Region of Peel
working with you

Watson & Associates ECONOMISTS LTD.

Development Charges Background Study

The Regional Municipality of Peel

September 18, 2020

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Table of Contents

Table of Contents (Cont'd)

Page

Table of Contents (Cont'd)

Page

Table of Contents (Cont'd)

Page

List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.P.	Asset management plan
CANSIM	Canadian Socio-Economic Information Management System (Statistics Canada)
C.I.D.	Capital Delivery System
D.C.	Development charge
D.C.A.	Development Charges Act, 1997, as amended
E.A.	Environmental Assessment
F.I.R.	Financial Information Return
F.S.W.	Floor Space per Worker
G.I.S.	Geographic Information System
G.F.A.	Gross floor area
G.M.S.	Growth Management Strategy
G.T.A.	Greater Toronto Area
I.C.I.	Industrial/Commercial/Institutional
L.I.D.	Low Impact Development
L.P.A.T.	Local Planning Appeal Tribunal
L.R.T.P.	Long Range Transportation Plan
L.T.A.	Lost Time Adjustment
M.E.C.P.	Ministry of the Environment, Conservation and Parks
M.T.O.	Ministry of Transportation
M.U.T.	Multi-use Trail
N.F.P.O.W.	No Fixed Place of Work

List of Acronyms and Abbreviations (Cont'd)

O.M.B.	Ontario Municipal Board
O.P.A.	Official Plan Amendment
O. Reg.	Ontario Regulation
P.H.F.	Peak Hour Factors
P.O.A.	Provincial Offences Act
P.P.U.	Persons per unit
R.O.P.A.	Regional Official Plan Amendment
R.O.W.	Right of Way
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
S.T.D.	Standard Drawing
S.W.M.	Stormwater management
sq.ft.	square foot
sq.m.	square metre
T.A.C.	Transportation Association of Canada
T.D.S.	Transportation Development Strategy
W.W.T.F.	Wastewater treatment facilities

Executive Summary

Executive Summary

1. The report provided herein represents the Development Charges (D.C.) Background Study for the Regional Municipality of Peel required by the Development Charges Act, 1997 (D.C.A.). This report has been prepared in accordance with the methodology required under the D.C.A. The contents include the following:

    - Chapter 1 – Overview of the legislative requirements of the Act;
    - Chapter 2 – Review of present D.C. policies of the Region;
    - Chapter 3 – Summary of the residential and non-residential growth forecasts for the Region;
    - Chapter 4 – Approach to calculating the D.C.;
    - Chapter 5 – Review of historical service standards and identification of future capital requirements to service growth and related deductions and allocations;
    - Chapter 6 – Calculation of the D.C.s;
    - Chapter 7 – D.C. policy recommendations and rules; and
    - Chapter 8 – By-law implementation.

2. D.C.s provide for the recovery of growth-related capital expenditures from new development. The D.C.A. is the statutory basis to recover these charges. The methodology is detailed in Chapter 4; a simplified summary is provided below:

    1) Identify amount, type and location of growth;

    2) Identify servicing needs to accommodate growth;

    3) Identify capital costs to provide services to meet the needs;

    4) Deduct:

        - Grants, subsidies and other contributions;
        - Benefit to existing development;
        - Statutory 10% deduction (soft services);
        - Amounts in excess of 10-year historical service calculation;
        - D.C. reserve funds (where applicable);

5) Net costs are then allocated between residential and non-residential benefit; and

6) Net costs divided by growth to provide the development charge.

3. A number of changes to the D.C. process need to be addressed as a result of the Smart Growth for our Communities Act, 2015 (Bill 73). These changes have been incorporated throughout the report and in the updated draft by-law, as necessary. These items include:

    a. Area-rating: Council must consider the use of area-specific charges.

    b. Asset Management Plan for new infrastructure: the D.C. background study must include an asset management plan that deals with all assets proposed to be funded, in whole or in part, by D.C.s. The asset management plan must show that the assets are financially sustainable over their full lifecycle.

    c. 60-day Circulation Period: The D.C. background study must be released to the public at least 60-days prior to passage of the D.C. by-law.

    d. Timing of Collection of Development Charges: The D.C.A. now requires D.C.s to be collected at the time of the first building permit unless the development charge by-law provides that D.C.s for certain services be collected at the time when the subdivision agreement is entered into.

4. Further changes to the D.C.A. were introduced through three bills passed in the Ontario legislature: Bill 108, Bill 138, and Bill 197. The following provides a brief summary of the proposed changes (at the time of writing).

    <u>Bill 108: More Homes, More Choice Act, 2019</u>

    In May 2019, the Province introduced Bill 108, More Homes, More Choice Act, 2019 which would make changes to the current D.C. legislation. The Bill was passed and given Royal Assent on June 6, 2019. While the legislation has been passed, much of the detailed changes are to be implemented by Regulation which is yet to be passed. The following items are currently in effect:

a. Effective January 1, 2020, rental housing and institutional developments shall pay D.C.s in six (6) equal annual payments commencing at first occupancy. Non-profit housing developments shall pay D.C.s in 21 equal annual payments. Interest may be charged on the installments, and any unpaid amounts inclusive of interests payable shall be added to the property tax roll and collected in the same manner as taxes.

b. Effective January 1, 2020 the D.C. amount for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval (for applications made after January 1, 2020), shall be determined based on the development charges by-law in effect on the day of Site Plan or Zoning By-law Amendment application.

As of the time of writing, other key elements of the changes that were not yet proclaimed are provided below:

- The D.C. would be refined to only allow for the following services to remain within the D.C.: water, wastewater, storm water, roads, fire, policing, ambulance, waste diversion, parks development, recreation, public libraries, long-term care, public health;
- The mandatory 10% deduction would be removed for all services that remain eligible in the D.C.;
- A new community benefits charge (C.B.C.) would be introduced to include formerly eligible D.C. services that are not included in the above listing, parkland dedication and bonus zoning contributions;

Bill 197: COVID-19 Economic Recovery Act, 2020

In March 2020, Canada was impacted by the COVID-19 global pandemic. As a result, the economy was put into a state of emergency in an effort to slow the spread of the virus. In response, the Province tabled legislation on July 8, 2020 which amended a number of Acts, including the D.C.A. and the Planning Act. With this Bill, many changes proposed in Bill 108 have now been revised. With respect to the above noted changes from Bill 108, the following changes are provided in Bill 197:

- Eligible Services: The list of eligible services for the D.C. have now been expanded to include most services eligible under the D.C.A. prior to Bill 108. For Peel Region, this means that all services currently provided in the D.C. study remain eligible.
- Mandatory 10% Deduction: The mandatory 10% deduction is still removed (consistent with Bill 108). This applies to all D.C.-eligible services.
- Community Benefits Charges: Based on the wording in the legislation, it appears that Upper-tier governments will not be able to impose a C.B.C.

As noted, certain changes to the D.C.A. have not been proclaimed. As a timeline has not yet been released with respect to proclamation, an analysis of the impact of removing the 10% deduction is provided in Appendix G.

The proposed changes are described further in Section 1.4.

5. The growth forecast (Chapter 3) on which the Region-wide D.C. is based, projects the following population, housing and non-residential floor area for the 10-year (2020 to 2029) and longer-term (2020 to 2041) periods.

Measure	10 Year 2020-2029	Longer-Term Region-wide 2020-2041	Longer-Term Water 2020-2041	Longer-Term Wastewater 2020-2041
(Net) Population Increase	211,500	434,700	433,760	431,500
Residential Unit Increase	80,240	158,600	158,020	157,285
Non-Residential Gross Floor Area Increase (sq.m.)	6,213,200	12,554,800	12,554,800	12,554,800

Source: Watson & Associates Economists Ltd. Forecast 2020

6. On September 10, 2015, the Region of Peel passed By-law 46-2015 under the D.C.A. The by-law imposes D.C.s on residential and non-residential uses. By-law 46-2015 was appealed to the L.P.A.T. (formerly known as the O.M.B.). As a result, the Tribunal directed the by-law to be amended by reducing the residential charges. It is noted that the GO Transit By-law 45-2001, as amended, is not expiring and therefore has not been updated as part of this D.C. process.

7. The Region's D.C.s currently in effect for full services in Mississauga and Brampton (excluding GO Transit service) are $53,510 for a single detached dwelling unit. Non-residential charges are broken down into two categories;

$157.77 per sq.m. for industrial development and $234.43 per sq.m. for non-residential, non-industrial development. The Region also calculated a separate charge for the Town of Caledon since the Town is serviced by Ontario Provincial Police (O.P.P) as opposed to Peel Regional Police. The charges in effect for full services in Caledon are $53,083 for a single detached unit, $156.20 per sq.m. for industrial development, and $232.86 per sq.m. for non-residential, non-industrial development. This report has undertaken a recalculation of the charge based on future identified needs (presented in Schedules ES-1 and ES-2 for residential and non-residential). Charges have been provided on a Region-wide basis for all services except for water, wastewater and policing services. Water and wastewater services have been provided for the water and wastewater service areas, Peel Regional Police charges are provided for the Cities of Mississauga and Brampton, and O.P.P. charges are provided for the Town of Caledon. The corresponding single detached unit charges and non-residential charges per square metre of building area are summarized at a high-level in Table ES-1 below and provided in detail in ES-2. These rates are submitted to Council for its consideration.

Table ES-1
Region of Peel
Summary of D.C.s

	RESIDENTIAL	NON-RESIDENTIAL	
	Single and Semi Detached Dwelling	Industrial (per sq.m. of G.F.A.)	Non-Industrial (per sq.m. of G.F.A.)
Region of Peel	60,427.18	178.05	230.75
Town of Caledon	59,769.83	175.15	227.85

Note: these charges are for full water and wastewater serviced areas

8. As discussed in Appendix G, Bill 197 provides for the removal of the 10% mandatory deduction currently required under the D.C.A. This deduction is currently required for the following Peel services; long-term care, public health, paramedics, housing services, waste diversion, and growth studies. The recalculated charges incorporating the removal of the 10% deduction are provided in table ES-3. The by-law is proposed to include two versions of the D.C. rate schedule. The rates schedule that corresponds to Table ES-2 are proposed to take effect on January 1, 2021, provided that the legislative amendments have not been proclaimed into force by that date. The contingency D.C. rate schedule that corresponds to Table ES-3 will either take effect on January 1, 2021 if the legislative amendments have been proclaimed into force before that date, or, in the even that proclamation does not occur until sometime after January 1, 2021, the contingency D.C. rates schedule will take effect on the actual date that the provisions of the D.C.A. amended through legislative changes are proclaimed into force by the Lieutenant Governor.

9. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is provided by service and is presented in Table 6-8. A summary of these costs is provided below:

Total gross expenditures planned over the next five years	$	4,291,103,836
Less:		
Benefit to existing development	$	834,207,394
Post planning period benefit	$	489,544,089
Ineligible re: Other Deductions	$	193,948,600
Mandatory 10% deduction for certain services[1]	$	28,967,509
Grants, subsidies and other contributions	$	100,720,326
Net Costs to be recovered from development charges	**$**	**2,643,715,919**

[1]Note: the mandatory 10% deduction will be removed upon proclamation of Bill 197

This suggests that for the non-D.C. cost over the five-year D.C. by-law (benefit to existing development, mandatory 10% deduction, and the grants, subsidies and other contributions), $1.16 billion (or an annual amount of $231.57 million) will need to be contributed from taxes and rates, or other sources. With respect to the post period benefit amount of $489.54 million, this amount will be included in subsequent D.C. study updates to reflect the portion of capital that benefits growth in the post period D.C. forecasts.

Based on the above table, the Region plans to spend $4.29 billion over the next five years, of which $2.64 billion (62%) is recoverable from D.C.s. Of this net amount, $1.98 billion is recoverable from residential development and $660.55 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

10. Considerations by Council – The background study represents the service needs arising from residential and non-residential growth over the forecast periods.

    The following services are calculated based on longer-term forecast for water service areas to 2041:

    - South Peel Water; and
    - Regional Water.

    The following services are calculated based on an urban forecast for wastewater service areas to 2041:

    - South Peel Wastewater; and
    - Regional Wastwater.

    The following service is calculated based on a Region-wide forecast to 2041:

    - Services Related to a Highway – Transportation;

    The following service is calculated based on a 10-year forecast for the City of Brampton and the City of Mississauga:

    - Peel Regional Police.

    The following service is calculated based on a 10-year forecast for the Town of Caledon:

    - Police - O.P.P.

    All other services are calculated based on a Region-wide 10-year forecast. These include:

    - Public Works;

- Growth Studies;
- Long Term Care;
- Public Health;
- Paramedics;
- Housing Services; and
- Waste Diversion

Council will consider the findings and recommendations provided in the report and, in conjunction with public input, approve such policies and rates it deems appropriate. These directions will refine the draft D.C. by-law which is provided under separate cover. These decisions may include:

- adopting the charges and policies recommended herein;
- considering additional exemptions to the by-law; and
- considering reductions in the charge by class of development (obtained by removing certain services on which the charge is based and/or by a general reduction in the charge).

11. The Region is proceeding with the D.C. public process and anticipates passing a new by-law in November 2020. The mandatory public meeting has been set for October 8, 2020.

Table ES-2
Region of Peel
Schedule of D.C.s

Program	RESIDENTIAL				NON-RESIDENTIAL	
	Single and Semi-Detached Dwelling	Apartments (>750 sq.ft.)	Small Unit (<=750 sq.ft.)	Other Residential	Industrial (per sq.m. of Gross Floor Area)	Non-Industrial (per sq.m. of Gross Floor Area)
Region of Peel						
Water Supply Services	22,392.53	16,242.84	8,590.38	17,734.97	76.19	76.19
Wastewater Services	23,371.54	16,952.99	8,965.95	18,510.35	79.01	79.01
Services Related to a Highway - Transportation	9,190.79	6,666.71	3,525.83	7,279.14	16.72	69.42
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**	**171.92**	**224.62**
Public Works	272.88	197.94	104.68	216.12	1.10	1.10
Peel Regional Police Services	762.21	552.88	292.40	603.67	3.19	3.19
Growth Studies	210.55	152.73	80.77	166.76	0.85	0.85
Long Term Care	736.95	534.56	282.71	583.67	-	-
Public Health	-	-	-	-	-	-
Paramedics	202.00	146.52	77.49	159.98	0.82	0.82
Housing Services	2,957.31	2,145.14	1,134.51	2,342.20	-	-
Waste Diversion	330.41	239.67	126.76	261.69	0.17	0.17
Sub-total Soft Services:	**5,472.32**	**3,969.44**	**2,099.32**	**4,334.09**	**6.13**	**6.13**
TOTAL REGION OF PEEL	**60,427.18**	**43,831.98**	**23,181.48**	**47,858.55**	**178.05**	**230.75**
Town of Caledon						
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**	**171.92**	**224.62**
Soft Service Rate Without Peel Regional Police	4,710.11	3,416.56	1,806.92	3,730.42	2.94	2.94
Police - O.P.P.	104.86	76.06	40.23	83.05	0.29	0.29
TOTAL CALEDON	**59,769.83**	**43,355.16**	**22,929.31**	**47,337.93**	**175.15**	**227.85**

Table ES-3
Region of Peel
Schedule of D.C.s with Removal of 10% Mandatory Deduction

Program	RESIDENTIAL				NON-RESIDENTIAL	
	Single and Semi-Detached Dwelling	Apartments (>750 sq.ft.)	Small Unit (<=750 sq.ft.)	Other Residential	Industrial (per sq.m. of Gross Floor Area)	Non-Industrial (per sq.m. of Gross Floor Area)
Region of Peel						
Water Supply Services	22,392.53	16,242.84	8,590.38	17,734.97	76.19	76.19
Wastewater Services	23,371.54	16,952.99	8,965.95	18,510.35	79.01	79.01
Services Related to a Highway - Transportation	9,190.79	6,666.71	3,525.83	7,279.14	16.72	69.42
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**	**171.92**	**224.62**
Public Works	272.88	197.94	104.68	216.12	1.10	1.10
Peel Regional Police Services	762.21	552.88	292.40	603.67	3.19	3.19
Growth Studies	229.12	166.20	87.90	181.46	0.93	0.93
Long Term Care	838.50	608.22	321.67	664.10	-	-
Public Health	-	-	-	-	-	-
Paramedics	223.05	161.79	85.57	176.66	0.90	0.90
Housing Services	3,264.77	2,368.17	1,252.45	2,585.71	-	-
Waste Diversion	367.13	266.31	140.84	290.77	0.19	0.19
Sub-total Soft Services:	**5,957.67**	**4,321.51**	**2,285.51**	**4,718.49**	**6.31**	**6.31**
TOTAL REGION OF PEEL	**60,912.53**	**44,184.05**	**23,367.67**	**48,242.95**	**178.23**	**230.93**
Town of Caledon						
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**	**171.92**	**224.62**
Soft Service Rate Without Peel Regional Police	5,195.46	3,768.63	1,993.11	4,114.82	3.12	3.12
Police - O.P.P.	104.86	76.06	40.23	83.05	0.29	0.29
TOTAL CALEDON	**60,255.18**	**43,707.23**	**23,115.50**	**47,722.33**	**175.33**	**228.03**

Report

Chapter 1
Introduction

1. Introduction

1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the Development Charges Act (D.C.A.) (section 10) and, accordingly, recommends new development charges (D.C.s) and policies for the Regional Municipality of Peel (The Region).

The Region retained Watson & Associates Economists Ltd. (Watson), to undertake the D.C. study process which began in 2017 and continued through to 2020. Watson worked with Region staff in preparing the D.C. analysis and policy recommendations.

This D.C. background study, containing the proposed D.C. by-law, will be distributed to members of the public in order to provide interested parties with sufficient background information on the legislation, the study's recommendations and an outline of the basis for these recommendations.

This report has been prepared, in the first instance, to meet the statutory requirements applicable to the Region's D.C. background study, as summarized in Chapter 4. It also addresses the requirement for "rules" (contained in Chapter 7) and the proposed by-law to be made available as part of the approval process (provided under separate cover).

In addition, the report is designed to set out sufficient background on the legislation (Chapter 4), Peel's current D.C. policies (Chapter 2) and the policies underlying the proposed by-law, to make the exercise understandable to those who are involved.

Finally, it addresses post-adoption implementation requirements (Chapter 8) which are critical to the successful application of the new policy.

The Chapters in the report are supported by Appendices containing the data required to explain and substantiate the calculation of the charge. A full discussion of the statutory requirements for the preparation of a background study and calculation of a D.C. is provided herein.

1.2 Summary of the Process

The Region of Peel Council directed that staff take a new approach to planning and managing growth that was:

1. **Integrated** across the fields of planning, infrastructure planning and finance in terms of how servicing is paid for; and

2. **Collaborative** with stakeholders including local municipal staff in planning, service program areas and finance as well as with the development industry.

As a result of Council's direction, Region of Peel staff established a Development Industry Work Group (D.I.W.G.). This working group, consisting of Region staff, staff from each local municipality, and stakeholders from the development community, met on a regular basis to discuss all facets to manage growth. The discussions included input into policies with respect to the 2020 Development Charge (D.C.) Background Study and associated By-law.

Through these working group meetings, a number of policy matters were discussed prior to completion of the calculations and report. These matters included:

- Matters pertaining to the growth forecast;
- Allocation/calculation of benefit to existing development;
- Allocation/calculation of the share of the costs for post-period benefit;
- Residential/non-residential cost allocations;
- Revision to by-law definitions; and
- Other policy matters for consideration in the D.C. by-law.

The public meeting required under section 12 of the D.C.A., has been scheduled for October 8, 2020. Its purpose is to present the study to the public and to solicit public input. The meeting is also being held to answer any questions regarding the study's purpose, methodology and the proposed modifications to the Region's D.C.s.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on September 18, 2020.

The process to be followed in finalizing the report and recommendations includes:

- consideration of responses received prior to, at, or immediately following the Public Meeting; and
- finalization of the report and Council consideration of the by-law subsequent to the public meeting.

Figure 1-1 outlines the proposed schedule to be followed with respect to the D.C. by-law adoption process.

Figure 1-1
Schedule of Key D.C. Process Dates for the Region of Peel

D.C. Study Process	Key Dates
1. Data collection, staff review, engineering work, D.C. calculations and policy work	Fall 2017 to Spring 2020
2. Meetings with Development Industry Working Group	1. January 17, 2017 2. February 8, 2017 3. February 22, 2017 4. March 8, 2017 5. May 30, 2017 6. June 27, 2017 7. September 14, 2017 8. November 7, 2017 9. December 11, 2017 10. January 12, 2018 11. January 22, 2018 12. February 7, 2018 13. February 27, 2018 16. January 27, 2020 17. February 20, 2020 18. April 20, 2020 19. June 22, 2020 20. August 18, 2020 21. August 31, 2020
3. Public meeting advertisement placed in newspaper(s)	September 17, 2020 (Mississauga News, Brampton Guardian, Caledon Citizen, Caledon Enterprise) September 17, 2020 (Peel Website)
4. Background study and proposed by-law available to public	September 18, 2020
5. Public meeting of Council	October 8, 2020

D.C. Study Process	Key Dates
6. Council considers adoption of background study and passage of by-law	November 26, 2020
7. Newspaper notice given of by-law passage	By 20 days after passage
8. Last day for by-law appeal	40 days after passage
9. Region makes pamphlet available (where by-law not appealed)	By 60 days after in force date

1.3 Changes to the D.C.A.: Bill 73 – Smart Growth for our Communities Act, 2015

With the amendment of the D.C.A. (as a result of Bill 73 and O. Reg. 428/15), there are a number of areas that must be addressed to ensure that the Region is in compliance with the D.C.A., as amended. The following provides an explanation of the changes to the Act that affect the Region's background study and how they have been dealt with to ensure compliance with the amended legislation.

1.3.1 Area Rating

Bill 73 has introduced two new sections where Council must consider the use of area-specific charges:

1) Section 2 (9) of the Act now requires a municipality to implement area-specific D.C.s for either specific services which are prescribed and/or for specific municipalities which are to be regulated. (Note that at this time, no municipalities or services are prescribed by the Regulations.)

2) Section 10 (2) c.1 of the D.C.A. requires that, "the development charges background study shall include consideration of the use of more than one development charge by-law to reflect different needs for services in different areas."

In regard to the first item, there are no services or specific municipalities identified in the regulations which must be area-rated. The second item requires Council to consider the use of area rating. This is discussed further in section 7.4.4.

1.3.2 Asset Management Plan for New Infrastructure

The newer legislation now requires that a D.C. background study must include an Asset Management Plan (subsection 10 (2) (c.2)). The asset management plan must deal with all assets that are proposed to be funded, in whole or in part, by D.C.s. The current regulations provide very extensive and specific requirements for the asset management plan related to transit services; however, they are silent with respect to how the asset management plan is to be provided for all other services. As part of any asset management plan, the examination should be consistent with the municipality's existing assumptions, approaches and policies on asset management planning. This examination may include both qualitative and quantitative measures such as examining the annual future lifecycle contributions needs (discussed further in Appendix F of this report).

1.3.3 60-Day Circulation of D.C. Background Study

Previously the legislation required that a D.C. background study be made available to the public at least two weeks prior to the public meeting. The amended legislation now provides that the D.C. background study must also be made available to the public (including posting on the municipal website) at least 60 days prior to passage of the D.C. by-law. No other changes were made to timing requirements for such things as notice of the public meeting and notice of by-law passage.

This D.C. study is being provided to the public on September 18, 2020 to ensure the new requirements for release of the study is met.

1.3.4 Timing of Collection of D.C.s

The D.C.A. has been refined by Bill 73 to require that D.C.s are collected at the time of the first building permit unless the development charges by-law provides that D.C.s for certain services be collected at the time when the subdivision agreement is entered into.

1.3.5 Other Changes

It is also noted that a number of other changes were made through Bill 73 and O. Reg. 428/15, including changes to the way in which transit D.C. service standards are calculated, the inclusion of waste diversion and the inability for collection of additional levies. As the Region does not provide conventional transit services, the section related to Transit D.C. service standards does not impact the Region's D.C. With respect to the

inclusion of waste diversion as a service, this service has been included in the calculations. With respect to the ability for collection of additional levies, a detailed Local Service Policy is provided in Appendix E.

1.4 Further Changes to the D.C.A.: Bill 108, 138, and 197

1.4.1 Bill 108: More Homes, More Choice Act – An Act to Amend Various Statutes with Respect to Housing, Other Development, and Various Matters

On May 2, 2019, the Province introduced Bill 108, which proposed changes to the D.C.A. The Bill has been introduced as part of the Province's *"More Homes, More Choice: Ontario's Housing Supply Action Plan".* The Bill received Royal Assent on June 6, 2019.

While having received royal assent, many of the amendments to the D.C.A. would not come into effect until they are proclaimed by the Lieutenant Governor. At the time of writing, the following provisions have been proclaimed:

- Effective January 1, 2020, rental housing and institutional developments shall pay D.C.s in six equal annual payments commencing at occupancy. Non-profit housing developments shall pay D.C.s in 21 equal annual payments. Interest may be charged on the instalments, and any unpaid amounts may be added to the property tax roll and collected in the same manner as taxes.
- Effective January 1, 2020 the D.C. amount for all developments occurring within 2 years of a Site Plan or Zoning By-law Amendment planning approval (for application made after January 1, 2020), shall be determined based on the D.C. by-law in effect on the day of Site Plan or Zoning By-law Amendment application.
- On February 28, 2020, the Province released updated draft regulations related to the D.C.A. and the *Planning Act*. A summary of these changes to take effect upon proclamation by the Lieutenant Governor is provided below:

Changes to Eligible Services – Prior to Bill 108, the D.C.A. provided a list of ineligible services whereby municipalities could include growth related costs for any service that was not listed as ineligible. With Bill 108, the changes to the D.C.A. would now specifically list the services that are eligible for inclusion in the by-law. Further, the

initial list of eligible services under Bill 108 was limited to "hard services", with the "soft services" being removed from the D.C.A. These services would be considered as part of a new *community benefits charge* (discussed below) imposed under the *Planning Act*. As noted in Section 1.4.2 this list of services has been amended through Bill 197.

Mandatory 10% deduction – The new draft regulation will remove the mandatory 10% deduction for all services that remain eligible under the D.C.A.

Remaining Services to be Included in a New Community Benefits Charge (C.B.C.) Under the Planning Act – It is proposed that a municipality may, by by-law, impose a C.B.C. against land to pay for the capital costs of facilities, services and matters required because of development or redevelopment in the area to which the by-law applies. The C.B.C. would include formerly eligible D.C. services that were excluded from the list of eligible services, in addition to parkland dedication and bonus zoning contributions.

1.4.2 Bill 197: COVID-19 Economic Recovery Act

In response to the global pandemic that began affecting Ontario in early 2020, the Province released Bill 197 which provided amendments to a number of Acts, including the D.C.A. and *Planning Act*. This Bill also revised some of the proposed changes identified in Bill 108. Bill 197 was tabled on July 8, 2020 and received Royal Assent on July 21, 2020, however, the changes with respect to D.C.A and C.B.C. do not come into effect until proclamation, which is yet to be determined. The following provides a summary of the proposed changes:

1.4.2.1 D.C. Related Changes

List of D.C. Eligible Services

- As noted above, under Bill 108 some services were to be included under the D.C.A. and some would be included under the C.B.C. authority. However, Bill 197 revised this proposed change and has included all services (with some exceptions) under the D.C.A. These services are as follows:
    - Water supply services, including distribution and treatment services.
    - Wastewater services, including sewers and treatment services.
    - Storm water drainage and control services.
    - Services related to a highway.
    - Electrical power services.
    - Toronto-York subway extension, as defined in subsection 5.1 (1).
    - Transit services other than the Toronto-York subway extension.
    - Waste diversion services.
    - Policing services.
    - Fire protection services.
    - Ambulance services.
    - Library Services.
    - Long-term care services.
    - Parks and recreation services (but not the acquisition of land for parks).
    - Public health services.
    - Childcare and early years services.
    - Housing services.
    - Provincial Offences Act Services.
    - Services related to emergency preparedness.
    - Services related to airports, but only in the Regional Municipality of Waterloo.
    - Additional services as prescribed

Classes of Services – D.C.

Present legislation (i.e. D.C.A., 1997) allows for categories of services to be grouped together into a minimum of two categories (90% and 100% services).

The Act (as proclaimed) proposes to repeal that and replace the above with the four following subsections:

- A D.C. by-law may provide for any eligible service or capital cost related to any eligible service to be included in a class, set out in the by-law.
- A class may be composed of any number or combination of services and may include parts or portions of the eligible services or parts or portions of the capital costs in respect of those services.
- A D.C. by-law may provide for a class consisting of studies in respect of any eligible service whose capital costs are described in paragraphs 5 and 6 of s. 5 of the D.C.A.
- A class of service set out in the D.C. by-law is deemed to be a single service with respect to reserve funds, use of monies, and credits.

As well the removal of 10% deduction for soft services under Bill 108 has been maintained.

Note: an initial consideration of "class" appears to mean any group of services.

1.4.2.2 C.B.C. Related Changes

C.B.C. Eligibility

- The C.B.C. will be limited to lower-tier and single tier municipalities, whereas upper-tier municipalities will not be allowed to impose this charge.

1.4.2.3 Combined D.C. and C.B.C. Impacts

D.C. vs. C.B.C. Capital Cost

- A C.B.C. may be imposed with respect to the services listed in s. 2 (4) of the D.C.A., "provided that the capital costs that are intended to be funded by the community benefits charge are not capital costs that are intended to be funded under a development charge by-law."

As a result of the passage of Bill 197 this report has provided the D.C. calculations with and without the 10% mandatory deduction required under the current D.C.A. The alternative calculation (without the 10% deduction) is provided in Appendix G.

Chapter 2
Current Region of Peel Policy

2. Current Region of Peel Policy under By-law46-2015

2.1 Schedule of Charges

On September 10, 2015, the Region of Peel passed By-law 46-2015 under the D.C.A. The by-law imposes D.C.s for residential and non-residential uses. The by-law and schedule of charges were subsequently amended at the direction of the L.P.A.T.

The table below provides the rates currently in effect as of August 1, 2020.

Table 2-1
Region of Peel
Current D.C. Rates

PROGRAM	RESIDENTIAL				NON-RESIDENTIAL	
	Single & Semi Detached	Other Residential	Apartments with (>750 sq.ft.)	Small Units (<= 750 sq.ft.)	Industrial (per sq.m. of Gross Floor Area)	Non-Industrial (per sq.m. of Gross Floor Area)
Region-Wide Services:						
Water Supply Services	28,627	23,453	17,522	11,589	88.17	88.17
Wastewater Services	11,809	9,675	7,227	4,781	41.95	41.95
Regional Roads	11,466	9,394	7,018	4,641	25.64	102.30
Sub-total Hard Services:	**51,902**	**42,522**	**31,767**	**21,011**	**155.76**	**232.42**
Peel Regional Police Services	427	351	261	173	1.57	1.57
Transhelp	4	2	2	1	-	-
Growth Studies	88	72	54	35	0.44	0.44
Long Term Care	162	133	100	66	-	-
Public Health	-	-	-	-	-	-
Paramedics	93	77	58	38	-	-
Social Housing	728	597	445	294	-	-
Shelters	106	87	65	44	-	-
Sub-total Soft Services:	**1,608**	**1,319**	**985**	**651**	**2.01**	**2.01**
TOTAL	**53,510**	**43,840**	**32,752**	**21,662**	**157.77**	**234.43**
Town of Caledon:						
Sub-total Hard Services:	**51,902**	**42,522**	**31,767**	**21,011**	**155.76**	**232.42**
Soft Service Rate Without Peel Regional Police Services	1,181	968	724	478	0.44	0.44
Police - O.P.P.	-	-	-	-	-	-
TOTAL	**53,083**	**43,489**	**32,491**	**21,489**	**156.20**	**232.86**

2.2 Services Covered

The following services are covered under By-law 46-2015:

- Regional Roads;
- Police – Peel Regional Police (Brampton and Mississauga);
- Growth Studies;
- Paramedics;
- Long Term Care;

- Transhelp;
- Social Housing;
- Shelters;
- Water Services; and
- Wastewater Services.

2.3 Timing of D.C. Calculation and Payment

D.C.s are calculated and payable on the date that a permit under the *Building Code* Act is issued in relation to a building or a structure on the land to which the D.C. applies. For residential development other than apartments, the water, wastewater and transportation portion of the D.C. shall be payable upon approval of a subdivision agreement under Section 51 of the *Planning Act* or a consent under Section 53 of the *Planning Act.* All other D.C.s are calculated and payable at building permit issuance.

The Region may enter into an agreement providing for all or part of a D.C. to be paid before or after it would otherwise be payable.

2.4 Indexing

Rates shall be adjusted semi-annually on February 1st and August 1st each year in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index.

2.5 Redevelopment Allowance

As a result of the redevelopment of land, a building or structure existing on the same land prior to the date of payment of D.C.s in regard to such redevelopment has been demolished or converted to another use in whole or in part on or after November 6, 1991, the D.C.s otherwise payable with respect to such redevelopment shall be reduced by the following amounts:

(a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C.s by the number,

according to type, of dwelling units that have been or will be demolished or converted to another principal use; and

(b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C.s by the gross floor area (G.F.A.) that has been or will be demolished or converted to another principal use;

Where the development would have been exempt prior to the redevelopment of change of use, no credit shall be allowed.

2.6 Exemptions

The following exemptions are provided under By-law 46-2015:

- Statutory exemptions:
  - Land owned by and used only for the purpose of the Region, the area municipalities or local boards;
  - Land owned by a district school board and used only for district school board purposes;
  - An enlargement to an existing dwelling unit;
  - One or two additional dwelling units in an existing single detached dwelling; or
  - One additional dwelling unit in any other existing residential building.
- Non-Statutory exemptions:
  - Land used as a hospital;
  - Land owned by a college or university and used only for the purposes of a college or university;
  - That portion of a building or structure, limited to not more than one room, owned by a religious organization which is reserved for the conduct of group worship, services or rites;
  - Land owned by an agricultural society and used only for the purposes of an agricultural society; and
  - The development of land by the installation of a mobile temporary sales trailer.

Chapter 3
Anticipated Development in the Region of Peel

3. Anticipated Development in the Region of Peel

3.1 Requirement of the Act

Chapter 4 provides the methodology for calculating a D.C. as per the D.C.A. Figure 4-1 presents this methodology graphically. It is noted in the first box of the schematic that in order to determine the D.C. that may be imposed, it is a requirement of Section 5 (1) of the D.C.A. that "the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated."

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which Peel Region will be required to provide services, over a 10-year (mid-2020 to mid-2030) and a longer-term time horizon (mid-2020 to mid-2041).

3.2 Basis of Population, Household and Non-Residential Gross Floor Area Forecast

The D.C. growth forecast has been derived by Watson based upon the Region of Peel Growth Management Strategy (G.M.S.), Scenario 16. The estimated current population, housing and employment base as of mid-2020 was derived from estimates prepared by the Region of Peel and represents the latest and best planning information regarding the Region's understanding of recent residential and non-residential development activity and demographic trends as of mid-2020. For the purposes of the D.C., Watson has prepared additional details related to the population forecast (gross population associated with new households) and employment forecast (gross floor area forecast), which was reviewed by the Region of Peel and its G.M.S. consultants to ensure consistency with the G.M.S.

3.3 Summary of Growth Forecast

A detailed analysis of the residential and non-residential growth forecasts is provided in Appendix A and the methodology employed is illustrated in Figure 3-1. The discussion provided herein summarizes the anticipated growth for the Region and describes the basis for the forecast. The results of the residential growth forecast analysis are summarized in Table 3-1 below, and Schedule 1 in Appendix A.

As identified in Table 3-1 and Appendix A, Schedule 1, the Region's population is anticipated to reach approximately 1,746,800 by mid-2030, and 1,970,000 by mid-2041.[1] The Region's 2041 population forecast is consistent with the 2041 population forecast set out in Schedule 3 of the Growth Plan for the Greater Golden Horseshoe (G.G.H.), 2019: A Place to Grow. The forecast represents an increase of 211,500 persons and 434,700 persons, respectively, over the 10-year and longer-term forecast periods. The population forecast summarized in Table 3-1 and Schedule 1, Appendix A includes an upward adjustment for the net Census undercount, which is estimated at approximately 3.4%. The Census undercount represents the net number of persons missed during Census enumeration. All references provided herein to the population forecast include the net Census undercount. Provided below is a summary of the key assumptions and findings regarding the Peel D.C. growth forecast update.

1. Unit Mix (Table 3-1; Appendix A – Schedules 1 through 5)

- The unit mix for the Region was derived from the Region of Peel G.M.S., Scenario 16. As previously discussed, the mid-2020 population is based upon best planning estimates by the Region of Peel.
- Based on the above, the long-term (2020-2041) household growth forecast is comprised of a housing unit mix of approximately 18% large apartments (>750 sq.ft.), 28% small apartments (equal to or less than 750 sq.ft.), 32% single and semi-detached units and 22% townhomes.

2. Geographic Location of Residential Development (Table 3-2; Appendix A – Schedules 2a and 2b)

- Table 3-2, Table 3-3 and Schedule 2a, Appendix A summarize the anticipated amount, type and location of residential development for the Region of Peel by local municipality over the 10-year and longer-term planning periods.
- In accordance with Region of Peel G.M.S., Scenario 16, total housing growth has been allocated to the following areas over the 2020-2041 forecast period:
    - City of Brampton – 42%;

[1] The population figures used in the calculation of the 2020 D.C. includes the Census undercount, which is estimated at approximately 3.4%.

- City of Mississauga – 41%; and
- Town of Caledon – 17%.

- As summarized in Table 3-2 and Schedule 2, Appendix A, the majority of new housing growth for the City of Mississauga over the longer-term forecast period is comprised of apartments (large and small combined, represents 80%). Apartments are forecast to comprise 25% of the City of Brampton's housing growth and 16% of the Town of Caledon's housing growth over the longer-term period.

Figure 3-1
Household Formation-based Population and Household Projection Model

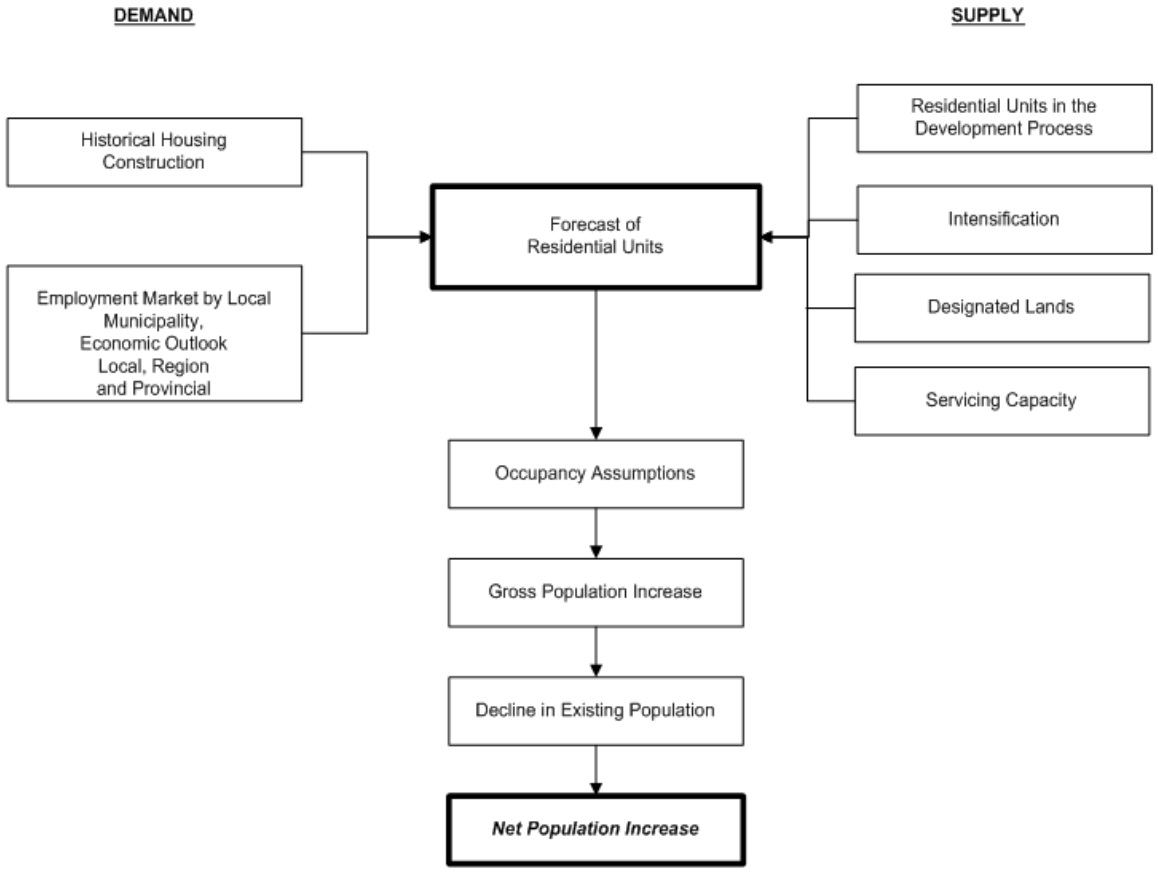

Table 3-1
Region of Peel
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[2]	Population (Including Census Undercount), Excluding Institutional	Excluding Census Undercount			Housing Units							Person Per Unit (P.P.U.): Total Population/ Total Households
				Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Townhomes	Apartments[3]	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Other	Total Households	
	Mid 2016	1,428,300	1,419,200	1,381,700	9,100	1,372,600	261,585	60,120	105,355	42,145	63,210	490	427,550	3.232
Forecast	*Mid 2020*	1,535,300	1,526,000	1,483,500	9,300	1,474,200	271,925	66,800	113,485	45,395	68,090	490	452,700	3.277
	Mid 2025	1,634,000	1,623,600	1,578,900	10,400	1,568,500	289,030	75,250	128,220	51,290	76,930	490	492,990	3.203
	Mid 2030	1,746,800	1,735,700	1,687,900	11,100	1,676,800	303,290	83,820	145,340	58,140	87,200	490	532,940	3.167
	Mid 2035	1,852,200	1,840,400	1,789,800	11,800	1,778,000	313,720	91,780	164,000	65,600	98,400	490	569,990	3.140
	Mid 2041	1,970,000	1,957,500	1,903,600	12,500	1,891,100	322,425	101,100	187,285	74,915	112,370	490	611,300	3.114
Incremental	**Mid 2016 - Mid 2020**	**107,000**	**106,800**	**101,800**	**200**	**101,600**	**10,340**	**6,680**	**8,130**	**3,250**	**4,880**	**0**	**25,150**	
	Mid 2020 - Mid 2025	**98,700**	**97,600**	**95,400**	**1,100**	**94,300**	**17,105**	**8,450**	**14,735**	**5,895**	**8,840**	**0**	**40,290**	
	Mid 2020 - Mid 2030	**211,500**	**209,700**	**204,400**	**1,800**	**202,600**	**31,365**	**17,020**	**31,855**	**12,745**	**19,110**	**0**	**80,240**	
	Mid 2020 - Mid 2035	**316,900**	**314,400**	**306,300**	**2,500**	**303,800**	**41,795**	**24,980**	**50,515**	**20,205**	**30,310**	**0**	**117,290**	
	Mid 2020 - Mid 2041	**434,700**	**431,500**	**420,100**	**3,200**	**416,900**	**50,500**	**34,300**	**73,800**	**29,520**	**44,280**	**0**	**158,600**	

Derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.

[1]Based on the Region of Peel Growth Management Strategy, Scenario 16. The population and housing for base year (2020) has been updated based on best planning estimates by the Region of Peel.

[2]Census undercount estimated at approximately 3.4%. Note: Population including the undercount has been rounded.

[3]Includes apartments in duplexes, accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Notes: 1) Numbers may not add to totals due to rounding. 2) An adjustment was made to the 2016 Census based on a review by the Region of Peel.

Table 3-2
Region of Peel
Population and Residential Growth Forecast Summary by Area Municipality

Population[1]	City of Mississauga	City of Brampton	Town of Caledon	Peel Region
2020	779,150	679,350	76,800	1,535,300
2030	834,580	799,670	112,550	1,746,800
2041	919,920	889,920	160,160	1,970,000
2020-2030	55,430	120,320	35,750	211,500
2020-2041	140,770	210,570	83,360	434,700
2020-2041, Share of Region Growth (%)	32%	48%	19%	100%

Housing Units	City of Mississauga	City of Brampton	Town of Caledon	Peel Region
2020	244,495	183,945	24,260	452,700
2030	277,800	219,680	35,460	532,940
2041	309,950	250,840	50,510	611,300
2020-2030	33,305	35,735	11,200	80,240
2020-2041	65,455	66,895	26,250	158,600
2020-2041, Share of Region Growth (%)	41%	42%	17%	100%

[1] Includes population undercount which is estimated at approximately 3.4%. Numbers may not add up precisely due to rounding. Population includes institutional population.

Sources: Derived from the Region of Peel Growth Management Strategy, Scenario 16.

Table 3-3
Region of Peel
Population and Residential Growth Forecast Summary by Area Municipality

City of Mississauga	Singles and Semi-Detached	Townhouses	Other	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Total Units
2020	127,340	37,865	410	31,550	47,330	244,495
2030	129,540	42,780	410	42,025	63,045	277,800
2041	130,770	47,310	410	52,580	78,880	309,950
2020-2030	2,200	4,915	0	10,475	15,715	33,305
2020-2041	3,430	9,445	0	21,030	31,550	65,455

City of Brampton	Singles and Semi-Detached	Townhouses	Other	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Total Units
2020	123,500	26,620	50	13,510	20,265	183,945
2030	146,520	34,705	50	15,360	23,045	219,680
2041	158,040	42,080	50	20,270	30,400	250,840
2020-2030	23,020	8,085	0	1,850	2,780	35,735
2020-2041	34,540	15,460	0	6,760	10,135	66,895

Town of Caledon	Singles and Semi-Detached	Townhouses	Other	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Total Units
2020	21,085	2,315	30	330	500	24,260
2030	27,230	6,335	30	745	1,120	35,460
2041	33,615	11,710	30	2,060	3,095	50,510
2020-2030	6,145	4,020	0	415	620	11,200
2020-2041	12,530	9,395	0	1,730	2,595	26,250

Peel Region	Singles and Semi-Detached	Townhouses	Other	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Total Units
2020	271,925	66,800	490	45,395	68,090	452,700
2030	303,290	83,820	490	58,135	23,255	532,940
2041	322,425	101,100	490	74,915	29,965	611,300
2020-2030	31,365	17,020	0	12,740	19,115	92,980
2020-2041	50,500	34,300	0	29,520	44,280	158,600

[1] Includes population undercount which is estimated at approximately 3.4%. Numbers may not add up precisely due to rounding.
Population includes institutional population.

Sources: Derived from the Region of Peel Growth Management Strategy, Scenario 16.

- In addition, housing growth has been allocated between urban area (full municipal services) and rural area (no municipal services/water only) (refer to Schedule 2b, Appendix A), as follows:
  - Urban – 99.2%;
  - Rural, Water Only Services – 0.4%; and
  - Rural, No Municipal Services – 0.5%.

3. Planning Period

- Short and longer-term time horizons are required for the D.C. process. The D.C.A. limits the planning horizon for certain services, such as housing, long-term care, health, and paramedics, to a 10-year planning horizon. Services related to a highway, public works, police, water, and wastewater services can utilize a longer planning period.

4. Population in New Housing Units (Appendix A – Schedules 2a through to Schedule 6)

- The number of housing units to be constructed by 2041 in Peel Region over the forecast period is presented in Figure 3-2. Over the 2020 to 2041 forecast period, the Region is anticipated to average approximately 7,550 new housing units annually.
- Institutional population[1] is anticipated to increase by nearly 150 people annually over the 2020 to 2041 period.
- Population in new units is derived from Schedules 3 and 4, which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit (P.P.U.) by dwelling type for new units.
- Schedule 8 summarizes the P.P.U. for the new housing units by age and type of dwelling based on a 2016 custom Census data for Peel Region (low- , medium-, and high- density). The total calculated adjusted 20-year average P.P.U. by dwelling type are as follows:
    - Singles/Semi-Detached: 4.202
    - Multiples (Townhouses): 3.328
    - Large Apartments (larger than 750 sq.ft.): 3.048
    - Small Apartments (equal/less than 750 sq.ft.): 1.612

[1] Institutional includes special care facilities such as nursing home or residences for senior citizens. A P.P.U. of 1.100 depicts 1-bedroom and 2- or more bedroom units in these special care facilities.

5. Existing Units and Population Change (Appendix A – Schedules 3 and 4)

- The decline in average occupancy levels for existing housing units is calculated in Schedules 3 through 4, by aging the existing population over the forecast period. The forecast population decline in existing households over a 10-year period is 4,840 persons annually.

6. Employment (Appendix A – Schedules 7,8 and 9)

- The employment projections provided herein have been derived by Watson based upon the Region of Peel G.M.S., Scenario 16. The corresponding total employment activity rate, which is defined as the number of jobs in a municipality divided by the number of residents, has also been summarized in Schedule 7. Key employment sectors include, other employment[1], industrial employment, work at home employment, and employees with no fixed place of work (N.F.P.O.W.). The employment forecast by usual place of work and total employment, including work at home and N.F.P.O.W., has been summarized below:
- 2016 employment data[2] (place of work) for Peel Region is outlined in Schedule 7. The 2016 employment base is comprised of the following:
    - 124,700 Work at Home and No Fixed Place of Work[3] (18%)
        - 38,200 work at home employment (6%)
        - 86,500 no fixed place of work employment (12%)
    - 570,600 Usual Place of Work Employment (82%):
        - 228,900 industrial (33%)
        - 341,700 other employment (49%)
- Total employment, including work at home and N.F.P.O.W. for the Region is anticipated to reach approximately 970,000 by 2041. This represents an

[1] Other employment includes Primary, Major Office, Institutional and Commercial/Population-Related Employment.
[2] 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset by Watson & Associates Economists Ltd.
[3] No fixed place of work is defined by Statistics Canada as "persons who do not go from home to the same work place location at the beginning of each shift". Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc.

employment increase of approximately 212,600 over the long-term forecast period.

- Schedule 7 summarizes the employment forecast, excluding work at home employment and N.F.P.O.W. employment, which is the basis for the D.C. employment forecast. The impact on municipal services from work at home employees has already been included in the population forecast. The need for municipal services related to N.F.P.O.W. employees has largely been included in the employment forecast by usual place of work (i.e. employment and gross floor area generated from N.F.P.O.W. construction employment). Furthermore, since these employees have no fixed work address, they cannot be captured in the non-residential Gross Floor Area (G.F.A.) calculation.
- Total employment for Peel Region (excluding work at home and N.F.P.O.W. employment) is anticipated to reach approximately 795,500 by mid-2041. This represents an employment increase of approximately 175,800 over the 21-year forecast period.

7. Non-Residential Sq.m. Estimates (G.F.A., Appendix A, Schedule 8)

- Square metre estimates were calculated in Schedule 8 based on the following employee density assumptions:
  - Industrial:
    - City of Mississauga: 120 sq.m. per employee
    - City of Brampton: 150 sq.m. per employee
    - Town of Caledon: 160 sq.m. per employee
    - Region-wide (average): 148 sq.m. per employee
  - Other Employment:
    - Region-Region: 36 sq.m. per employee
- The Region-wide incremental non-residential G.F.A. is anticipated to increase by 6,213,200 sq.m. over the 10-year forecast period, 12,554,800 sq.m. and over the longer-term forecast period.
- In terms of percentage growth, the 2020 to 2041 incremental G.F.A. forecast by sector is broken down as follows:
  - Industrial– 66%; and
  - Other Employment – 34%.

8. Geography of Non-Residential Development (Appendix A – Schedules 8a and 8b)

- Schedules 8a and 8b summarizes the anticipated amount, type and location of non-residential development by municipality for Peel Region.
- In accordance with the Region of Peel G.M.S., Scenario 16 and the above noted G.F.A. assumptions, the amount and percentage of forecast total non-residential growth over the long-term forecast period by development location is summarized in Table 3-4.

Table 3-4
Region of Peel
Usual Place of Work Employment Growth Forecast and Gross Floor Area (G.F.A.), sq.m. by Area Municipality, 2020 to 2041

Municipality	Industrial Employment	Other Employment[1]	Total Usual Place of Work, Excluding Work at Home and N.F.P.O.W.[2]	Share of Total Usual Place of Work Employment (%)	Non-Residential G.F.A., sq.m.	Share of Non-Residential G.F.A.
City of Mississauga	9,480	29,800	39,280	33%	2,663,000	21%
City of Brampton	27,320	26,700	54,020	45%	6,144,200	49%
Town of Caledon	18,960	7,100	26,060	22%	3,747,600	30%
Peel Region	55,760	63,600	119,360	100%	12,554,800	100%

Source: Employment derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.
Floor Space per Worker Assumptions and Gross Floor Area Forecast is a forecast by Watson & Associates Economists Ltd.

[1]Other Employment includes Major Office, Institutional and Commercial/Population-Related Employment.

[2]Excludes No Fixed Place of Work and Work at Home Employment.

Note: Figures have been rounded.

Chapter 4
The Approach to the Calculation of the Charge

4. The Approach to the Calculation of the Charge

4.1 Introduction

This chapter addresses the requirements of subsection 5 (1) of the D.C.A. with respect to the establishment of the need for service which underpins the D.C. calculation. These requirements are illustrated schematically in Figure 4-1.

Note: As the Province has passed Bill 197, notes have been provided where proposed changes impact the methodology.

4.2 Services Potentially Involved

Table 4-1 lists the full range of municipal service categories which are provided within the Region.

A number of these services are defined in subsection 2 (4) of the D.C.A. as being ineligible for inclusion in D.C.s. These are shown as "ineligible" on Table 4-1. Two ineligible costs defined in subsection 5 (3) of the D.C.A. are "computer equipment" and "rolling stock with an estimated useful life of (less than) seven years." In addition, local roads are covered separately under subdivision agreements and related means (as are other local services). Services which are potentially eligible for inclusion in the Region's D.C. are indicated with a "Yes."

4.3 Increase in the Need for Service

The D.C. calculation commences with an estimate of "the increase in the need for service attributable to the anticipated development," for each service to be covered by the by-law. There must be some form of link or attribution between the anticipated development and the estimated increase in the need for service. While the need could conceivably be expressed generally in terms of units of capacity, subsection 5 (1) 3, which requires that Region Council indicate that it intends to ensure that such an increase in need will be met, suggests that a project-specific expression of need would be most appropriate.

Figure 4-1
The Process of Calculating a Development Charge under the Act
that must be followed

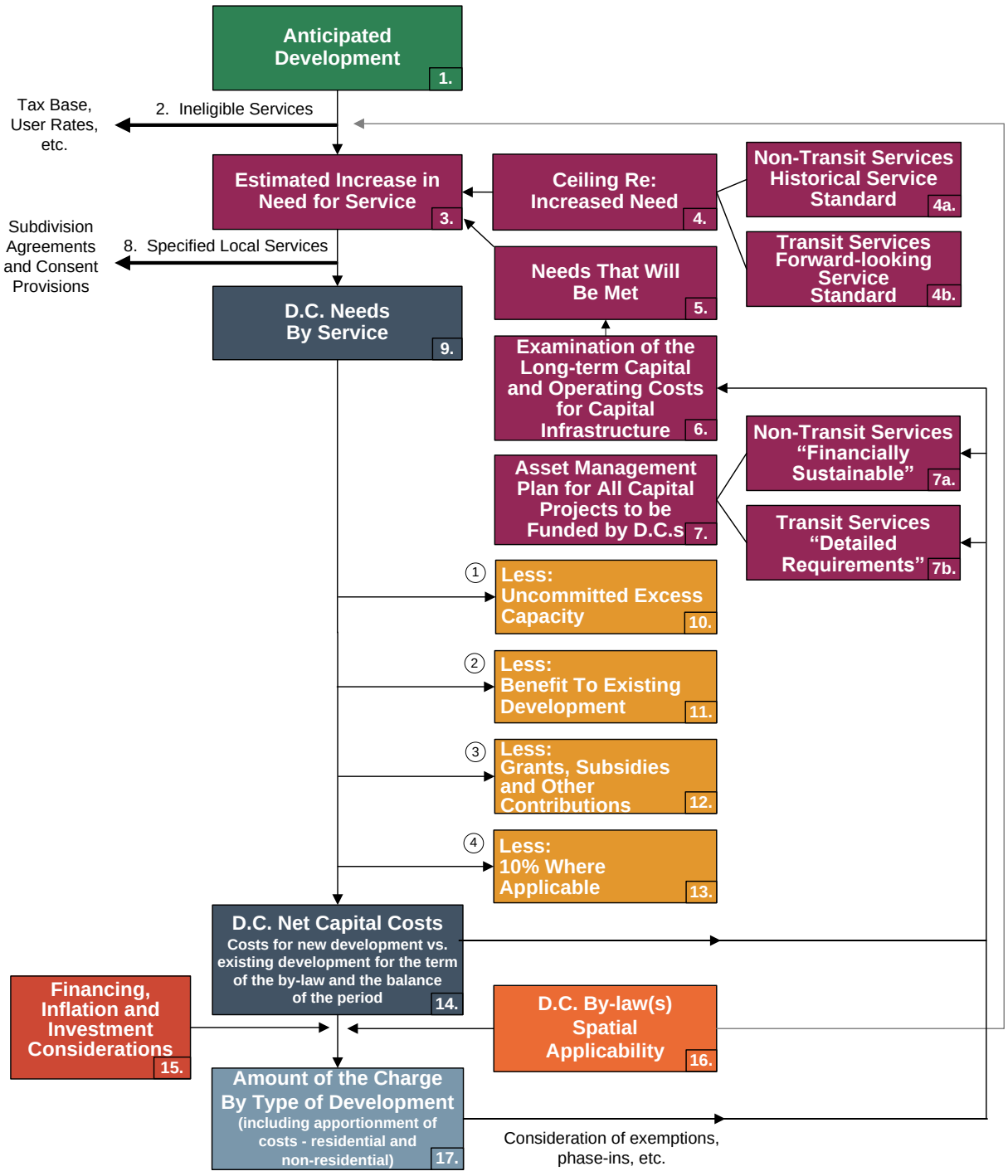

Table 4-1
Categories of Municipal Services to be Addressed as Part of the Calculation

Eligibility for Inclusion in the D.C. Calculation	Description
Yes	Municipality provides the service – service has been included in the D.C. calculation.
No	Municipality provides the service – service has not been included in the D.C. calculation.
n/a	Municipality does not provide the service.
Ineligible	Service is ineligible for inclusion in the D.C. calculation.

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery[1] %
1. Services Related to a Highway - Transportation	Yes	1.1 Arterial roads	100
	Yes	1.2 Collector roads	100
	Yes	1.3 Bridges, Culverts and Roundabouts	100
	n/a	1.4 Local municipal roads	0
	Yes	1.5 Traffic signals	100
	Yes	1.6 Sidewalks and streetlights	100
	Yes	1.7 Active Transportation	100

[1] Province recently passed Bill 197 (yet to be proclaimed) which will remove the 10% mandatory deduction. Further, parking and airports (other than in Waterloo Region) will become ineligible services

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery[1] %
2. Public Works	Yes	2.1 Transit vehicles[1] & facilities	100
	Yes	2.2 Other transit infrastructure	100
	No	2.3 Municipal parking spaces - indoor	90
	No	2.4 Municipal parking spaces - outdoor	90
	Yes	2.5 Works Yards	100
	Yes	2.6 Rolling stock[1]	100
	Yes	2.6 Water supply vehicles & equipment	100
	Yes	2.7 Wastewater vehicles & equipment	100
	n/a	2.8 Ferries	90
	n/a	2.9 Airport	90
3. Stormwater Drainage and Control Services	n/a	3.1 Main channels and drainage trunks	100
	n/a	3.2 Channel connections	100
	n/a	3.3 Retention/detention ponds	100
4. Fire Protection Services	n/a	4.1 Fire stations	100
	n/a	4.2 Fire pumpers, aerials and rescue vehicles[2]	100
	n/a	4.3 Small equipment and gear	100
5. Outdoor Recreation Services (i.e. Parks and Open Space)	Ineligible	5.1 Acquisition of land for parks, woodlots and E.S.A.s	0
	n/a	5.2 Development of area municipal parks	90
	n/a	5.3 Development of district parks	90
	n/a	5.4 Development of municipal-wide parks	90
	n/a	5.5 Development of special purpose parks	90
	n/a	5.6 Parks rolling stock[2] and yards	90

[1]with 7+ year life time
*same percentage as service component to which it pertains
computer equipment excluded throughout

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery[1] %
6. Indoor Recreation Services	n/a	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	90
	n/a	6.2 Recreation vehicles and equipment[2]	90
7. Library Services	n/a	7.1 Public library space (incl. furniture and equipment)	90
	n/a	7.2 Library vehicles[1]	90
	n/a	7.3 Library materials	90
8. Electrical Power Services	Ineligible	8.1 Electrical substations	0
	Ineligible	8.2 Electrical distribution system	0
	Ineligible	8.3 Electrical system rolling stock	0
9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	9.1 Cultural space (e.g. art galleries, museums and theatres)	0
	Ineligible	9.2 Tourism facilities and convention centres	0
10. Wastewater Services	Yes	10.1 Treatment plants	100
	Yes	10.2 Sewage trunks	100
	No	10.3 Local systems	0
11. Water Supply Services	Yes	11.1 Treatment plants	100
	Yes	11.2 Distribution systems	100
	No	11.3 Local systems	0
12. Waste Management Services	Ineligible	12.1 Landfill collection, transfer vehicles and equipment	0
	Ineligible	12.2 Landfills and other disposal facilities	0
	Yes	12.3 Waste diversion facilities	90
	Yes	12.4 Waste diversion vehicles and equipment[2]	90

[1] Province recently passed Bill 197 (yet to be proclaimed) which will remove the 10% mandatory deduction. Further, parking and airports (other than in Waterloo Region) will become ineligible services

[2] with 7+ year life time

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery[1] %
13. Police Services	Yes Yes Yes	13.1 Police detachments 13.2 Police rolling stock[2] 13.3 Small equipment and gear	100 100 100
14. Long Term Care	Yes Yes	14.1 Long Term Care space 14.2 Vehicles[2]	90 90
15. Child Care and Early Years Services	No No	15.1 Child care space 15.2 Vehicles[2]	90 90
16. Public Health	Yes Yes	16.1 Health department space 16.2 Health department vehicles[2]	90 90
17. Housing Services	Yes	17.1 Social Housing space 17.2 Shelters	90 90
18. Provincial Offences Act (P.O.A.)	n/a	18.1 P.O.A. space	90
20. Paramedics	Yes Yes	20.1 Paramedics station space 20.2 Vehicles[2]	90 90
21. Hospital Provision	Ineligible	21.1 Hospital capital contributions	0
22. Provision of Headquarters for the General Administration of Municipalities and Area Municipal Boards	Ineligible Ineligible Ineligible	22.1 Office space 22.2 Office furniture 22.3 Computer equipment	0 0 0

[1] Province recently passed Bill 197 (yet to be proclaimed) which will remove the 10% mandatory deduction. Further, parking and airports (other than in Waterloo Region) will become ineligible services

[2] with 7+ year life time

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery[1] %
23. Other Services	Yes	23.1 Growth Studies in respect to eligible services including those in connection with acquiring buildings, rolling stock, materials and equipment, and improving land[3] and facilities, including the D.C. background study cost	0-100
	Yes	23.2 Interest on money borrowed to pay for growth-related capital	0-100

[1] Province recently passed Bill 197 (yet to be proclaimed) which will remove the 10% mandatory deduction. Further, parking and airports (other than in Waterloo Region) will become ineligible services
[2]with a 7+ year life time
[3]same percentage as service component to which it pertains

4.4 Local Service Policy

Some of the need for services generated by additional development consists of local services related to a plan of subdivision. As such, they will be required as a condition of subdivision agreements or consent conditions.

4.5 Capital Forecast

Paragraph 7 of subsection 5 (1) of the D.C.A. requires that "the capital costs necessary to provide the increased services must be estimated." The Act goes on to require two potential cost reductions and the Regulation sets out the way in which such costs are to be presented. These requirements are outlined below.

These estimates involve capital costing of the increased services discussed above. This entails costing actual projects or the provision of service units, depending on how each service has been addressed.

The capital costs include:

a) costs to acquire land or an interest therein (including a leasehold interest);
b) costs to improve land;
c) costs to acquire, lease, construct or improve buildings and structures;
d) costs to acquire, lease or improve facilities, including rolling stock (with a useful life of 7 or more years), furniture and equipment (other than computer equipment), materials acquired for library circulation, reference or information purposes;
e) interest on money borrowed to pay for the above-referenced costs (i.e. debt charges);
f) costs to undertake studies in connection with the above-referenced matters; and
g) costs of the D.C. background study.

In order for an increase in need for service to be included in the D.C. calculation, Region Council must indicate "...that it intends to ensure that such an increase in need will be met" (subsection 5 (1) 3). This can be done if the increase in service forms part of a Council-approved Official Plan, capital forecast or similar expression of the intention of Council (O. Reg. 82/98 section 3). The capital program contained herein reflects the Region's approved and proposed capital budgets and master servicing/needs studies.

4.6 Treatment of Credits

Section 8, paragraph 5, of O. Reg. 82/98 indicates that a D.C. background study must set out "the estimated value of credits that are being carried forward relating to the service." Subsection 17, paragraph 4, of the same Regulation indicates that "...the value of the credit cannot be recovered from future D.C.s," if the credit pertains to an ineligible service. This implies that a credit for eligible services can be recovered from future D.C.s. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs. There are no outstanding credit obligations included in the D.C. calculations.

4.7 Existing Reserve Funds

Section 35 of the D.C.A. states that:

> "The money in a reserve fund established for a service may be spent only for capital costs determined under paragraphs 2 to 8 of subsection 5 (1)."

There is no explicit requirement under the D.C.A. calculation method set out in subsection 5 (1) to net the outstanding reserve fund balance as part of making the D.C. calculation; however, section 35 does restrict the way in which the funds are used in future.

For services which are subject to a per capita based, service level "cap," the reserve fund balance should be applied against the development-related costs for which the charge was imposed once the project is constructed (i.e. the needs of recent growth). This cost component is distinct from the development-related costs for the next 10-year period, which underlie the D.C. calculation herein.

The alternative would involve the Region spending all reserve fund monies prior to renewing each by-law, which would not be a sound basis for capital budgeting. Thus, the Region will use these reserve funds for the Region's cost share of applicable development-related projects, which are required but have not yet been undertaken, as a way of directing the funds to the benefit of the development which contributed them (rather than to future development, which will generate the need for additional facilities directly proportionate to future growth).

The Region's D.C. Reserve fund balances by service at December 31, 2019 (adjusted) are shown below:

Service	Cash Balance as of December 31, 2019	Adjustments Including Encumbrances and Commitments[1]	Balance as of December 31, 2019 (adjusted)
Services Related to a Highway - Transportation	$92,523,896	($291,463,763)	($198,939,867)
Public Works[2]	$499,541	($41,226)	$458,316
Growth Studies	($903,192)	($2,856,552)	($3,759,744)
Long Term Care	$12,784,680	($1,914,434)	$10,870,245
Public Health	$5,798,750	$0	$5,798,750
Peel Regional Police Services	$6,120,506	($1,392,729)	$4,727,777
Police - O.P.P.	($50,409)	($109,187)	($159,596)
Housing Services	($3,213,987)	($8,470,386)	($11,684,373)
Paramedics	($432,136)	($659,518)	($1,091,654)
Regional Wastewater	($9,993,679)	($62,805,713)	($72,799,391)
South Peel Wastewater	$15,441,616	($249,656,290)	($234,214,674)
Regional Water	($30,630,660)	($267,145,317)	($297,775,977)
South Peel Water	($102,082,073)	($542,633,920)	($644,715,993)
Total	**($14,137,146)**	**($1,429,149,036)**	**($1,443,286,181)**

[1]Adjustments relate to commitments and work in progress

[2]Reserve fund was previously named Transhelp in 2019

Note: Amounts in brackets are deficit balances.

4.8 Deductions

The D.C.A. potentially requires that five deductions be made to the increase in the need for service. These relate to:

- the level of service ceiling;
- uncommitted excess capacity;
- benefit to existing development;
- anticipated grants, subsidies and other contributions; and
- 10% reduction for certain services (to be removed under Bill 197).

The requirements behind each of these reductions are addressed as follows:

4.8.1 Reduction Required by Level of Service Ceiling

This is designed to ensure that the increase in need included in section 4.3 does "…not include an increase that would result in the level of service (for the additional development increment) exceeding the average level of the service provided in the municipality over the 10-year period immediately preceding the preparation of the

background study…" O. Reg. 82/98 (section 4) goes further to indicate that "…both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service."

In many cases, this can be done by establishing a quantity measure in terms of units as floor area, land area or road length per capita and a quality measure, in terms of the average cost of providing such units based on replacement costs, engineering standards or recognized performance measurement systems, depending on circumstances. When the quantity and quality factor are multiplied together, they produce a measure of the level of service, which meets the requirements of the Act, i.e. cost per unit.

With respect to transit services, the changes to the Act as a result of Bill 73 have provided for an alternative method for calculating the services standard ceiling. Transit services must now utilize a forward-looking service standard analysis, described later in this section.

The average service level calculation sheets for each service component in the D.C. calculation are set out in Appendix B.

4.8.2 Reduction for Uncommitted Excess Capacity

Paragraph 5 of subsection 5 (1) requires a deduction from the increase in the need for service attributable to the anticipated development that can be met using the Region's "excess capacity," other than excess capacity which is "committed."

"Excess capacity" is undefined, but in this case must be able to meet some or all of the increase in need for service, in order to potentially represent a deduction. The deduction of uncommitted excess capacity from the future increase in the need for service would normally occur as part of the conceptual planning and feasibility work associated with justifying and sizing new facilities, e.g. if a road widening to accommodate increased traffic is not required because sufficient excess capacity is already available, then widening would not be included as an increase in need, in the first instance.

4.8.3 Reduction for Benefit to Existing Development

Section 5 (1) 6 of the D.C.A. provides that, "The increase in the need for service must be reduced by the extent to which an increase in service to meet the increased need would benefit existing development." The general guidelines used to consider benefit to existing development included:

- the repair or unexpanded replacement of existing assets that are in need of repair;
- an increase in average service level of quantity or quality;
- the elimination of a chronic servicing problem not created by growth; and
- providing services where none previously existed and not triggered by regulatory requirements (generally considered for water or wastewater services).

This step involves a further reduction in the need, by the extent to which such an increase in service would benefit existing development. The level of services cap in section 4.8.1 is related but is not the identical requirement. Sanitary, storm and water trunks are highly localized to growth areas and can be more readily allocated in this regard than other services such as services related to a highway, which do not have a fixed service area.

Where existing development has an adequate service level which will not be tangibly increased by an increase in service, no benefit would appear to be involved. For example, where expanding existing public works facilities simply replicates what existing residents are receiving, they receive very limited (or no) benefit as a result. On the other hand, where a clear existing service problem is to be remedied, a deduction should be made accordingly.

In the case of services such as long-term care, child care and early years, transportation, etc., the service is typically provided on a Region-wide system basis. For example, with respect to child care and early years, facilities of the same type may provide different functions (i.e. daily childcare vs. after-school programs)

4.8.4 Reduction for Anticipated Grants, Subsidies and Other Contributions

This step involves reducing the capital costs necessary to provide the increased services by capital grants, subsidies and other contributions (including direct developer contributions required due to the local service policy) made or anticipated by Council and in accordance with various rules such as the attribution between the share related to new vs. existing development. That is, some grants and contributions may not specifically be applicable to growth or where Council targets fundraising as a measure to offset impacts on taxes (O. Reg. 82/98 section 6).

4.8.5 The 10% Reduction

Paragraph 8 of subsection 5 (1) of the D.C.A. requires that, "the capital costs must be reduced by 10 per cent." This paragraph does not apply to water supply services, waste water services, stormwater drainage and control services, services related to a highway, police and fire protection services. The primary services to which the 10% reduction does apply include services such as parks, recreation, libraries, childcare/ social services, the Provincial Offences Act, ambulance, homes for the aged, and health.

The 10% is to be netted from the capital costs necessary to provide the increased services, once the other deductions have been made, as per the infrastructure costs sheets in Chapter 5.

Note: The calculations have been provided with the 10% deduction in the body of the report to reflect the current D.C.A. at the time of writing. With the passage of Bill 197 and upcoming proclamation, the calculations have also been prepared without the 10% mandatory deduction and are provided in Appendix G for Council's consideration.

4.9 Municipal-wide vs. Area Rating

This step involves determining whether all of the subject costs are to be recovered on a uniform municipal-wide basis or whether some or all are to be recovered on an area-specific basis. Under the amended D.C.A., it is now mandatory to "consider" area-rating of services (providing charges for specific areas and services), however, it is not mandatory to implement area-rating. Further discussion is provided in section 7.4.4.

4.10 Allocation of Development

This step involves relating the costs involved to anticipated development for each period under consideration and using allocations between residential and non-residential development and between one type of development and another, to arrive at a schedule of charges.

4.11 Asset Management

The new legislation now requires that a D.C. background study must include an asset management plan (subsection 10 (2) c. 2). The asset management plan (A.M.P.) must deal with all assets that are proposed to be funded, in whole or in part, by D.C.s. The current regulations provide very extensive and specific requirements for the A.M.P. related to transit services (as noted in the subsequent subsection); however, they are silent with respect to how the A.M.P. is to be provided for all other services. As part of any A.M.P., the examination should be consistent with the municipality's existing assumptions, approaches and policies on the asset management planning. This examination has been included in Appendix F.

4.12 Transit

The most significant changes to the D.C.A resulting from Bill 73 relate to the transit service. These changes relate to four areas of the calculations, as follows:

A. Transit no longer requires the statutory 10% mandatory deduction from the net capital cost (subsection 5.2 (i) of the D.C.A.).

B. The background study requires the following in regard to transit costs (as per subsection 8 (2) of the Regulations):

    1. The calculations that were used to prepare the estimate for the planned level of service for the transit services, as mentioned in subsection 5.2 (3) of the Act.
    2. An identification of the portion of the total estimated capital cost relating to the transit services that would benefit,

i. the anticipated development over the 10-year period immediately following the preparation of the background study, or
ii. the anticipated development after the 10-year period immediately following the preparation of the background study.

3. An identification of the anticipated excess capacity that would exist at the end of the 10-year period immediately following the preparation of the background study.
4. An assessment of ridership forecasts for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study, categorized by development types, and whether the forecasted ridership will be from existing or planned development.
5. An assessment of the ridership capacity for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study.

C. A new forward-looking service standard (as per subsection 6.1 (2) of the Regulations):

1. The service is a discrete service.
2. No portion of the service that is intended to benefit anticipated development after the 10-year period immediately following the preparation of the background study may be included in the estimate.
3. No portion of the service that is anticipated to exist as excess capacity at the end of the 10-year period immediately following the preparation of the background study may be included in the estimate.

D. A very detailed asset management strategy and reporting requirements (subsection 6.1 (3) of the Regulation) that includes lifecycle costs, action plans that will enable the assets to be sustainable, summary of how to achieve the proposed level of service, discussion on procurement measures and risk.

Conventional Transit services are currently provided through the area municipalities. Therefore, the above calculations and reporting requirements are not required by the Region.

Chapter 5
D.C.-Eligible Cost Analysis by Service

5. D.C.-Eligible Cost Analysis by Service

5.1 Introduction

This chapter outlines the basis for calculating eligible costs for the D.C.s to be applied on a uniform basis. In each case, the required calculation process set out in subsection 5 (1) paragraphs 2 to 8 in the D.C.A. and described in Chapter 4, was followed in determining D.C.-eligible costs.

The nature of the capital projects and timing identified in the Chapter reflects Council's current intention. Over time, however, Region projects and Council priorities change and accordingly, Council's intentions may alter and different capital projects (and timing) may be required to meet the need for services required by new growth.

5.2 Service Levels and 10-Year Capital Costs for D.C. Calculation

This section evaluates the development-related capital requirements for all of the "soft" services over a 10-year planning period. Each service component is evaluated on two format sheets: the average historical 10-year level of service calculation (see Appendix B), which "caps" the D.C. amounts; and, the infrastructure cost calculation, which determines the potential D.C. recoverable cost.

5.2.1 Public Works

The Public Works Department has a variety of vehicles and major equipment related to operations support, transportation, water, wastewater and Transhelp totalling approximately $55.24 million. The inventory provided over the previous 10-year period equates to a per capita standard of $34. Over the forecast period, the D.C.-eligible amount for vehicles and equipment is $7,095,825.

The Region provides operational support for their transportation, water, and, wastewater services and Transhelp services out of a number of public works facilities. Currently, the facilities provide 29,361 sq.m of building area, up from 22,144 sq.m in 2010. Based on the average over the previous 10-year period, this translates into an average level of service of 17.8 sq.m per 1,000 population or $78 per capita. This level of service

provides the Region with a maximum D.C.-eligible amount for recovery over the 10-year forecast period of $16,513,920.

Based on the service standard for vehicles, equipment and facilities, the D.C.-eligible amount related to Public Works over the forecast period is $23,609,745.

Based on the needs arising from growth, eight projects have been identified related to additional facility space, vehicles, and technological investments. The total cost of the projects identified is $71,159,000 and includes new facilities, expansions to existing facilities and additional vehicles to service growth. A deduction in the amount of $23,898,000 has been applied to account for the benefit to growth beyond the 10-year forecast period. An additional $2,000,000 has been deducted from the Public Works Facility Expansion for internal funding sources identified by staff for this project. Further, $21,196,900 has been deducted to account for the benefit to existing development and $458,316 has been deducted to recognize the existing reserve fund balance. Upon applying these deductions, the net amount included in the D.C. is $23,605,784.

The residential/non-residential capital cost allocation for public works is a 71%/29% split which is based on the incremental growth in population to employment for the 10-year forecast period

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Public Works

Prj .No	Increased Service Needs Attributable to Anticipated Development 2020-2029	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
1	New Salt Manangement Facility (13,000 tonnes capacity-GFA of 2,266 sq.m.)	2020-2024	15,800,000	-		15,800,000	3,521,200		12,278,800	8,717,948	3,560,852
2	New Vehicle Provision	2020-2029	1,900,000	-		1,900,000	-		1,900,000	1,349,000	551,000
3	Victoria Yard Expansion	2020-2024	30,500,000	18,453,000		12,047,000	11,625,200		421,800	299,478	122,322
4	Land Acquisition for future facility expansion	2020-2024	9,000,000	5,445,000		3,555,000	-		3,555,000	2,524,050	1,030,950
5	Technology Investment to Meet Service Needs	2020	287,000	-		287,000	213,400		73,600	52,256	21,344
6	Automatic Fare Payment Solution	2021	1,530,000	-		1,530,000	1,137,800		392,200	278,462	113,738
7	Outsourced Transhelp Vehicles to Service Growth	2020-2029	8,142,000	-		8,142,000	4,699,300		3,442,700	2,444,317	998,383
8	Public Works Facility Expansion	2020-2024	4,000,000	-	2,000,000	2,000,000	-		2,000,000	1,420,000	580,000
9	Reserve Fund Adjustment	Reserve	-	-		-	458,316		(458,316)	(325,404)	(132,912)
	Total		**71,159,000**	**23,898,000**	**2,000,000**	**45,261,000**	**21,655,216**	**-**	**23,605,784**	**16,760,107**	**6,845,677**

5.2.2 Peel Regional Police Services

Peel Regional Police currently provides police services to the Cities of Brampton and Mississauga from a total of 80,103 sq.m. of facility space. The facility space provided over the previous 10-year period translates to an average level of service of 0.056 sq.m per capita or an investment of $209 per capita. Based on this service standard the Region would be eligible to collect approximately $36.71 million from D.C.s for additional facility space over the 10-year period.

The Region currently owns and leases 26.22 hectares of land which is used for police facilities/activities. The amount provided over the historical 10-year period equates to an average level of service of 0.019 hectares per 1,000 population or $70 per capita. This level of service provides the Region with a maximum D.C.-eligible amount of $12,216,383 for recovery over the forecast period.

In addition to the facility space and land, the Region also currently has 840 police vehicles in its inventory. The total D.C.-eligible amount calculated for police vehicles over the forecast period is approximately $2,548,375, based on an average historical service standard of $15 per capita.

Peel Regional Police also maintains equipment and radios which currently have a total value of $77,616,494. The Region has a calculated average level of service for the historic 10-year period of $49 per capita, providing for a D.C.-eligible amount over the forecast period of $8,585,388 for equipment and radios.

Based on these service standards, the total D.C.-eligible amount over the 10-year forecast period related to Peel Regional Police is $60,057,291.

The Region has identified the need for additional vehicles and equipment for new police staff, as a result of growth. In addition, two Divisional and Operational Facilities have been identified within the forecast period. The gross capital cost of these projects is $191,180,000. An amount of $59,535,600 has been deducted as a benefit to existing development from the Divisional and Operational Facility project in order to recognize the portion of the cost related to replacement of an existing facility. An additional $71,574,300 has been deducted from the calculations to recognize the benefit to growth subsequent to the forecast period. After deducting $4,727,777 to account for the

existing reserve fund balance, a net D.C.-eligible amount of $55,342,323 has been included in the calculations for the 10-year forecast period.

The residential/non-residential allocation for Peel Regional Police is based on the relationship between population and employment within the Cities of Brampton and Mississauga, resulting in an allocation of 71% to residential and 29% to non-residential.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Peel Regional Police Services

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2020-2029									71%	29%
1	Vehicles for New Police Staff	2020	292,000	-		292,000	-		292,000	207,320	84,680
2	Equipment for New Police Staff	2020	117,000	-		117,000	-		117,000	83,070	33,930
3	Equipment for New Police Staff	2020	90,000	-		90,000	-		90,000	63,900	26,100
4	Communication Equipment for New Police Staff	2020	211,000	-		211,000	-		211,000	149,810	61,190
5	Divisional and Operational Facility	2021	126,000,000	44,444,400		81,555,600	59,535,600		22,020,000	15,634,200	6,385,800
6	Divisional and Operational Facility	2028	57,000,000	27,129,900		29,870,100	-		29,870,100	21,207,771	8,662,329
7	Communication Equipment for New Police Staff	2021-2029	2,430,000	-		2,430,000	-		2,430,000	1,725,300	704,700
8	Vehicles for New Police Staff	2021-2029	2,628,000	-		2,628,000	-		2,628,000	1,865,880	762,120
9	Equipment for New Police Staff	2021-2029	2,412,000	-		2,412,000	-		2,412,000	1,712,520	699,480
	Reserve Fund Adjustment	Reserve					4,727,777		(4,727,777)	(3,356,721)	(1,371,055)
	Total		**191,180,000**	**71,574,300**	**-**	**119,605,700**	**64,263,377**	**-**	**55,342,323**	**39,293,050**	**16,049,274**

5.2.3 Police – O.P.P.

The Region currently provides policing services to the Town of Caledon through the Ontario Provincial Police (O.P.P.). The O.P.P. operates its services from a total of 2,324 sq.m of facility space. Based on the level of service provided over the previous 10-year period, the average level of service equates to 0.03 sq.m per capita or $158 per capita. The facilities are operated from 1.96 hectares of land. The average level of service provided over the previous 10-year period equates to a service standard of $70 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 10-year forecast period of $8,138,131.

Based on the anticipated growth over the 10-year forecast period, the need for an additional Ancillary Building and a new Satellite Office in Bolton have been identified with a gross capital cost of $1.55 million. A deduction in the amount of $330,100 has been made to account for the existing facility space to be replaced by the new office space in Bolton. An additional $159,596 has been included in the D.C. calculation to account for the reserve fund deficit which results in a net D.C.-eligible amount of $1,379,496 over the forecast period.

The growth-related costs for O.P.P. have been allocated 75% residential and 25% non-residential based on the incremental growth in population to employment within the Town of Caledon, for the 10-year forecast period.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Police - O.P.P.

Prj .No	Increased Service Needs Attributable to Anticipated Development 2020-2029	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 75%	Non-Residential Share 25%
1	Ancillary Building	2021	1,150,000	-		1,150,000	-		1,150,000	862,500	287,500
2	Bolton O.P.P. Satellite Office	2021-2022	400,000	-		400,000	330,100		69,900	52,425	17,475
	Reserve Fund Adjustment	Reserve	159,596	-		159,596	-		159,596	119,697	39,899
	Total		**1,709,596**	**-**	**-**	**1,709,596**	**330,100**	**-**	**1,379,496**	**1,034,622**	**344,874**

5.2.4 Growth Studies

The D.C.A. permits the inclusion of studies undertaken to facilitate the completion of the Region's capital works program. The Region has made provisions for the inclusion of new studies undertaken to facilitate this D.C. process, as well as other studies which benefit growth (in whole or in part). The list of studies includes such studies as the following:

- D.C. Study Updates;
- Growth Related Financial Analysis;
- Official Plan Review;
- Regional Official Plan Amendment Appeals;
- Growth Management Program Support;
- Long Range Studies – Growth Related;
- Long Range Studies – Community Related; and
- Watershed Planning to Support Growth.

The cost of these studies, including the reserve fund deficit of $3,759,744 is $22,984,744, of which $3,165,000 is attributable to existing benefit. The net growth-related capital cost, after the mandatory 10% deduction, is $18,213,744. This amount has been included in the D.C. calculations.

These costs have been allocated 71% residential and 29% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Growth Studies

No.	Increased Service Needs Attributable to Anticipated Development 2020-2029	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	Component Name											71%	29%
1	Development Charges Update	2020-2029	1,200,000	-		1,200,000	-		1,200,000	120,000	1,080,000	766,800	313,200
2	Growth Related Financial Analysis	2020-2029	1,000,000	-		1,000,000	-		1,000,000	100,000	900,000	639,000	261,000
3	Official Plan Review	2021-2029	5,000,000	-		5,000,000	1,000,000		4,000,000	400,000	3,600,000	2,556,000	1,044,000
4	Regional Official Plan Ammendments (ROPAs) Appeals	2020-2029	4,800,000	-		4,800,000	960,000		3,840,000	384,000	3,456,000	2,453,760	1,002,240
5	Growth Management Program Support	2021-2029	3,600,000	-		3,600,000	-		3,600,000	360,000	3,240,000	2,300,400	939,600
6	Long Range Studies - Growth	2021-2029	1,800,000	-		1,800,000	360,000		1,440,000	144,000	1,296,000	920,160	375,840
7	Long Range Studies - Community	2020-2029	1,600,000	-		1,600,000	800,000		800,000	80,000	720,000	511,200	208,800
8	Watershed Planning to Support Growth	2020	225,000	-		225,000	45,000		180,000	18,000	162,000	115,020	46,980
	Reserve Fund Adjusment	Reserve	3,759,744	-		3,759,744	-		3,759,744		3,759,744	2,669,418	1,090,326
	Total		**22,984,744**	**-**	**-**	**22,984,744**	**3,165,000**	**-**	**19,819,744**	**1,606,000**	**18,213,744**	**12,931,758**	**5,281,986**

5.2.5 Long Term Care

The Region of Peel currently operates five Long Term Care facilities from a total of 54,623 sq.m. of facility space. The facilities in service over the historical 10-year period provide residents with space equating to an average service level of 0.04 sq.m or $194 per capita. This facility space is currently provided on 100,974 sq.m of land which provides a per capita service standard of 0.07 sq.m or $50 per capita. This level of investment provides the Region with $51,692,715 for eligible future D.C. funding over the 10-year forecast period.

The Region has identified the need for a new Peel Manor facility which will provide additional Long Term Care space for growth-related needs. The gross capital cost of this project is $135.6 million. $64,414,000 has been deducted as a benefit to existing development to account for the existing Peel Manor facility space that is being replaced. An additional $854,300 has been deducted to account for the benefit to growth beyond the forecast period. A further reduction of $7,962,379 recognizes anticipated grant funding related to this project. With an adjustment of $10,870,245 to account for the existing reserve fund balance, $45,262,144 has been included in the D.C. calculation, after the 10% mandatory deduction.

An allocation of 100% to residential development has been attributed to services related to Long Term Care Homes as this is primarily a residential service.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel

Space: Long Term Care

Prj.No	Increased Service Needs Attributable to Anticipated Development 2020-2029 Comp Name	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 100%	Non-Residential Share 0%
1	Peel Manor	2020-2022	135,600,000	854,300		134,745,700	64,414,000	7,962,379	62,369,321	6,236,932	56,132,389	56,132,389	-
	Reserve Fund Adjustment	Reserve					10,870,245		(10,870,245)		(10,870,245)	(10,870,245)	-
	Total		**135,600,000**	**854,300**	**-**	**134,745,700**	**75,284,245**	**7,962,379**	**51,499,076**	**6,236,932**	**45,262,144**	**45,262,144**	**-**

5.2.6 Public Health Services

Public Health services focus on health promotion, health protection and illness prevention and are provided in various offices and clinics located throughout the Region. The Region currently provides this service from 2,081 sq.m. of facility space. Based on the space provided over the past 10 years, the historical average level of service provided by the Region equates to an investment of $12 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the forecast period of $2,540,115.

The Region has identified the need for additional clinic and facility space over the forecast period at a gross capital cost of $5,400,000. A deduction of $1,080,000 has been made to account for the benefit to existing development. The current reserve fund balance of $5,798,750 will fully fund the growth-related portions of these projects. The residual amount in the reserve fund will be allocated towards future-growth related works.

While public health services are predominately residential based, there are some health services provided to the non-residential sector. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Public Health

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	2020-2029											95%	5%
1	Public Health Clinics and Facilities	2021	1,800,000	-		1,800,000	360,000		1,440,000	144,000	1,296,000	1,231,200	64,800
2	Public Health Clinics and Facilities	2024	1,800,000	-		1,800,000	360,000		1,440,000	144,000	1,296,000	1,231,200	64,800
3	Public Health Clinics and Facilities	2029	1,800,000	-		1,800,000	360,000		1,440,000	144,000	1,296,000	1,231,200	64,800
	Reserve Fund Adjustment	Reserve		-		-	3,888,000		(3,888,000)		(3,888,000)	(3,693,600)	(194,400)
	Total		**5,400,000**	**-**	**-**	**5,400,000**	**4,968,000**	**-**	**432,000**	**432,000**	**-**	**-**	**-**

Note: Residual of $1,910,750 remains in the reserve fund for future growth-related works

5.2.7 Paramedics

The Peel Regional Paramedic Services currently operates out of a combination of larger reporting stations and smaller satellite stations. These facilities provide a total of 23,702 sq.m. of space. Over the past ten years, the average level of service was 9.90 sq.m. of space per 1,000 population or an investment of $70 per capita. Based on this service standard, the Region would be eligible to collect approximately $14,817,690 from D.C.s for ambulance facility space (over the 10-year period).

In addition to facility space, the Region also has 132 ambulances, 47 transport vehicles and 164 defibrillators. Over the past ten years, the average level of service was 0.20 vehicles/equipment per 1,000 population which equates to an investment of $21 per capita. Based on this service standard, the Region would be eligible to collect approximately $4,496,490 from D.C.s for ambulance vehicles and equipment (over the 10-year period).

Based on these service standard calculations, the total D.C.-eligible amount over the 10-year forecast period related to Paramedics is $19,314,180.

The Region of Peel has identified the need for additional paramedics facility space required for growth resulting in gross capital expenditures of $49,210,000. In addition, defibrillators, medical equipment and additional vehicles are needed over the forecast period. The total gross capital cost related to Paramedics is $61,510,800. Other deductions in the amount of $5,038,000 have been made to account for other funding sources identified for these growth-related projects. A further deduction of $38,270,000 has been made to account for the share of the costs that benefit growth beyond the forecast period. Finally, an adjustment of $1,091,654 has been made to account for the existing reserve fund deficit resulting in a D.C. recoverable amount of $17,474,174, after the 10% mandatory deduction.

The growth costs have been allocated 71% residential and 29% non-residential based on the incremental growth in population to employment, for the 10-year forecast period.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Paramedics

#	Increased Service Needs Attributable to Anticipated Development 2020-2029	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	Component Name											71%	29%
1	Defibrillators and Medical Equipment	2020	1,096,000	-	1,085,000	11,000	-		11,000	1,100	9,900	7,029	2,871
2	Ambulance Fleet and Support Vehicles	2020	4,093,000	-	3,953,000	140,000	-		140,000	14,000	126,000	89,460	36,540
3	Ambulance Facilities - Growth	2020	6,210,000	-		6,210,000	-		6,210,000	621,000	5,589,000	3,968,190	1,620,810
4	Defibrillators and Medical Equipment	2021-2029	961,200	-		961,200	-		961,200	96,120	865,080	614,207	250,873
5	Ambulance Fleet and Support Vehicles	2021-2029	6,150,600	-		6,150,600	-		6,150,600	615,060	5,535,540	3,930,233	1,605,307
6	Ambulance Facilities - Growth	2021-2029	43,000,000	38,270,000		4,730,000	-		4,730,000	473,000	4,257,000	3,022,470	1,234,530
	Reserve Fund Adjustment		1,091,654	-		1,091,654	-		1,091,654		1,091,654	775,074	316,580
	Total		**62,602,454**	**38,270,000**	**5,038,000**	**19,294,454**	**-**	**-**	**19,294,454**	**1,820,280**	**17,474,174**	**12,406,664**	**5,067,510**

5.2.8 Housing Services

The Region of Peel provides Social Housing services to its residents due to the rising difficulty for many to afford accommodations at market prices. The Region currently operates 7,780 units below market rent. Over the previous 10 years, the average level of service equates to an average level of investment of $2,064 per capita. This level of service provides the Region with a maximum D.C.-eligible amount of $436,637,520 over the 10-year forecast period.

In addition to Social Housing units, the Region also provides temporary housing and living space for homeless individuals. The Region currently operates out of 13,423 sq.m of facility space which, when based on the average provided over the last 10 years, equates to an average level of service of $34 per capita. Due to the increasing needs for Shelter services, the Region has been renting out hotel rooms on an as-needed basis to address the overflow that cannot be accommodated in the existing facility space. In 2019, the Region rented 20,686 hotel rooms over the year. The level of service provided over the historical 10-year period provides for an average level of service of $67 per capita. This level of service provided through shelter space and hotel rooms allows the Region to recover $7,273,485 over the forecast period.

Based on these service standards, the Region is eligible to collect up to $443,911,005 from D.C.s for Housing Services.

The Region has identified $836,510,000 in Affordable Housing Initiatives through the Housing Master Plan. This project will provide additional social housing units to residents. In addition to this project, The Region has also identified the need for an additional Family Shelter in Brampton at a gross capital cost of $34,301,000. Deductions in the amount of $138,906,400 have been made to account for the benefit to growth beyond the forecast period. Further deductions of $57,461,000 have been made to recognize recently announced grant contributions to these projects as well as $186,910,600 to recognize other deductions. Finally, deductions totalling $298,700,700 have been made to account for the share of the costs that benefit existing development. An additional $11,684,373 has been included in the D.C. calculation to account for the existing reserve fund deficit. The net D.C. recoverable amount for Housing Services is therefore $181,633,443, after the 10% mandatory deduction.

Since Housing Services is considered a residential-based service, the growth-related capital costs have been allocated 100% residential and 0% non-residential.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Housing Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	2020-2029											100%	0%
1	Affordable Housing Initiatives	2023	836,510,000	115,670,000	186,910,600	533,929,400	297,300,700	54,998,000	181,630,700	18,163,070	163,467,630	163,467,630	-
2	Brampton Family Shelter	2021	34,301,000	23,236,400		11,064,600	1,400,000	2,463,000	7,201,600	720,160	6,481,440	6,481,440	-
3	Reserve Fund Adjustment	Reserve	11,684,373	-		11,684,373	-		11,684,373		11,684,373	11,684,373	-
	Total		**882,495,373**	**138,906,400**	**186,910,600**	**556,678,373**	**298,700,700**	**57,461,000**	**200,516,673**	**18,883,230**	**181,633,443**	**181,633,443**	**-**

5.2.9 Waste Diversion

With respect to Waste Diversion, the Region currently provides 19,366 sq.m. of eligible waste diversion related facility space. Over the past ten years, the average level of service for eligible space was 0.01 sq.m. per capita which equates to an average investment of $187 per capita. In addition to facilities, there are also 130 waste diversion collection vehicles that are 100% eligible for inclusion in the D.C. Over the historical 10-year period, the average service standard for vehicles equates to $30 per capita. The Region also has an inventory of non-collection vehicles and equipment related to waste diversion at a value of $9,247,958. The level of service provided over the previous 10 years equates to an average level of investment of $6 per capita. Finally, the Region provides blue and green carts to residential units for recycling purposes. In 2019, 447,683 carts were provided to residents within the Region, providing for an average investment of $45 per capita. Based on the service standard for waste diversion services, the Region would be eligible to collect $56,470,500 from D.C.s over the 10-year period.

The Region has identified the need for additional carts and bins based on the anticipated growth in residential units over the 10-year forecast period. A provision has also been made for additional collection vehicles that will be required to service new growth. Finally, an Anaerobic Digestion Facility has been planned for construction within the forecast period. The gross capital cost of these projects is $121,520,000. A deduction of $3,622,000 has been applied to account for the capacity at the Anaerobic Digestion Facility that will benefit growth beyond the forecast period. A further deduction of $94,163,000 has been made to account for the existing organic waste to be processed at this new facility. The net growth-related capital cost after the mandatory 10% deduction is $21,361,500.

While waste diversion is predominately residential based, there is some use by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Waste Diversion

Prj .No	Increased Service Needs Attributable to Anticipated Development 2020-2029 Component Name	Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 95%	Non-Residential Share 5%
1	Blue Cart - Curbside	2020-2029	2,880,000	-		2,880,000	-		2,880,000	288,000	2,592,000	2,462,400	129,600
2	Green Cart - Curbside	2020-2029	4,080,000	-		4,080,000	-		4,080,000	408,000	3,672,000	3,488,400	183,600
3	Blue Multi-Res	2020-2029	72,000	-		72,000	-		72,000	7,200	64,800	61,560	3,240
4	Kitchen Bins	2020-2029	288,000	-		288,000	-		288,000	28,800	259,200	246,240	12,960
5	Provision for Additional Collection Vehicles	2021-2029	5,550,000	-		5,550,000	-		5,550,000	555,000	4,995,000	4,745,250	249,750
6	Anaerobic Digestion Facility	2020-2023	108,650,000	3,622,000		105,028,000	94,163,000		10,865,000	1,086,500	9,778,500	9,289,575	488,925
	Total		**121,520,000**	**3,622,000**	**-**	**117,898,000**	**94,163,000**	**-**	**23,735,000**	**2,373,500**	**21,361,500**	**20,293,425**	**1,068,075**

5.3 Service Levels and 21-Year Capital Costs for Peel's D.C. Calculation

This section evaluates the development-related capital requirements for those services with 21-year (2020-2041) capital costs.

5.3.1 Services Related to a Highway – Transportation

5.3.1.1 Introduction

The Region of Peel is responsible for the planning, construction, operations, and maintenance of the transportation network within its municipal boundaries. To identify the required transportation infrastructure needs for the road network to the 2041 planning horizon year, the Region of Peel developed the Long-Range Transportation Plan (L.R.T.P.). The L.R.T.P. serves as the basis for identifying infrastructure programming needs, inclusive of both road improvements as well as sustainable and active transportation infrastructure. The Plan is updated in its entirety every 5 years with the latest being completed and adopted by Regional Council in 2019. The 2019 L.R.T.P. provides a critical "blueprint" for transportation infrastructure requirements that allows the Region to sustain projected growth demands to the 2041 planning horizon.

The Region of Peel retained the services of H.D.R. Corporation (H.D.R.) to deliver an updated Transportation D.C. Background Study (2017 to 2041). This included a full review of the road network and intersection improvements required to accommodate future traffic growth due to development. In addition to the technical analyses completed by H.D.R. and I.B.I. Group, the Region has drawn upon several Regional Transportation Plans and Strategic Studies that inform the Road Improvement and Sustainable Transportation component of the 2020 D.C. update. They include:

- The Long Range Transportation Plan, 2019; and,
- Adoption and implementation of the 2018 Sustainable Transportation Strategy, which is inclusive of pedestrian and cycling infrastructure requirements along Regional roads;

The combination of these Plans, Strategic Studies, and technical analyses serve as the basis for the development-related capital requirements for the 2020 D.C. Background Study and By-law Update.

5.3.1.2 Road Network Service Levels

According to the D.C.A., the 10-year historical average service level defines an upper limit on the road improvements that are eligible to be included in the development charge. Provided the proposed improvement program does not result in a future service level that is better than the historical 10-year average, this program is required as a result of future growth and can be included in the development charge.

The Region of Peel owns and maintains 1,668 lane km of arterial roads, as well as sidewalks and active transportation lanes and tracks. This provides an average level of investment of $7,060 per capita, resulting in a D.C. eligible recovery amount of $3,068,895,060 over the 2020-2041 forecast period.

The Region also has 100 bridges, and 81 major culverts throughout the Region which equates to an investment of $411 per capita and a D.C. recoverable amount of $178,705,170 over the 21-year forecast period.

The total D.C. eligible amount over the forecast period for Services Related to a Highway – Transportation is $3,247,600,230.

5.3.1.3 Costing Analysis – Construction Costs Update

5.3.1.3.1 Design Standards

Several documents were reviewed in order to establish a set of road specifications for the 2020 Peel D.C. update. Assumptions as to roadway characteristics were supported by findings from the 2013 Peel Road Characterization Study, the Peel Public Works Adopted Standard, the Transportation Association of Canada (T.A.C.) Geometric Design Guide and the Ministry of Transportation (M.TO.) Geometric Standard. Table 5-1 presents the main road specifications used in the costing exercise.

Table 5-1
Region of Peel
Road Specifications Assumptions

	2020 Peel Region D.C.	
IMPROVEMENT TYPE	**SALVAGED BASE ROAD WIDENING**	
ROAD DIMENSIONS	**URBAN**	**RURAL**
Lane Width (m):	3.50m	3.75m
CROSS-SECTION:		
Cross-Section	URBAN	RURAL
Asphalt Top Course Depth	0.050m	0.050m
Asphalt Bottom Course Depth	0.100m	0.100m
Granular A (Upper Granular) Depth	0.150m	0.150m
Granular B (Lower Granular) Depth	0.45m	0.45m
Paved Shoulder Width	-	1.00m
Granular Shoulder Width	-	2.00m
Curb and Gutter	2 side/s	0 side/s
Asphalt pad / Splash pad	1.00m	-
Sidewalk Width	1.80m	-
Bike Path Width	2.40m	-
Catch basins spacing	75.0m	-
Manhole spacing	120.0m	-
Paved Shoulder Thickness		
HL-1	-	0.050m
HL-8	-	0.100m
Granular A (Upper Granular) Depth	-	0.150m
Granular B (Lower Granular) Depth	-	0.450m
Granular Shoulder Thickness		
Granular A (Upper Granular) Depth	-	0.150m
Granular B (Lower Granular) Depth	-	-

Since the 2015 Peel D.C. Background Study, design standards and road cross-section specifications have evolved. The main changes to road design assumptions that impacted the calculation of road project construction costs include:

- The reduction in lane widths for Urban Roads – Lane widths were reduced from 3.75m per lane to 3.50m per lane.

- The increase in paved shoulder widths – The width for paved shoulders increased from 1.0m to 1.5m, as per the Active Transportation Plan.

- The use of 450mm of Granular B below the paved shoulder – The paved shoulder subsurface must match the composition of the roadway subsurface (0.150m for Granular A and 0.450m for Granular B). In the 2015 D.C. study, paved and unpaved shoulders only incorporated 0.150m of Granular A. These changes are in accordance with Standard Drawing (S.T.D.) 5-1-2.

5.3.1.3.2 Construction Unit Price Review

Road construction contracts tendered by the Region of Peel between 2013 and 2016 were reviewed to develop unit prices. These average unit costs were integral to properly price the road improvements and calculate the benchmark costs for different projects.

The selected approach provided estimates based on 2016-unit prices consisting of averaged prices from construction contracts tendered between 2013 and 2016 and using a 2% price increase factor to account for inflation. This factor is consistent with both the increases in the Canadian Construction Price Index and the year-to-year inflation rate anticipated by Peel Region. Incorporating data from previous years ensures that a reasonable sample of projects is included and smoothens out annual fluctuations. The selected method follows the unit price costing approach used in previous D.C. updates.

Table 5-2
Region of Peel
Past Contracts to Develop Construction Unit Prices

Year	Project ID	Description
2013	026T	Bridge Rehabilitation
	043T	Road Works
	076T	Road Works
	078T	Road Works
	079T	Watermain Replacement and Road Resurfacing
	116T	Road Works, Structural Works, Storm and Sanitary Sewers

Year	Project ID	Description
	331T	Road Works
	333T	Structural Works
2014	002T	Bridge Rehabilitation
	005T	Road Works
	012T	Road Works
	017T	Road Works and Intersection Improvements
	024T	Roadway Reconstruction and Watermain Replacement
	039T	Road Works, Structural Works, Storm and Sanitary Sewers
	201T	Road Works, Structural Works, Storm and Sanitary Sewers
	310T	Road Works
	438T	Road Works and Intersection Improvements
	201T	Dixie Road Widening and Utility Relocation
	456T	Road Works
2015	04-4840	Bridge Rehabilitation
	09-480 and 11-4880	Road and Structural Works
	10-4850	Culvert Repair and Replacement
	11-4090 and 14-4265	Road Works, Storm and Sanitary Sewers, Intersection Improvements, Parking Lot Construction
	11-4830	Bridge Rehabilitation
	13-4666 and 15-4666	Road Works
	15-4635	Road Works
	15-4653	Road Works
	15-4665	Road Works
	15-4675	Road Works
	2015-175T	Road Resurfacing
	2015-058T	Road Resurfacing
	N/A	Queen Street bid
2016	012T	Road Works
	071T	Road Works
	396T	Low Impact Development
	04-0T	Removals and Installation
	04-33	Hydro One Utilities

Table 5-3 presents some of the unit prices derived from the review of the contracts above and compares them to the unit prices used in the 2015 D.C. update. For the purpose of this report, only the more commonly occurring construction items between curb lines have been listed.

Table 5-3
Region of Peel
Construction Unit Prices (Items between Curb lines)

Construction Item	Unit	2020 Peel D.C. (2016$)	2015 Peel D.C. (2015$)	Change
Excavation	m^3	$25.46	$22.87	11%
Granular A – Roadway	tonne	$27.56	$22.18	24%
Granular B – Roadway	tonne	$25.65	$20.36	26%
Hot Mix HL1	tonne	$107.29	$84.09	28%
Hot Mix HL8	tonne	$98.41		17%
150mm DIA non perforated subdrain	m	$32.71	$23.47	39%
Supply and Install Storm, Sewer Pipes	m	$563.50	$493.32	14%
Catchbasins (single)	each	$4,028.99	$3,081.60	31%
Catchbasins (double)	each	$4,028.99	N/A	N/A
Supply and Install Manhole, Maintenance Holes	each	$4,969.29	$4,797.68	4%
Topsoil and sod	m^2	$17.36	N/A	N/A

As the major elements of road construction, hot mix and granular A and B are the main determinants of the cost of a road improvement. The increase in costs for these items observed since the 2015 D.C. is in the range of 17% to 27%.

5.3.1.3.3 Adjustment Factors for Engineering, Basic Construction, and Miscellaneous Items

At the planning level, most of the required construction activities can be defined to a reasonable level of accuracy. However, there are other less tangible construction costs that are not. For this reason, it is common practice to estimate the additional costs by applying factors to overall project cost. Previously, in the 2015 Peel D.C. update, standard adjustment factors were derived from the costing portion of the Ministry of Transportation's Inventory Manual for Municipal Roads.

For the current update, the factors for basic construction, engineering and contingency were based on a combination of best practices review and discussions with different stakeholders. This included the examination of the adjustment factors used by Hamilton (2013), Whitchurch-Stouffville (2014), and Wellington (2017) D.C. studies. Neighbouring

municipalities such as Halton, York and Durham Regions were also investigated; however, the adjustment factors used in their Roads Program costing process were not available openly in their D.C. reports.

Overall, the adjustment factors are lower than in the 2015 D.C. study update. The proposed adjustment factor breakdown for the 2020 Peel D.C. study update is summarized in Table 5-4. The basic construction adjustment was applied to the benchmark cost, followed by the contingency adjustment. The contingency adjustment factor was only applied to curb-to-curb construction components. The engineering adjustment factor was used to create a detailed design allowance for projects involving design and construction components.

Table 5-4
Region of Peel
Construction Cost Adjustment Factors

	2020 Peel D.C. Study	2015 Peel D.C. Study		Description
	Rural and Urban	Rural	Urban	
Basic Construction Adjustment	10%	5%	15%	Accounts for small items which vary from project to project and cannot be addressed individually using a benchmark system.
Contingency Adjustment	15%	10%	22%	Represents the unforeseen cost to address additional works not directly associated with the rehabilitation work. Applied to benchmark costs for curb-to-curb construction such as road widening, R.T.L., L.T.L. Also used for structure costs (such as retaining wall and L.I.D.) to account for increased uncertainty involved.
Engineering Adjustment	10%	18%	15%	Represents the engineering costs associated with the design and construction supervision. Applied to total project cost to estimate the Detailed Design Allowance.

5.3.1.3.4 Road Construction Cost Estimates

The road construction costs on a per kilometre basis were calculated using updated unit prices and adjustment factors, as discussed in the previous sections. The road construction benchmark costs are presented in Table 5-5 and include adjustments for basic construction (10%) and contingency (15%) items as well as an allowance for additional work associated with intersections tie-ins at intersecting roads. A length of 150 m was assumed for tie-ins and their individual costs were prorated based on this assumption and on the type of road improvement.

Table 5-5
Region of Peel
Benchmark Costs (Construction between Curb lines)

		Peel 2020 D.C. Update (2016$)**	2015 Peel D.C. (2015$)	Change
		Including tie-ins	Including tie-ins (440,000$/km)	
New Lanes	**RURAL**			
2	Resurface and widen from 2 to 4 lanes	$2,667,200/km	$1,352,000/km	97%
3	Resurface and widen from 2 to 5 lanes	$3,218,400/km	$1,803,000/km	79%
4	Resurface and widen from 2 to 6 lanes	$3,631,600/km	$2,125,000/km	71%
New Lanes	**URBAN**			
2	Resurface and widen from 2 to 4 lanes	$2,540,200/km	$1,952,600/km	30%
3	Resurface and widen from 2 to 5 lanes	$3,146,000/km	$2,561,200/km	23%
4	Resurface and widen from 2 to 6 lanes	$3,751,800/km	$2,866,500/km	31%
2	Resurface and widen from 3 to 5 lanes	$2,859,000/km	$1,975,000/km	45%
2	Resurface and widen from 4 to 6 lanes	$3,177,700/km	$2,145,500/km	48%
1	Resurface and widen from 5 to 6 lanes	$2,544,400/km	$1,785,000/km	43%
2	Resurface and widen from 5 to 7 lanes	$3,496,600/km	$2,160,000/km	62%

Notes:
Rural price differential between 2015 D.C. and 2020 D.C.

1. 2016 Unit costs for granular A and B are about 20% higher, accounting for a portion of the cost increase
2. Adjustment factors for rural projects increased: Rural basic construction adjustment increased from 5% to 10% and rural contingency adjustment went from 10% to 15%.
3. Shoulder widths increased from 3m (1m paved, 2m unpaved) to 3.5m (1.5m paved, 2m unpaved) on each side, as per the Active Transportation Plan.
4. The 2015 D.C. does not consider the construction of a road substructure under shoulder areas, including the cost of excavation under the shoulders. These additional costs were incorporated in the 2020 D.C. update.
5. 2015 D.C. only repaves additional rural lanes following Peel Region Asphalt surface standards (50mm HL1 and 100mm HL8) while the existing surface is repaved with 50mm of hot mix. The 2020 D.C. removes the existing asphalt layer and repaves the entire new road width according to the standard.

Urban price differential between 2015 D.C. and 2020 D.C.

1. Unit costs went up overall by about 22% since the last D.C.
2. Adjustment factors for urban decreased: the const. adjustment dropped from 15% to 10% and contingency fell from 22% to 15%.
3. Lane widths were reduced from 3.75m (2015 D.C.) to 3.5m (2020 D.C.)
4. The cost increases are driven by the hot-mix application. In the 2015 D.C., 150mm of asphalt was only applied to the new widened sections and 50mm of mix was applied onto the existing section. In the 2020 D.C., the 150mm standard was applied on the entire road surface. The impact of the hot mix price increase becomes more pronounced as the width of the road increases.

Overall, urban road widening costs increased by an average of 22% since 2015, which is understandable in light of the rise in unit costs observed since the 2015 D.C. study.

Rural widening experienced an average cost increase of approximately 59%. Along with the effect of higher unit prices, this change can be explained through the rise in effective adjustment totalling 26.5% (a 10% construction adjustment followed by a 15% contingency) applied under this D.C., compared to the 15.5% effective adjustment applied in the 2015 costing. Moreover, standards for rural construction have evolved since the last update, particularly for paved shoulders, which have increased from 1.0m to 1.5m, as per Peel Region's mission to support safe and comfortable access for active transportation modes. Furthermore, the underlying assumptions relating to the rural road construction are different. In this update, 450mm granular fill (Granular B) was accounted for below the paved shoulders, which incurs additional costs not captured in the 2015 D.C.

Construction Unit Price Review (Beyond Curb Lines)

In addition to the roadway construction that occurs between the curb lines, there are costs associated with improvements located beyond the curb lines. As with the curb-to-curb benchmark costs, beyond curb line costs were derived by extracting unit costs from recent Region of Peel contracts. The costing of beyond curb line items was done independently of previous (2015 D.C.) assumptions and was based on Peel Region and City of Brampton standard drawings, as well as costing information collected by Peel Region.

To be consistent with the past D.C. study, a contingency adjustment to items beyond curb lines was not applied. The 2020 Peel D.C. study costs for items beyond the curb

are shown in Table 5-6. Overall, there is a trend towards increasing costs for beyond curb line items, with sidewalks, landscaping, illumination and traffic signals requiring greater investment than in the 2015 update. Rising costs follow the trend of increasing unit costs (particularly for granulars and hot mix) and can also be attributed to enhanced regional standards in recent years. For instance, sidewalk widths have been upgraded to 1.8m whereas 1.5m may have been acceptable in the past. Traffic signal costs reflect increases in infrastructure costs tracked by the Peel Region Traffic Operations group. The footnotes below Table 5-6 describe in further detail the assumptions and considerations associated with individual items, which guided the derivation of beyond curb line item costs.

Table 5-6
Region of Peel
Construction Unit Prices (Items Outside Curb lines)

	2020 Peel D.C. Update (2016$)	Units	2015 Peel D.C. Study Cost
SIDEWALKS [1]			
Install sidewalks	$177,400	per km per side	$131,000
BIKE PATHS / MULTI-USE TRAIL [2]			
Install bike paths / multi-use trail	$161,200	per km per side	$209,700
LANDSCAPING [3]			
Landscaping	$95,200	per km (2 sides)	$58,005
ILLUMINATION			
Street Lighting – New Construction	$403,000	per km (2 sides)	$410,000
Street Lighting – Reconstruction with New Equipment, Wiring, Poles	$422,100	per km (2 sides)	
Street Lighting – Relocation of Pole with Existing Electrical Equipment	$228,000	per km (2 sides)	-
BUS BAYS [4]			
Installation of bus bays on both sides	$292,400	2 sides	-
TRAFFIC SIGNAL [5]			
Permanent 4-way traffic signal	$275,000	each	$180,000
Permanent 3-way traffic signal	$200,000	each	$150,000
Temporary 4-way traffic signal	$200,000	each	$125,000
Temporary 3-way traffic signal	$150,000	each	
Fully protected left-turn phase	$13,500	each	-
Protected permissive phase	$10,000	each	-
New traffic controller	$18,000	each	-
STUDIES	3% of project cost	per study	3% of project cost
PROPERTY ACQUISITION	Site specific	Individual basis	Site specific

[1] Costs associated with sidewalk construction include excavation and concrete placement to achieve a 1.8 m standard width. The costs were computed in accordance with Peel Region Public Works S.T.D.: 5-2-6.

[2] Multi-use trail (M.U.T.) costs involve excavation, asphalt and granular base placement as well as bike markings for a 2.4m M.U.T. Costs computed in accordance with Peel Region Public Works S.T.D.: 5-2-17.

[3] Landscaping costs were derived by accounting for the planting of boulevard trees and the addition of topsoil, seeds and mulch.

[4] Bus bays costs were derived through design criteria from Peel Region Public Works S.T.D.: 5-2-10 and City of Brampton S.T.D.: 260.

[5] Traffic signal costs were provided by the Peel Region Traffic Operations group and are based on 2016 signal costs tracked by the Region.

Utility Relocation

Following the review of utility relocation contracts and project bids, cost estimates for the relocation of utilities were derived. The 2020 D.C. utilized a blended rate for utility relocation rather than distinguishing between rural and urban projects. Table 5-7 below summarizes the results of the analysis.

Table 5-7
Region of Peel
Utilities Relocation Cost

Utility type	2020 D.C. Cost	2015 D.C. Cost
Minor Relocation	$346,000/km/side	$102,000/km/side (rural) $296,300/km/side (urban)
Major Relocation	$1,080,000/km/side	$577,500/km/side (rural) $720,000/km/side (urban)

Minor relocation was assumed to include gas and cable relocation exclusively while Major Relocation considered the cases wherein all utilities must be moved, including gas, cable, phone and hydro.

5.3.1.3.5 Structure and Culvert Cost

The structure and culvert improvements costs were derived through the M.T.O. Parametric Estimation Guide (2016). The costs within the Guide were derived from data obtained through Capital Delivery System (C.I.D.) and Highway Costing System (HiCo) databases for tendered capital contracts tendered by Ontario's Ministry of Transportation (M.T.O.) from 2010 to 2016. The data reflects the average price of the three low bidders, and all bid values were inflated to 2016 present day worth at 2% per year. The guide incorporates costs including:

- Structure excavation
- Dewatering
- Piling
- Footings
- Abutments
- Piers
- Formwork
- Falsework
- Access to structure
- Reinforcing steel
- Deck, beams
- Parapet wall
- Joints
- Waterproofing

However, the costs do not include paving, embedded or other electrical work, traffic control or property acquisition.

The Parametric Estimation Guide is widely used in the industry to assess project costs in conceptual stages such as Development Charge studies. As the costs between structures vary significantly based on individual project constraints, the Guide provides high-level costs, to be supplemented with further analysis as a project advances through various phases.

The average per square meter costs were extracted from the 2016 Guide for the different types of bridge and culvert-related construction undertakings.

Table 5-8
Region of Peel
Structure and Culvert Unit Prices

	2020 Peel D.C. Update (2016$)	Units	2015 Peel D.C. Study Cost
BRIDGES			
New Structures (All types)	$5,300	per sq.m. deck area	$3800 per sq.m. deck area
New Structures (Prestressed CPCI Members)	$2,900	per sq.m. deck area	
New Structures (Post-tensioned box)	$3,100	per sq.m. deck area	
New Structures (Rigid frame)	$6,800	per sq.m. deck area	
New Structures (Steel beam)	$3,900	per sq.m. deck area	
Replacement – All steel bridge types	$3,500	per sq.m. deck area	-
Replacement – All concrete bridge types	$5,500	per sq.m. deck area	-
Major Rehab – All steel bridge types	$2,700	per sq.m. deck area	-
Major Rehab – All concrete bridge types	$1,200	per sq.m. deck area	-
Minor Rehab – All steel bridge types	$100	per sq.m. deck area	-
Minor Rehab – All concrete bridge types	$500	per sq.m. deck area	-

	2020 Peel D.C. Update (2016$)	Units	2015 Peel D.C. Study Cost
CULVERTS			
New Culvert	$5,000	per sq.m. deck area	-
Major Rehabilitation – Concrete Culvert	$4,500	per sq.m. deck area	$3850 per sq.m. deck area
Minor Rehabilitation – Concrete Culvert	$800	per sq.m. deck area	-
Rehabilitation – Steel Culvert	$2,400	per sq.m. deck area	-

In addition, noise wall benchmark costs were retrieved from Peel Region project bids (such as the Cawthra Road project #11-4350) and were informed by assumptions from other municipalities D.C. studies such as the City of Mississauga and the City of Brampton. Moreover, costs for retaining wall and Low Impact Development features (L.I.D.s) were derived using City of Brampton cross-sectional standards (L210). Despite being out-of curb elements, a contingency of 15% was applied to retaining walls and Low Impact Development features due to the higher risk associated with structure construction. The results are summarized in Table 5-9.

Table 5-9
Region of Peel
Benchmark Costs for Retaining Walls and Noise Walls

	2020 Peel D.C. Update (2016$)	Units	2015 Peel D.C. Study Cost
RETAINING WALLS			
Retaining walls	$4,017,000	per km per side	-
NOISE WALLS			
Noise Attenuation (concrete)	$1,284,000	per km per side	$1,300,000
Noise Attenuation (wood)	$907,000	per km per side	-
LID			
Bioswales	$250,000	per km per side	-

5.3.1.3.6 Intersection Tie-in Costs

The road construction costs reflect the cost per km of straight roadway and do not include the additional costs associated with either having to tie into existing crossroads or to provide the approach stub for future intersecting roads to connect into. A benchmark cost for intersection tie-ins was developed based on the assumption that

each tie-in spans 150m in length. The cost is prorated depending on the road improvement type. The benchmark costs for tie-ins are summarized in Table 5-10.

Table 5-10
Region of Peel
Intersection Tie-ins Benchmark Costs

	Peel 2020 D.C. Update (2016$)	Unit	2015 Peel D.C. (2015$)
INTERSECTION TIE-INS – RURAL			
Resurface and widen from 2 to 4 lanes	$258,000	each	$126,000 Minor tie-ins (each)
Resurface and widen from 2 to 5 lanes	$321,000	each	
Resurface and widen from 2 to 6 lanes	$385,000	each	
INTERSECTION TIE-INS – URBAN			
Resurface and widen from 2 to 4 lanes	$257,000	each	$251,000 Major tie-ins (each)
Resurface and widen from 2 to 5 lanes	$317,000	each	
Resurface and widen from 2 to 6 lanes	$376,000	each	
Resurface and widen from 3 to 5 lanes	$288,000	each	
Resurface and widen from 4 to 6 lanes	$319,000	each	
Resurface and widen from 5 to 6 lanes	$252,000	each	
Resurface and widen from 5 to 7 lanes	$349,000	each	

In order to incorporate the intersection tie-in costs into the per km cost for each road widening, the 2015 Peel D.C. methodology included a review and compilation of all intersection tie-ins based on proposed widenings. The 2015 D.C. exercise found that the per km cost of tie-ins is equivalent to $430,000/km, an allowance that was subsequently added to the base road widening cost.

It was decided to opt against following same approach as the M.T.O. methodology. Instead, a 30% allowance for tie-ins was applied to the base road widening cost, on the assumption of two 150m tie-ins per km. The comparison of the M.T.O. and current approaches indicated that a 30% tie-in allowance from the base road widening cost is appropriate and results to a very similar overall allowance to the one used to account for tie-ins in the 2015 D.C.

5.3.1.3.7 Intersection Improvement Costs

Benchmark costs for the parallel/taper sections of auxiliary turn lanes as well as costs for additional turn lane storage were calculated as part of the intersection improvement costing exercise. The items involved in the turn lane pricing were excavation, curb and gutter, drainage, and pavement binder.

Because of price variability, costs for new auxiliary lanes were separated according to road speed limits. Furthermore, existing storage lane extensions costs were based on a linear interpolation of costs for adding new auxiliary lanes.

Table 5-11 below summarizes the intersection improvements costs, including basic construction and contingency adjustments. However, these are the construction costs only and do not account for necessary property acquisition or utility relocation.

Table 5-11
Region of Peel
Benchmark Costs for Auxiliary Lane Improvements

	2020 Peel D.C. Update (2016$)	Unit
URBAN TURNING LANES (Parallel and Taper Only)		
Additional Right-turn lane on a 50 km/h road	$49,000	each
Additional Right-turn lane on a 60 km/h road	$54,000	each
Additional Right-turn lane on a 70 km/h road	$64,000	each
Additional Right-turn lane on a 80 km/h road	$72,000	each
Additional Left-turn lane on a 50 km/h road	$68,000	each
Additional Left-turn lane on a 60 km/h road	$90,000	each
Additional Left-turn lane on a 70 km/h road	$102,000	each
Additional Left-turn lane on a 80 km/h road	$116,000	each
TURN LANE STORAGE		
10m	$14,000	each
25m	$23,000	each
50m	$38,000	each
100m	$68,000	each
150m	$98,000	each
200m	$128,000	each
250m	$158,000	each
300m	$188,000	each

5.3.1.3.8 Streetscaping Costs

Regional design standards were used in conjunction with bid/tender details in order to develop benchmark costs for streetscape improvements. These costs involve features that are used to enhance the public realm. These capital expenses, despite their magnitude, generally tend to be overlooked and therefore must be incorporated into the costing exercise. A summary of the streetscaping features and cost is presented in Table 5-12 below. Similar to beyond curb items, no contingency adjustment is applied to these features.

Table 5-12
Region of Peel
Streetscape Enhancements Benchmark Costs

	2020 Peel D.C. Update (2016$)	Unit	2015 Peel D.C. Study Cost
STREETSCAPING			
Coloured concrete median	$16,750	per 100m leg	$11,290
Coloured median between intersections	$177,000	per km	$259,350
Splash Pad at Intersections	$116,000	per km	$147,840
Coloured Concrete Channelization	$1,700	each	$3,760
Gateway Features	$96,000	each	$94,080

For a particular road section, the number of intersections within the road section and the length of the road section were determined to estimate a net streetscaping cost. The activities involving intersection upgrades were estimated to run 100m from the intersection of each leg.

5.3.1.3.9 Property Costs

A detailed inventory of property located adjacent to road sections that require property in order to achieve the ultimate right-of-way identified in the Regional Official Plan was undertaken to estimate property acquisition costs. Adjacent properties were inventoried on either side of each road section along with the property type and length of road frontage. The amount of property required to provide the O.P. approved right of way (R.O.W.) was calculated using the existing R.O.W., future required R.O.W., and length of road frontage applicable to the property. The property costs were estimated based on the following property prices per acre provided by the Region as shown in Table 5-13.

Table 5-13
Region of Peel
Property Costing (per acre) Assumptions

	Lower-Tier Municipality within Region of Peel (per acre)		
Land Use Type	**Mississauga**	**Brampton**	**Caledon**
Industrial	$1,600,000	$1,400,000	$1,100,000
Commercial	$1,800,000	$1,800,000	$1,500,000
Railway	$2,300,000	$2,300,000	$1,400,000
Residential (low density)	$2,200,000	$1,500,000	$1,100,000
Residential (mid density)	$2,750,000	$1,900,000	$1,750,000
Residential (high density)	$5,000,000	$3,500,000	-
Agricultural	-	-	$125,000 to $750,000

As a result of the field review, several locations were identified where entire residential properties were required in order to implement the required road improvements. These property acquisitions were included in the costing analysis.

5.3.1.3.10Stand-alone Intersection Improvements

H.D.R. was retained by the Region of Peel to carry out a review of future intersection improvements within the entire Region of Peel for 2017 to 2041. This review provided a detailed assessment of the intersection improvement requirements based on forecast intersection turning movement volumes, existing and planned intersection lane configurations, and a detailed traffic operations analysis.

The recommended intersection improvements were assessed using the Synchro intersection analysis software. The major components of the work included:

1. Existing Model Development – Updating the Region's 2010 Synchro 7 Base Model to 2016 Base Conditions in Synchro 9

2. Traffic Forecasting using the Region's EMME traffic model – Developing Traffic Volume Forecasts for 2017-2026, 2031, 2036, and 2041

3. Horizon Year Background Model Development – Incorporating and validating planned improvements in the updated Synchro model

4. Horizon Year Intersection Analysis – Identifying deficiencies and developing intersection improvement recommendations for all horizon years

The existing conditions Synchro model development utilized the base model previously developed from the intersection improvement study in 2010 (by others for the Region of Peel). Based on the intersection inventory provided by the Region (as of April 2016), the Synchro model was expanded to include 452 signalized and 337 unsignalized intersections.

Table 5-14
Region of Peel
Base Model Development Upgrade – Number of Intersections

Intersection Control Type	2010 Synchro Model Scope	2016 Synchro Model Scope
Signalized	327	452
Unsignalized	**146**	**337**

The geometric configuration for signalized and unsignalized intersections were coded and verified based on aerial photos and geo-located based on G.I.S. data. The geometric parameters that were coded include:

- Intersections locations according to G.I.S. mapping
- Lane Configurations
- Street Names
- Auxiliary Lane Storage Lengths
- Turning or Pedestrian Crossing Restrictions
- Lane Widths
- Speed Limits
- Roundabouts, Stop and Yield Conditions
- Two Way Left Turn Lanes

Traffic signal configurations were coded in separate AM and PM peak model files, based on timing cards and controller files provided in April 2016. Since signal optimization is expected to be the first line of improvement analysis, the base signal timing plans were intended to capture the latest phasing settings to ensure all protective phases and turn restrictions were captured. Parameters reviewed and coded in the Synchro base model include:

- Phasing (leading left turn phases, pedestrian times, Amber/All-red, Offsets, NEMA phasing)
- Mode of Control (semi/fully actuated, fixed time etc.)
- Signal Detector Settings

It was identified that the previous 2010 intersection improvement study was conducted using a range of non-standard Synchro analysis parameters, such as lost-time adjustments (L.T.A.) ranging between -1 to -7 seconds. During base model development, all intersections were revised to a zero-second L.T.A. A 0 second lost time means all traffic stops during the yellow signal, while a 7 second lost time means some traffic will cross the intersection during the red signal. This assumption is expected to trigger some additional improvements (relative to the 2010 study recommendations) because it assumes no traffic volumes will utilize the amber time to clear intersections.

The volume data imported into Synchro include:

- Traffic volumes for AM and PM peak hours
- Truck percentages
- Peak hour factors
- Conflict pedestrian crossing volumes
- Conflict cyclist volumes

Peak hour factors (P.H.F.) were calculated based on 15-minute fluctuations for the intersection total and provided as average for the overall intersection. This approach ensures the models are less susceptible to fluctuations where some turning movements observe short surges that cause P.H.F.s to drop as low as 0.3. Any calculated P.H.F. lower than 0.90 were set to 0.90 to minimize over-analyzing peak surge volumes that may not be indicative of the entire AM or PM peak hour.

Traffic forecasts were developed using data extracted from the Region's EMME macro planning model on a link level, spatially translated to match local Synchro intersection approach growth rates, and subsequently balanced using the Fratar/Furness method. Upon completion of this exercise, each turning movement resulted in an individual effective growth rate with respect to the approach growth rates from the planning model.

The results of the intersection improvement analysis indicated that the Regional road system service level will be significantly worse in 2031 and 2041 than it has been, on average, over the past 10 years. Therefore, it is appropriate to include all currently proposed road network improvements in the development charges, as they are fully required to support future growth.

5.3.1.3.11 Adjustment to 2017 Peel Region D.C. Update

As the D.C. study completed by H.D.R. in 2017 was based on 2016-dollar values, an adjustment of 3.5% was made to update the costing analysis for the 2020 D.C. calculations. This adjustment was based on inflation rates observed since 2016 and a review of the costing included in the D.C. Background Updates completed by the City of Mississauga and the City of Brampton in 2019.

5.3.1.2 Regional Official Plan Amendment (R.O.P.A.) 15 Transportation Corridor

In June 2005, Regional Council adopted R.O.P.A. 15 to extend the Regional Urban Boundary to include the lands in Northwest Brampton. Through this amendment, Regional Official Plan Policy 5.3.4.2.2 d) was introduced "That development of any subsequent phase of North West Brampton, beyond Phase 1, shall be permitted to proceed only if the development can be supported by the existing and planned arterial road network and transit systems, inclusive of a North-South Transportation Corridor".

In 2008, the Ontario Ministry of Transportation initiated an Environmental Assessment (E.A.) study to examine long term transportation problems and opportunities and to consider alternative solutions to link Urban Growth Centres in Greater Toronto Area. This study eventually became known as the G.T.A. West Transportation Corridor Environmental Assessment Study and the preliminary study area spanned broadly from York Region to the City of Guelph. Subsequently, the following steps were taken by the Ministry:

- In 2012, stage 1 of the G.T.A. West Corridor E.A. concluded and the Transportation Development Strategy (T.D.S.) was released. The Strategy recommended new and expanded non-road transportation infrastructure, widening or improvements to existing roadways, and a new freeway spanning

from Highway 400 in Vaughan to the Halton-Peel boundary with connections to Highways 427, 410, 401 and potentially Highway 407.

- In 2014, Stage 2 of the E.A. was initiated, and a focused analysis area and range of route alternatives were released for public consultation. The G.T.A. West project team was working towards identifying a single preferred alternative for the corridor by 2018.
- In late 2015, the Ministry advised that the Public Consultation process would be delayed and that more time was needed for the study.
- In February 2018, the Minister of Transportation announced that the province will not proceed with an E.A. for a proposed highway in the G.T.A. West corridor.
- In November 2018, following a change in Provincial government, the Minister of Finance released the Ontario Economic Outlook and Fiscal Review report which announced the Province's plans to resume the G.T.A. West Transportation Corridor E.A.
- On August 7th, 2020, the Ministry of Transportation confirmed the Preferred Route for the G.T.A. West Transportation Corridor and Regional staff will be bringing a report to council on October 8, 2020 on the key changes from the Technically Preferred Route and the implications to Peel Region.

During the above noted process, the Region has also been considering the impacts of the Northwest Brampton Transportation Corridor as required by R.O.P.A. 15. In 2010, the Region of Peel, Halton Region, City of Brampton, and Town of Halton Hills jointly completed the Halton-Peel Boundary Area Transportation Study which recommended the implementation of a transportation corridor in the Halton Peel Boundary Area.

As of the time of writing, no consideration of the final solution for the R.O.P.A. 15 Transportation Corridor has been considered by Council. A provision has been made for a transportation solution in north-west Brampton, which is included as project #63 "R.O.P.A. 15 Transportation Corridor". It is expected that after Council's further consideration of the proposed corridor routing, that more detailed costs estimates will be developed and included within the D.C. study.

5.3.1.3 Summary of Capital Costs Included in D.C. Calculation

The detailed listing of the transportation capital costs included in the D.C. calculation is contained in the following pages. The Region has identified the need for $1.62 billion in additional road projects with a reserve adjustment of $198.94 million. An additional $11.83 million has been included in the calculations for existing growth-related debt principal and discounted interest. It is noted that the capital forecast for transportation utilizes employment figures that include W.A.H. AND N.F.P.O.W. employees, however, W.A.H. and N.F.P.O.W. employment growth has been excluded from the D.C. employment growth forecast as their impact on municipal services from work has already been included in the population forecast. To reflect this in the D.C. calculations, a post-period benefit deduction in the amount of $80.99 million has been made to the total capital program. Additional deductions of $180.69 million for benefit to existing development and other contributions in the amount of $67.98 million have been made. The net amount included in the D.C. calculation is $1.50 billion. A summary of these capital costs is provided in Table 5-15.

These costs are attributed 71% to residential and 29% non-residential development which is the share of incremental population and employment growth over the 2020-2041 period.

Table 5-15
Region of Peel
Summary of Transportation Capital Costs

Services Related to a Highway Capital Costs	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Costs	Benefit to Existing	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Projects	1,621,400,000		1,621,400,000	180,685,500	67,983,109	1,372,731,391	974,639,288	398,092,103
Existing Debt Principal and Interest (Discounted)	11,830,923		11,830,923			11,830,923	8,399,955	3,430,968
Provisional Reduction for WAH and NFPOW Adjustment		80,991,000	(80,991,000)			(80,991,000)	(57,503,610)	(23,487,390)
Reserves	198,939,867		198,939,867			198,939,867	141,247,305	57,692,561
Total	**1,832,170,789**	**80,991,000**	**1,751,179,789**	**180,685,500**	**67,983,109**	**1,502,511,180**	**1,066,782,938**	**435,728,242**

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Services Related to a Highway - Transportation

No.	Increased Service Needs Attributable to Anticipated Development 2020-2041		Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
1	THE GORE ROAD - Castlemore Road to Mayfield Road	Two (2) to four (4) lane widening from Castlemore Road to Mayfield Road.	2020	3,000,000	-		3,000,000	450,000	-	2,550,000	1,810,500	739,500
2	DIXIE ROAD - Queen Street to Bovaird Drive	Four (4) to six (6) lane widening from Queen Street East to Bovaird Drive.	2020-2023	34,362,000	-		34,362,000	5,154,300	-	29,207,700	20,737,467	8,470,233
3	** MAYFIELD ROAD- Airport Road to The Gore Road and THE GORE ROAD - Squire Ellis Drive to Mayfield Road	Two (2) to five (5) lane widening on Mayfield Road from Airport Road to The Gore Road and two (2) to four (4) widening on the Gore Road from Squire Ellis Drive to Mayfield Road	2020-2022	28,859,000	-		28,859,000	3,820,000	-	25,039,000	17,777,690	7,261,310
4	Derry Road/Argentia Road	Intersection: Northbound Dual Left Turn Lanes and Eastbound Right Turn Lane	2020-2023	4,746,000	-		4,746,000	237,300	-	4,508,700	3,201,177	1,307,523
5	Snow Storage Facility	Construction of a facility to store and treat snow removed from Regional Roads.	2020-2022	10,000,000	-		10,000,000	5,000,000	-	5,000,000	3,550,000	1,450,000
6	** MAYFIELD ROAD - Hurontario Street to Chinguacousy Road	Two (2) to six (6) lane widening from Hurontario Street to Chinguacousy Road.	2020-2021	22,118,000	-		22,118,000	2,990,800	-	19,127,200	13,580,312	5,546,888
7	** MAYFIELD ROAD - The Gore Road to Coleraine Drive	Two (2) to four (4) lane widening from The Gore Road to Coleraine Drive.	2020-2022	19,117,000	-		19,117,000	2,769,100	-	16,347,900	11,607,009	4,740,891
8	DIXIE ROAD - Bovaird Drive to Countryside Drive	Four (4) to six (6) lane widening from Bovaird Drive to Countryside Drive.	2020-2022	21,828,000	-		21,828,000	3,191,900	-	18,636,100	13,231,631	5,404,469
9	AIRPORT ROAD - 1.0 km North of Mayfield Road to King street	Two (2) to five (5) lane widening from 1.0 km north of Mayfield Road to King Street.	2020-2022	19,678,000	-		19,678,000	2,951,700	-	16,726,300	11,875,673	4,850,627
10	STEELES AVENUE - Chinguacousy Road to Mississauga Road	Four (4) to six (6) lane widening from Chinguacousy Road to Mississauga Road.	2020-2021	18,044,000	-		18,044,000	2,708,600	-	15,335,400	10,888,134	4,447,266
11	* Winston Churchill Boulevard Class E.A. - Highway 401 to Embleton Road	Environmental Assessment to determine road corridor improvements	2020	490,000	-		490,000	36,800	244,755	208,445	147,996	60,449
12	** MAYFIELD ROAD - Chinguacousy Road to Mississauga Road	Two (2) to five (5) lane widening from Chinguacousy Road to Mississauga Road.	2020-2022	16,420,000	-		16,420,000	2,073,700	-	14,346,300	10,185,873	4,160,427
13	STEELES AVENUE - Mississauga Road to Winston Churchill Boulevard	Four (4) to six (6) lane widening from Mississauga Road to Winston Churchill Boulevard.	2020-2023	19,454,000	-		19,454,000	2,918,100	-	16,535,900	11,740,489	4,795,411
14	MAYFIELD ROAD - Dixie Road to Bramalea Road	Five (5) to six (6) lane widening from Dixie Road to Bramalea Road.	2020-2023	4,795,000	-		4,795,000	719,300	-	4,075,700	2,893,747	1,181,953
15	MAYFIELD ROAD - Mississauga Road to Winston Churchill Boulevard	Two (2) to four (4) lane widening from Mississauga Road to Winston Churchill Boulevard.	2020-2023	16,198,000	-		16,198,000	2,420,700	60,000	13,717,300	9,739,283	3,978,017
16	CAWTHRA ROAD - Eastgate Parkway to Queen Elizabeth Way	Corridor and Intersection Improvements from Eastgate Parkway to Queen Elizabeth Way.	2020-2024	9,379,000	-		9,379,000	1,406,900	-	7,972,100	5,660,191	2,311,909
17	King Street/Albion Vaughn Road	Intersection: Northbound Right Turn Lane	2020	900,000	-		900,000	45,000	-	855,000	607,050	247,950
18	COURTNEY PARK AND HIGHWAY 410 Interchange Improvements	Improvements to the Courtney Park/Highway 410 interchange.	2020	1,500,000	-		1,500,000	750,000	-	750,000	532,500	217,500
19	Kennedy Road/Williams Parkway	Intersection: Contribution to the City of Brampton in conjunction with widening on Williams Parkway.	2020	2,900,000	-		2,900,000	145,000	-	2,755,000	1,956,050	798,950

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Services Related to a Highway - Transportation

No.	Increased Service Needs Attributable to Anticipated Development 2020-2041		Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
20	Erin Mills Parkway/Fowler Drive	Intersection:Westbound Right Turn Lane and extension of Eastbound Left Turn Lane	2020-2021	865,000	-		865,000	43,300	-	821,700	583,407	238,293
21	Erin Mills Parkway/Credit Valley Road	Intersection: Eastbound Right Turn Lane	2020	800,000	-		800,000	40,000	-	760,000	539,600	220,400
22	Erin Mills Parkway/Thomas Street	Intersection: Northbound Dual Left Turn Lane	2020	510,000	-		510,000	25,500	-	484,500	343,995	140,505
23	Contribution to City of Brampton led E.A. Studies	Region of Peel's contribution to City of Brampton led environmental assessment projects on City roads that intersect with Regional Roads	2020-2021	210,000	-		210,000	31,500	-	178,500	126,735	51,765
24	** Monitoring for Permit Requirements	Compliance with the Endangered Species Act, the Environmental Protection Act and the Ontario Water Resources Act.	2021-2027	4,098,000	-		4,098,000	940,700	-	3,157,300	2,241,683	915,617
25	MAYFIELD ROAD EXTENSION - Mayfield Road to Highway 50/Major Mackenzie Drive	Future Six (6) lane urban road construction from Mayfield Road to Highway 50/Major Mackenzie Drive	2020-2025	56,381,000	-		56,381,000	-	5,100,000	51,281,000	36,409,510	14,871,490
26	* WINSTON CHURCHILL BOULEVARD-2.0 Km South of Embleton Road to Embleton Road	Two(2) to four(4) lane widening from 2.0 km South of Embleton Road to Embleton Road.	2020-2025	19,545,000	-		19,545,000	1,418,800	9,772,599	8,353,601	5,931,057	2,422,544
27	Erin Mills Parkway/Battleford Road	Intersection: Eastbound Right Turn Lane	2020-2022	1,002,000	-		1,002,000	50,100	-	951,900	675,849	276,051
28	Derry Road/Bramalea Road	Intersection: Eastbound Dual Left Turn Lane, Southbound Dual Left Lane, Southbound through Lane and Northbound hatched Lane.	2020	1,375,000	-		1,375,000	68,800	-	1,306,200	927,402	378,798
29	Kennedy Road/Vodden Street	Intersection: Northbound Right Turn Lane	2020-2022	734,000	-		734,000	36,700	-	697,300	495,083	202,217
30	Erin Mills Parkway/Erin Centre Boulevard	Intersection: Eastbound Dual Left Turn Lane	2020-2022	1,316,000	-		1,316,000	65,800	-	1,250,200	887,642	362,558
31	Mississauga Road/Derry Road	Intersection: Eastbound Dual Left Turn Lane	2020-2022	1,092,000	-		1,092,000	54,600	-	1,037,400	736,554	300,846
32	Mississauga Road/Turner Valley Road	Intersection: Southbound Dual Left Turn Lane	2020-2022	1,853,000	-		1,853,000	92,700	-	1,760,300	1,249,813	510,487
33	Traffic Engineering Studies	Various traffic engineering studies related to evaluation of intersections and improvements.	2020-2041	30,360,000	-		30,360,000	15,180,000	-	15,180,000	10,777,800	4,402,200
34	Road Program Planning and Studies	Capital Programming and Studies.	2020-2041	9,000,000	-		9,000,000	4,500,000	-	4,500,000	3,195,000	1,305,000
35	ARCH Stage 3 and Stage 4 for Environmental Assessments	Funding for stage 3 and 4 Archeological Assessments.	2020-2021	200,000	-		200,000	100,000	-	100,000	71,000	29,000
36	SP47 Environmental Assessment	Contribution to the City of Brampton Environmental Assessment for new roads	2020	1,500,000	-		1,500,000	-	-	1,500,000	1,065,000	435,000
37	Road Characterization Study and Strategic Goods Movement Network Study Update	Review of current function of Regional corridors and surrounding land uses	2020	100,000	-		100,000	50,000	-	50,000	35,500	14,500
38	Various Signal Phasing & AODA Updates	Installation of new advance green phases, traffic and pedestrian warning and control signals throughout Peel.	2020-2041	4,090,000	-		4,090,000	2,045,000	-	2,045,000	1,451,950	593,050

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Services Related to a Highway - Transportation

No.	Increased Service Needs Attributable to Anticipated Development 2020-2041		Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
39	Traffic Data Collection and Analysis	Collection and analysis of traffic data related to growth.	2020-2041	5,340,000	-		5,340,000	2,670,000	-	2,670,000	1,895,700	774,300
40	Transportation Data Collection Program	Collection and analysis of information and statistics on travel patterns in the GTHA using Transportation Tomorrow Survey	2020-2041	6,585,000	-		6,585,000	3,292,500	-	3,292,500	2,337,675	954,825
41	Transportation Planning Studies	Transportation planning studies intended to develop transportation policies and plans in Peel Region.	2020-2041	7,700,000	-		7,700,000	3,850,000	-	3,850,000	2,733,500	1,116,500
42	Transportation Demand Management Initiatives	Funding for Transportation Demand Management (TDM)/Smart Commute Program.	2020-2041	15,400,000	-		15,400,000	7,700,000	-	7,700,000	5,467,000	2,233,000
43	Goods Movement Program	Implementation of a Goods Movement program.	2020-2027	4,940,000	-		4,940,000	2,470,000	-	2,470,000	1,753,700	716,300
44	MISSISSAUGA ROAD - Bovaird Drive to Mayfield Road	Two (2) to six (6) lane widening from Bovaird Drive to Sandalwood Parkway and two (2) to four (4) lane widening from Sandalwood Parkway to Mayfield Road.	2021	6,067,000	-		6,067,000	910,100	-	5,156,900	3,661,399	1,495,501
45	** DIXIE ROAD - Countryside Drive to 2 km North of Mayfield Road	Two (2) to four (4) lane widening from Countryside Drive to Mayfield Road and two (2) to five (5) lane widening from Mayfield Road to 2 km northerly.	2021	23,613,000	-		23,613,000	3,366,300	-	20,246,700	14,375,157	5,871,543
46	MAVIS ROAD - Highway 401 to Highway 407 portion under Peel's jurisdiction	Four (4) to six (6) lane widening of Mavis Road, Region's portion, including the structure over Highway 407 to accommodate increasing traffic flows.	2021	5,670,000	-		5,670,000	850,500	-	4,819,500	3,421,845	1,397,655
47	MISSISSAUGA ROAD - Queen Street to Bovaird Drive	Four (4) to six (6) lane widening from Queen Street to Bovaird Drive.	2021-2026	21,962,000	-		21,962,000	3,294,300	-	18,667,700	13,254,067	5,413,633
48	MAYFIELD ROAD - Heart Lake Road to Hurontario Street	Four (4) to six (6) lane widening from Heart Lake Road to Hurontario Street.	2021-2026	19,218,000	-		19,218,000	2,882,700	-	16,335,300	11,598,063	4,737,237
49	Erin Mills Parkway/Millcreek Drive	Intersection: Northbound Dual Left Turn Lane	2021	500,000	-		500,000	25,000	-	475,000	337,250	137,750
50	Embleton Road/New Street East of Heritage Road	A new 4-way signalized intersection east of Heritage Road in conjunction with new development.	2021	803,000	-		803,000	-	-	803,000	570,130	232,870
51	Dixie Road/Rathburn Road	Intersection: Northbound Dual Left Turn Lane	2021-2023	1,900,000	-		1,900,000	95,000	-	1,805,000	1,281,550	523,450
52	Dixie Road/Eglinton Road	Intersection: Westbound Right Turn Lane	2021-2023	700,000	-		700,000	35,000	-	665,000	472,150	192,850
53	Derry Road/Tomken Road	Intersection: Eastbound Dual Left and Northbound Right Turn Lanes	2021-2023	1,800,000	-		1,800,000	90,000	-	1,710,000	1,214,100	495,900
54	Airport Road/Williams Parkway	Intersection: Northbound Right Turn Lane and Eastbound Right Turn Lane	2022	7,322,000	-		7,322,000	366,100	-	6,955,900	4,938,689	2,017,211
55	Mississauga Road/Argentia Road	Intersection: Eastbound Dual Left and Westbound Dual Left Turn Lanes	2022	1,625,000	-		1,625,000	81,300	-	1,543,700	1,096,027	447,673
56	Britannia Road/Silken Laumann Way	Intersection: Eastbound Right and Southbound Right Turn Lanes	2022	1,042,000	-		1,042,000	52,100	-	989,900	702,829	287,071

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Services Related to a Highway - Transportation

No.	Increased Service Needs Attributable to Anticipated Development 2020-2041		Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
57	AIRPORT ROAD - Braydon Boulevard to Countryside Drive	Four (4) to six (6) lane widening from Braydon Boulevard to Countryside Drive.	2022-2027	8,559,000	-		8,559,000	1,283,900	-	7,275,100	5,165,321	2,109,779
58	Coleraine Drive/George Bolton Parkway	Signalization of fourth leg - for new development	2022	425,000	-		425,000	-	-	425,000	301,750	123,250
59	Coleraine Drive/Parr Boulevard	Signalization of fourth leg - for new development	2022	210,000	-		210,000	-	-	210,000	149,100	60,900
60	Coleraine Drive over Canadian National Railway	Grade Separation on Coleraine Drive over the Canadian Pacific Railway.	2022-2026	24,301,000	-		24,301,000	1,215,100	-	23,085,900	16,390,989	6,694,911
61	THE GORE ROAD - Queen Street East to Castlemore Road	Corridor Improvements from Queen Street East to Castlemore Road.	2023	18,141,000	-		18,141,000	2,721,200	-	15,419,800	10,948,058	4,471,742
62	AIRPORT ROAD - King Street to Huntsmill Drive	Corridor Improvements from King Street to Huntsmill Drive.	2023-2025	27,669,000	-		27,669,000	4,150,300	-	23,518,700	16,698,277	6,820,423
63	R.O.P.A. 15 Transportation Corridor		2021-2026	90,897,000	-		90,897,000	-	-	90,897,000	64,536,870	26,360,130
64	Derry Road/Hurontario Street	Intersection: Northbound and Southbound Right Turn Lanes	2023-2025	1,260,000	-		1,260,000	63,000	-	1,197,000	849,870	347,130
65	Derry Road/Edwards Boulevard	Intersection: Northbound Right Turn Lane	2023	550,000	-		550,000	27,500	-	522,500	370,975	151,525
66	Dixie Road/ Clark Boulevard	Intersection: Contribution to the City of Brampton in conjunction with the (4-6) widening on Clark Boulevard	2023	1,605,000	-		1,605,000	80,300	-	1,524,700	1,082,537	442,163
67	Derry Road/Maritz Drive	Intersection: Northbound Right Turn Lane	2023	300,000	-		300,000	15,000	-	285,000	202,350	82,650
68	Derry Road/Saint Barbara Boulevard	Intersection: Southbound Right Turn Lane	2023	400,000	-		400,000	20,000	-	380,000	269,800	110,200
69	Steeles Avenue/Finch Avenue Gorewood Drive	Intersection: Westbound Dual Left Turn Lane	2023-2025	802,000	-		802,000	40,100	-	761,900	540,949	220,951
70	Britannia Road/Bidwell Road_Whitehorn Avenue	Intersection: Eastbound Right Turn Lane	2023	500,000	-		500,000	25,000	-	475,000	337,250	137,750
71	* Winston Churchill Boulevard Study - Four to Six Lane Widening from North Sheridan Way to Dundas Street	Winston Churchill Boulevard (4-6) Lane Widening from North Sheridan Way to Dundas Street	2023	1,000,000	-		1,000,000	75,000	500,000	425,000	301,750	123,250
72	** HIGHWAY 50 - Castlemore Road to Mayfield Road and MAYFIELD ROAD - Coleraine Drive to Highway 50	Five (5) to seven (7) lane widening from Castlemore Road to Mayfield Road and two (2) to four (4) lane widening on Mayfield Road from Coleraine Drive to Highway 50.	2024-2025	42,481,000	-		42,481,000	3,532,900	16,550,259	22,397,841	15,902,467	6,495,374
73	MISSISSAUGA ROAD - Financial Drive to Queen Street	Four (4) to six (6) lane widening from Financial Drive to Queen Street.	2024	16,785,000	-		16,785,000	2,517,800	-	14,267,200	10,129,712	4,137,488
74	MAYFIELD ROAD - Airport Road to Clarkway Drive	Five (5) to six (6) lane widening from Airport Road to Clarkway Drive	2024-2029	30,773,000	-		30,773,000	4,616,000	-	26,157,000	18,571,470	7,585,530
75	BOVAIRD DRIVE - James Potter Road/Creditview Road to Mississauga Road	Four (4) to six (6) lane widening from James Potter Road/Creditview Road to Mississauga Road	2024-2031	14,535,000	-		14,535,000	2,180,300	-	12,354,700	8,771,837	3,582,863
76	Mayfield Road/Goreway Drive	Contribution to the City of Brampton's intersection improvements at Mayfield Road and Goreway Drive	2024	800,000	-		800,000	40,000	-	760,000	539,600	220,400

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Services Related to a Highway - Transportation

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	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
77	Airport Road/Sandalwood Parkway	Contribution to the City of Brampton's intersection improvements at Airport Road and Sandalwood Parkway	2024	1,000,000	-		1,000,000	50,000	-	950,000	674,500	275,500
78	Development Charges Update	Funding for the preparation of the Regional Transportation Development Charges Update	2024-2039	1,200,000	-		1,200,000	-	-	1,200,000	852,000	348,000
79	BOVAIRD DRIVE - Mississauga Road to 1.5 km West of Heritage Road	Two (2) to four (4) lane widening from Mississauga Road to 1.5 km West of Heritage Road.	2025	19,462,000	-		19,462,000	2,919,300	-	16,542,700	11,745,317	4,797,383
80	* Future Road Widening Projects	WCB (5-7) - Steeles Ave to 2 km south of Embleton Rd	2025-2030	6,910,000	-		6,910,000	518,200	3,455,212	2,936,588	2,084,977	851,611
81	* Future Road Widening Projects	WCB (4-6) - 2 km south of Embleton Rd to Embleton Rd	2025-2030	11,825,000	-		11,825,000	886,900	5,912,323	5,025,777	3,568,302	1,457,475
82	Future Road Widening Projects	Coleraine Dr (2-4) - Highway 50 to Mayfield Rd	2025-2030	29,139,000	-		29,139,000	4,370,900	-	24,768,100	17,585,351	7,182,749
83	Future Road Widening Projects	Mayfield Rd (4-6) - Bamalea Rd to Airport Rd	2025-2031	4,154,000	-		4,154,000	619,700	-	3,534,300	2,509,353	1,024,947
84	* Future Road Widening Projects	WCB (4-6) - North Sheridan Way to Dundas St	2025-2030	14,389,000	-		14,389,000	1,045,900	7,194,368	6,148,732	4,365,600	1,783,132
85	Future Intersections	Derry Rd and Syntex Dr	2025	450,000	-		450,000	22,500	-	427,500	303,525	123,975
86	Future Intersections	Bovaird Dr and Collector Rd(new)	2025	628,000	-		628,000	-	-	628,000	445,880	182,120
87	Future Intersections	Bovaird Dr and Collector Rd(new)	2025	729,000	-		729,000	-	-	729,000	517,590	211,410
88	Future Intersections	Derry Rd and Tenth Line	2025-2026	1,825,000	-		1,825,000	91,300	-	1,733,700	1,230,927	502,773
89	Future Intersections	Dixie Rd and Sherway Dr	2025	690,000	-		690,000	34,500	-	655,500	465,405	190,095
90	Future Intersections	Derry Rd and Ninth Line	2025-2027	1,220,000	-		1,220,000	61,000	-	1,159,000	822,890	336,110
91	Future Intersections	Derry Rd and West Credit Ave	2025	310,000	-		310,000	15,500	-	294,500	209,095	85,405
92	Future Intersections	Derry Rd and Glen Erin Rd	2025	250,000	-		250,000	12,500	-	237,500	168,625	68,875
93	Future Intersections	Queen St and William Sharpe Dr	2025	380,000	-		380,000	19,000	-	361,000	256,310	104,690
94	Future Intersections	Queen St and Creditview Rd	2025	850,000	-		850,000	42,500	-	807,500	573,325	234,175
95	Future Intersections	Queen St and McLaughlin Rd	2025	3,025,000	-		3,025,000	151,300	-	2,873,700	2,040,327	833,373
96	Future Intersections	Derry Rd and Millcreek Dr	2029	415,000	-		415,000	20,800	-	394,200	279,882	114,318
97	Future Intersections	Winston Churchill Boulevard and Collector road (new)	2025	628,000	-		628,000	-	314,066	313,934	222,893	91,041
98	Future Intersections	Winston Churchill Boulevard and Collector Road (new)	2025	628,000	-		628,000	-	314,066	313,934	222,893	91,041
99	Future Intersections	Highway 50 and George Bolton Pkwy	2025	210,000	-		210,000	-	-	210,000	149,100	60,900
100	Future Intersections	Mayfield Rd and McVean Dr	2025	1,000,000	-		1,000,000	50,000	-	950,000	674,500	275,500
101	Future Intersections	Winston Churchill Boulevard and Arterial Road (new)	2025	628,000	-		628,000	-	314,066	313,934	222,893	91,041
102	Future Road Widening Projects	Mayfield Road (5-6) - Chinguacousy Road to West of Mississauga Road	2026-2035	14,930,000	-		14,930,000	2,239,500	-	12,690,500	9,010,255	3,680,245
103	Future Intersections	Finch Ave and Darcel Ave	2026-2028	700,000	-		700,000	35,000	-	665,000	472,150	192,850
104	Future Intersections	Queen St and West Dr	2026-2041	2,370,000	-		2,370,000	118,500	-	2,251,500	1,598,565	652,935
105	Future Intersections	Derry Rd and Forest Park Dr	2026-2027	695,000	-		695,000	34,800	-	660,200	468,742	191,458
106	Future Intersections	Derry Rd and Rosehurst Dr	2026-2027	1,850,000	-		1,850,000	92,500	-	1,757,500	1,247,825	509,675

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
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	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
107	Future Intersections	Kennedy Rd and Clarence Rd	2026-2031	1,280,000	-		1,280,000	64,000	-	1,216,000	863,360	352,640
108	* Future Intersections	Winston Churchill Blvd and Embleton Rd	2026	2,600,000	-		2,600,000	65,000	1,300,000	1,235,000	876,850	358,150
109	Future Intersections	Airport Rd and Northwest Dr	2026-2028	695,000	-		695,000	34,800	-	660,200	468,742	191,458
110	Future Intersections	Airport Rd and Morning Star Dr	2026	770,000	-		770,000	38,500	-	731,500	519,365	212,135
111	Future Intersections	Airport Rd and Clark Blvd	2026	975,000	-		975,000	48,800	-	926,200	657,602	268,598
112	Future Intersections	Highway 50 and Collector Road (new)	2026	647,000	-		647,000	-	323,566	323,434	229,638	93,796
113	Future Intersections	Britannia Rd and Ninth Line Rd	2026-2029	675,000	-		675,000	33,800	-	641,200	455,252	185,948
114	Future Intersections	Embleton Road and New Intersection	2026	729,000	-		729,000	-	-	729,000	517,590	211,410
115	Future Intersections	EMP and Windwood Dr	2026	300,000	-		300,000	15,000	-	285,000	202,350	82,650
116	Future Intersections	Britannia Rd and Cantay Rd	2026-2027	917,000	-		917,000	45,900	-	871,100	618,481	252,619
117	* Future Intersections	Britannia Rd and WCB	2026	1,108,000	-		1,108,000	27,700	554,000	526,300	373,673	152,627
118	Future Intersections	Britannia and Queen St	2026-2028	1,110,000	-		1,110,000	55,500	-	1,054,500	748,695	305,805
119	Growth Related Traffic Signal Installations	Installation of traffic signals due to growth.	2026	825,000	-		825,000	-	-	825,000	585,750	239,250
120	** Under Maintenance Envelope	Contingency allocated for costs during the warranty period	2027-2041	22,000,000	-		22,000,000	6,600,000	-	15,400,000	10,934,000	4,466,000
121	* Future Intersections	Britannia Rd and Belgrave Rd	2027	300,000	-		300,000	15,000	-	285,000	202,350	82,650
122	* Future Intersections	Bovaird Dr and Collector Rd(new)	2027	628,000	-		628,000	-	314,066	313,934	222,893	91,041
123	* Future Intersections	Mayfield Rd and Collector Rd (new)	2027	618,000	-		618,000	-	-	618,000	438,780	179,220
124	Future Intersections	Winston Churchill Boulevard and Collector Road (new)	2027	628,000	-		628,000	-	314,066	313,934	222,893	91,041
125	Future Intersections	Winston Churchill Boulevard and Collector Road (new)	2027	628,000	-		628,000	-	314,066	313,934	222,893	91,041
126	Future Intersections	Dixie Rd and Dundas ST	2027	500,000	-		500,000	25,000	-	475,000	337,250	137,750
127	Future Intersections	Mayfield Road and Collector Road (new)	2027	628,000	-		628,000	-	-	628,000	445,880	182,120
128	Future Intersections	Airport Rd and Coventry Rd	2027	885,000	-		885,000	44,300	-	840,700	596,897	243,803
129	Future Intersections	Airport Rd and Braydon Blvd	2027	400,000	-		400,000	20,000	-	380,000	269,800	110,200
130	Future Intersections	Airport Rd and Queen St	2027	705,000	-		705,000	35,300	-	669,700	475,487	194,213
131	Future Intersections	The Gore Rd and Fogal Rd	2027	890,000	-		890,000	44,500	-	845,500	600,305	245,195
132	Future Intersections	The Gore Rd and Ebenezer Rd	2027	1,450,000	-		1,450,000	72,500	-	1,377,500	978,025	399,475
133	Future Intersections	The Gore Rd and Cottrelle Blvd	2027	830,000	-		830,000	41,500	-	788,500	559,835	228,665
134	Future Intersections	The Gore Rd and Pannahill Dr	2027	400,000	-		400,000	20,000	-	380,000	269,800	110,200
135	Future Intersections	Embleton Rd and Heritage Rd	2027	1,400,000	-		1,400,000	70,000	-	1,330,000	944,300	385,700
136	Future Intersections	Britannia Rd and Falbourne St	2027	500,000	-		500,000	25,000	-	475,000	337,250	137,750
137	Future Intersections	Dixie Rd and Lakeshore Blvd	2027	500,000	-		500,000	25,000	-	475,000	337,250	137,750
138	Future Intersections	Derry Rd and Cardiff Blvd	2027	350,000	-		350,000	17,500	-	332,500	236,075	96,425
139	Future Intersections	Dixie Rd and Matheson Rd	2027-2028	1,090,000	-		1,090,000	54,500	-	1,035,500	735,205	300,295
140	KING STREET Grade Separated Crossing	Bolton Residential Expansion Study (BRES) indicates the future need for a grade separated crossing on King Street.	2027	22,000,000	-		22,000,000	1,100,000	3,300,000	17,600,000	12,496,000	5,104,000
141	Sustainable Transportation Strategy Implementation	Implementation of Sustainable Transportation Strategy through various projects in Peel.	2020-2040	184,770,000	-		184,770,000	26,395,500	8,797,000	149,577,500	106,200,025	43,377,475
142	Future Intersections	King St and Hwy 50	2028-2030	2,365,000	-		2,365,000	118,300	-	2,246,700	1,595,157	651,543
143	Future Intersections	The Gore Rd and Castle Oaks Crossing	2028	1,085,000	-		1,085,000	54,300	-	1,030,700	731,797	298,903
144	Future Intersections	The Gore Rd and King St	2028-2030	898,000	-		898,000	44,900	-	853,100	605,701	247,399

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	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
145	Future Intersections	King St and Caledon Town Line	2028-2032	1,288,000	-		1,288,000	64,400	-	1,223,600	868,756	354,844
146	Future Intersections	King St and Ennis Lake Rd	2028	1,112,000	-		1,112,000	55,600	-	1,056,400	750,044	306,356
147	Future Intersections	King St and Torbram Rd	2028	405,000	-		405,000	20,300	-	384,700	273,137	111,563
148	Future Intersections	Bovaird Dr and Torbram Rd	2028	403,000	-		403,000	20,200	-	382,800	271,788	111,012
149	Future Intersections	Bovaird Dr and Professor Lake Pkwy	2028	810,000	-		810,000	40,500	-	769,500	546,345	223,155
150	Future Intersections	Mayfield RD and Heartlake Rd	2028	566,000	-		566,000	28,300	-	537,700	381,767	155,933
151	Future Intersections	Derry Rd and Financial Dr	2028	360,000	-		360,000	18,000	-	342,000	242,820	99,180
152	Future Intersections	Derry Rd and Telford Wy	2028	650,000	-		650,000	32,500	-	617,500	438,425	179,075
153	Transportation Initiatives	Construction of a commuter parking lot in Peel.	2028-2032	4,750,000	-		4,750,000	712,500	-	4,037,500	2,866,625	1,170,875
154	Future Intersections	Britannia and Ninth Line Rd	2029	1,350,000	-		1,350,000	67,500	-	1,282,500	910,575	371,925
155	* Future Intersections	Highway 50 and Castlemore Rd	2029-2036	2,816,000	-		2,816,000	70,400	1,408,131	1,337,469	949,603	387,866
156	Future Intersections	Mayfield RD and Torbram Rd	2029	783,000	-		783,000	39,200	-	743,800	528,098	215,702
157	Future Intersections	Mayfield Rd and Kennedy Rd	2029-2033	1,544,000	-		1,544,000	77,200	-	1,466,800	1,041,428	425,372
158	Future Intersections	Mayfield Rd and Cresthaven RD	2029	784,000	-		784,000	39,200	-	744,800	528,808	215,992
159	Future Intersections	Derry Rd and Mavis Rd	2029	700,000	-		700,000	35,000	-	665,000	472,150	192,850
160	Future Intersections	Dixie Rd and Burnhamthorpe Rd	2029	500,000	-		500,000	25,000	-	475,000	337,250	137,750
161	Future Intersections	Derry Rd and Rexwood Rd	2029	500,000	-		500,000	25,000	-	475,000	337,250	137,750
162	Future Intersections	Derry Rd and Meadowvale Blvd	2029	980,000	-		980,000	49,000	-	931,000	661,010	269,990
163	Future Intersections	Derry Rd and Kennedy Rd	2029	650,000	-		650,000	32,500	-	617,500	438,425	179,075
164	Future Environmental Assessments	Mississauga Rd (2-4) - Mayfield Rd to Old School Rd	2029	570,000	-		570,000	85,500	-	484,500	343,995	140,505
165	Future Environmental Assessments	Mayfield Road (4-6)- Clarkway to Colearine	2029	460,000	-		460,000	69,000	-	391,000	277,610	113,390
166	Future Intersections	Mayfield Rd and WCB	2030	425,000	-		425,000	21,300	-	403,700	286,627	117,073
167	Future Environmental Assessments	The Gore Rd (2-4) - Mayfield Rd to Healy Rd	2030	580,000	-		580,000	87,000	-	493,000	350,030	142,970
168	Highway 401 West Bound Ramp To Dixie Road/Creekbank Road Extension	Improvements to the Highway 401 West Bound Ramp to Dixie Road and Creekbank Road Extension.	2030	6,962,000	-		6,962,000	3,481,000	-	3,481,000	2,471,510	1,009,490
169	Future Intersections	Steeles Ave and Goreway DR	2031	950,000	-		950,000	47,500	-	902,500	640,775	261,725
170	Future Intersections	Steeles Ave and Tomken Rd	2031	595,000	-		595,000	29,800	-	565,200	401,292	163,908
171	Future Intersections	Steeles Ave and Kennedy Rd	2031	586,000	-		586,000	29,300	-	556,700	395,257	161,443
172	Future Intersections	Steeles Ave and MacLaughlin Rd	2031	625,000	-		625,000	31,300	-	593,700	421,527	172,173
173	Future Intersections	Steeles Ave and Windmill Blvd	2031	1,600,000	-		1,600,000	80,000	-	1,520,000	1,079,200	440,800
174	Future Intersections	Steeles Ave and Chinguacousy Rd	2031	175,000	-		175,000	8,800	-	166,200	118,002	48,198
175	Future Intersections	Steeles Ave and Finacial Dr	2031	1,720,000	-		1,720,000	86,000	-	1,634,000	1,160,140	473,860
176	Future Intersections	Steeles Ave and Heritage Rd	2031	1,500,000	-		1,500,000	75,000	-	1,425,000	1,011,750	413,250
177	* Future Intersections	Steeles Ave and WCB	2031	1,000,000	-		1,000,000	25,000	500,000	475,000	337,250	137,750
178	Future Intersections	Kennedy Rd and Rambler Dr	2031	620,000	-		620,000	31,000	-	589,000	418,190	170,810
179	Future Intersections	Kennedy Rd and Orenda Rd	2031	875,000	-		875,000	43,800	-	831,200	590,152	241,048
180	Future Road Widening Projects	Mayfield Rd (4-6)- Clarkway to Coleraine	2032-2037	7,899,000	-		7,899,000	1,184,900	-	6,714,100	4,767,011	1,947,089
181	Future Road Widening Projects	Mississauga Rd (2-4) - Mayfield Rd to Old School Rd	2032-2037	15,373,000	-		15,373,000	2,306,000	-	13,067,000	9,277,570	3,789,430
182	Future Road Widening Projects	The Gore Rd (2-4) - Mayfield Rd to Healy Rd	2033-2038	15,814,000	-		15,814,000	2,372,100	-	13,441,900	9,543,749	3,898,151

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	Project Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 71%	Non-Residential Share 29%
183	Future Intersections	Highway 50 and Wilton_Allan Dr	2035-2041	1,175,000	-		1,175,000	58,800	-	1,116,200	792,502	323,698
184	Future Intersections	Kennedy Rd and Queen St	2031-2041	1,400,000	-		1,400,000	70,000	-	1,330,000	944,300	385,700
185	Future Intersections	Kennedy Rd and Church St	2031-2041	410,000	-		410,000	20,500	-	389,500	276,545	112,955
186	Future Intersections	Cawthra Rd and Lakeshore Blvd	2031-2041	1,100,000	-		1,100,000	55,000	-	1,045,000	741,950	303,050
187	Future Intersections	Cawthra Rd and Atwater Ave	2031-2041	610,000	-		610,000	30,500	-	579,500	411,445	168,055
188	* Future Intersections	WCB and Royal Windsor Dr	2031-2041	655,000	-		655,000	16,400	327,500	311,100	220,881	90,219
189	* Future Intersections	WCB Blvd and Broomsgrove Rd	2031-2041	545,000	-		545,000	13,600	272,500	258,900	183,819	75,081
190	* Future Intersections	WCB and Truscott Dr	2031-2041	527,000	-		527,000	13,200	263,500	250,300	177,713	72,587
191	Future Intersections	Queensway East and Hurontario St	2031-2041	950,000	-		950,000	47,500	-	902,500	640,775	261,725
192	Future Intersections	Queensway East and Trillium Centre	2031-2041	1,325,000	-		1,325,000	66,300	-	1,258,700	893,677	365,023
193	* Future Intersections	Hwy 50 and Cottrelle Blvd	2031-2041	526,000	-		526,000	13,200	263,000	249,800	177,358	72,442
194	Future Intersections	Bovaird Dr and Southlake Blvd_Heartlake Rd	2031-2041	2,760,000	-		2,760,000	138,000	-	2,622,000	1,861,620	760,380
195	Future Intersections	HWY 50 and Ellwood Dr	2031-2041	935,000	-		935,000	46,800	-	888,200	630,622	257,578
196	Future Intersections	Queen St East and McVean Dr	2031-2041	940,000	-		940,000	47,000	-	893,000	634,030	258,970
197	Future Intersections	Queen St East and Goreway Dr	2031-2041	2,300,000	-		2,300,000	115,000	-	2,185,000	1,551,350	633,650
198	Future Intersections	Queen St East and Delta Park Dr	2031-2041	655,000	-		655,000	32,800	-	622,200	441,762	180,438
199	Future Intersections	Queen St and Gateway Blvd	2031-2041	975,000	-		975,000	48,800	-	926,200	657,602	268,598
200	Future Intersections	Bovaird Dr and Royal Orchard Dr_Van Kirk Dr	2031-2041	1,550,000	-		1,550,000	77,500	-	1,472,500	1,045,475	427,025
201	Future Intersections	Bovaird Dr and Fletcher Ck_Edenbrook Hill Dr	2031-2041	870,000	-		870,000	43,500	-	826,500	586,815	239,685
202	Future Intersections	Bovaird Dr and Chingaucousy Rd	2031-2041	1,525,000	-		1,525,000	76,300	-	1,448,700	1,028,577	420,123
203	Future Intersections	Bovaird Dr and Ashby Field Rd_GO Station	2031-2041	960,000	-		960,000	48,000	-	912,000	647,520	264,480
204	Future Intersections	Bovaird Dr and Heritage Rd	2031-2041	1,600,000	-		1,600,000	80,000	-	1,520,000	1,079,200	440,800
205	Future Intersections	Coleraine Dr and Healey Rd	2031-2041	1,200,000	-		1,200,000	60,000	-	1,140,000	809,400	330,600
206	Future Intersections	King St and Hurontario Sr	2031-2041	980,000	-		980,000	49,000	-	931,000	661,010	269,990
207	Property	Property	2020-2041	234,328,000	-		234,328,000	-	-	234,328,000	166,372,880	67,955,120
208	Utilities	Utilities	2020-2041	96,751,000	-		96,751,000	-	-	96,751,000	68,693,210	28,057,790
	Provisional Reduction for WAH and NFPOW Adjustment		2020		80,991,000		(80,991,000)	-	-	(80,991,000)	(57,503,610)	(23,487,390)
	Existing Debt Principal		2020-2040	8,737,949	-		8,737,949	-	-	8,737,949	6,203,944	2,534,005
	Existing Debt Interest (Discounted)		2020-2040	3,092,973	-		3,092,973	-	-	3,092,973	2,196,011	896,962
	Reserve Fund Adjustment		Reserve	198,939,867	-		198,939,867	-		198,939,867	141,247,305	57,692,561
	Total			**1,832,170,789**	**80,991,000**	**-**	**1,751,179,789**	**180,685,500**	**67,983,109**	**1,502,511,180**	**1,066,782,938**	**435,728,242**

5.4 Service Levels and Water and Wastewater Capital Costs for Peel's D.C. Calculation

This section evaluates the development-related capital requirements for Water and Wastewater Services.

5.4.1 Water and Wastewater Master Servicing Plan

The Region of Peel is responsible for planning, constructing, operating and maintaining the municipal water and wastewater systems within its boundaries, including water treatment, transmission, storage, pumping and distribution, as well as wastewater local and primary collection, pumping and treatment.

The Region of Peel is responsible for planning, constructing, operating and maintaining the municipal water and wastewater systems within its boundaries, including water treatment, transmission, storage, pumping and distribution, as well as wastewater local and primary collection, pumping and treatment.

To identify the required infrastructure needs for the lake-based water and wastewater systems, the Region of Peel has completed the 2020 Water and Wastewater Master Plan for the lake-based systems to service growth to 2041. The objective of the Master Plan is "to provide water supply and sanitary sewer services to appropriate areas of the Region in an adequate, efficient, planned and cost-effective manner consistent with the public need and financial realities." The Region completed the first Water and Wastewater Master Servicing Plan for the lake-based systems in 1999. The Region issued an addendum to the Master Plan in 2002 to identify infrastructure requirements to meet water supply commitments to York Region. Full updates of the Master Plan, which were adopted by Council, were completed in 2007 and 2013. Regular technical reviews of the Master Plan and servicing strategies are undertaken in the intermediary years.

The 2020 Water and Wastewater Master Servicing Plan, which has evolved based on the approved 1999, 2002, 2007, and 2013 Master Plans, provides a "blueprint" for lake-based water and wastewater infrastructure requirements to allow the Region to sustain projected growth demands. It is on the basis of this "blueprint" that the growth-related Regional capital plan to 2041 has been developed, as required under the D.C.A.

5.4.1.1 Water Supply Services

5.4.1.1.1 The Treatment and Transmission System

The lake-based treatment and transmission system (also referred to as the South Peel water system) consists of a network of water treatment plants, reservoirs, pumping stations, elevated tanks and the interconnecting transmission (or trunk) mains between these facilities. The transmission mains range in size from 600 mm diameter to 2400 mm diameter and are generally dedicated for the transfer of water between water pressure zones from downstream pumping stations to upstream reservoirs.

As with the previous Master Plan, the approach of projecting future demands in the water system was based on establishing a maximum day demand starting point based on a 5-year rolling average, calculated from measured water demands and projecting growth demands for residential and industrial/commercial/institutional (I.C.I.) population from this point forward.

To obtain the required volumes of water to meet the supply requirements, maximum day demand (as opposed to average day or peak hour demand) is considered the key criteria for sizing the treatment and transmission system. Localized peak hour demands (morning and evening peaks) are equalized in the system because of the provision of reservoirs throughout the Region of Peel.

Reservoirs are designed based on the Ministry of Environment, Conservation and Parks (M.E.C.P.) design criteria which, in part, utilize the maximum day demand for balancing storage and then include fire and emergency storage. The pumping stations are designed based on peak hour demand or maximum day demand plus fire demand.

Water treatment plant capacity is also designed based on maximum day demand.

The full pipe hydraulic model was used to assess the transmission network and determine minimum required pipe sizes to meet maximum day demand conditions.

5.4.1.1.2 The Distribution System

The lake-based distribution system (also referred to as the Regional water system) conveys water from the treatment and transmission facilities to the distribution water

mains within each subdivision. Under Regional policy, all new distribution mains with a diameter of 400 mm or larger are financed through development charges.

The Region has used historical water consumption to establish water design standards for both the treatment and transmission as well as the distribution systems in accordance with the D.C.A. and Ministry of Environment (M.E.C.P.) guidelines. Average residential and I.C.I. water usage varies on an annual basis and is therefore subject to refinement based on a review of available historical data for design purposes.

Regional policy specifies that the transmission and distribution systems be designed to provide water pressures in the range of 240 kPa (40 psi) and 700 kPa (100 psi).

The distribution mains are smaller and closer to the demand source than the transmission mains. The full pipe hydraulic model was used to assess the distribution system using average day demand, maximum day demand plus fire flow, morning peak demand (higher industrial usage) and evening peak demand (higher residential usage). Higher morning or evening peaks vary among the water pressure zones.

5.4.1.1.3 Water Demand Criteria

The maximum day demand is calculated based on the average day consumption rates, which are then multiplied by a factor determined by historical records and checked against M.E.C.P. design guidelines (the M.E.C.P. factor is based on the population serviced but references the need to utilize historical peaking factors).

The total maximum day demand for the entire lake-based water system is currently at approximately 989 ML/d, and includes supply to York Region, non-residential industrial consumption and unaccounted water loss (e.g., leakage, firefighting and flushing for maintenance).

Confirmation of the water consumption criteria used in the Master Plan has been undertaken in the 2020 Master Plan. Plant flow data from 2001 onwards was evaluated with additional weighting placed on recent data. Historical flows were correlated to recent population data.

The development of design criteria is an element that is reviewed during each Master Plan update and, as a result, has evolved over the years. The Region has also

considered water conservation initiatives and changes in the Ontario Plumbing Code, which specifies the use of water efficient fixtures for new home construction. These and other recent trends in water consumption support the reduction of the average day water design criteria from 280 to 265 L/person or employee/day. This represents a reduction of approximately 5.4 percent.

Further analysis and discussions with the development industry led to the decision of discretizing a single design criterion into separate residential and non-residential components based on serviced population. The new design criteria will be 270 L/cap/d for residential and 250 L/cap/d for I.C.I. population. The residential maximum day peaking factor will also be reduced from 2.0 to 1.8, while the non-residential maximum day peaking factor will remain unchanged at 1.4.

Based on the format of planning projections received from the Region of Peel, it is applicable to provide the employment design criteria related to employees.

The updated design criteria are summarized in Table 5-16.

Table 5-16
Region of Peel
Updated Water Design Criteria

Land Use Type	Average Day Demand	Maximum Day Factor
Residential	270 L/cap/d	1.8
I.C.I.	250 L/emp/d	1.4

Table 5-17
Region of Peel
2020 Watermain Unit Costs

Size (mm)	Unit Cost ($/m)
400	$873
600	$1,337
750	$1,533
900	$1,822
1,050	$2,141
1,200	$2,528
1,350	$3,076
1,500	$3,416
1,650	$3,966
1,800	$4,419
2,100	$4,998

These base construction unit costs assume open cut construction and include excavation, materials, installation, restoration, engineering and contingencies. They do not include additional costs to account for creek, road, railway, or utility crossings, valves, tunneling requirements where required. Special circumstances which require, for example, rock excavation, tunnelling and dewatering, are also not included in these unit costs. In cases where construction will occur in built up areas, such as intensification areas, a cost escalation factor is applied to the base construction cost to account for the additional infrastructure coordination/relocation, restoration, and urban construction impacts.

Soft costs such as geotechnical/hydrogeological, property/easements, engineering and design, contract administration and contingency allowances, are added to the base construction cost to arrive at the total project cost.

5.4.1.1.4 Water Service Standards Recommendation

That the Water Service Standards based on Regional policy, guidelines and the standards outlined above, be used for the preparation of the new D.C. by-law.

That the allocation of the residential/non-residential share of eligible growth expenditures be based on incremental population vs. employment growth (multiplied by their respective capacity design criteria) over the 2020-2041 forecast period as follows:

- Residential – 73%
- Non-residential – 27%

5.4.1.1.5 Summary of Capital Costs Included in D.C. Calculation – Regional Water

The Region has identified the need for $544.83 million in additional water projects with post period benefit of $3.26 million. An adjustment to account for the existing reserve fund deficit of $297.78 million has been made to the calculations. An additional $91.14 million has been included in the calculations to account for existing growth-related debt-principal and interest (discounted) costs. In addition to the existing debt, the Region is anticipating issuing $30 million of new growth-related debt. The discounted interest costs related to this debt amount has been included in the calculations at an amount of $8.90 million with $498,800 of that amount attributed to growth beyond the forecast period. The capital forecast to 2041 for water utilizes total employment figures that include W.A.H. and N.F.P.O.W. employees. Since the growth forecast utilized for the D.C. calculations excludes these categories, a post period benefit deduction in the amount of $30.35 million has been made to account for this capital. The net amount included in the D.C. calculation is $908.54 million. A summary of these capital costs is provided in Table 5-18.

Table 5-18
Region of Peel
Summary of Regional Water Capital Costs

Regional Water Capital Costs	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Costs	Benefit to Existing	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Projects	544,825,331	3,256,000	541,569,331	-	-	541,569,331	395,345,612	146,223,719
Existing Debt Principal and Interest (Discounted)	91,141,530	-	91,141,530	-	-	91,141,530	66,533,317	24,608,213
New Debt Interest (Discounted)	8,901,408	498,800	8,402,608	-	-	8,402,608	6,133,903	2,268,704
Provisional Reduction for WAH and NFPOW Adjustment		30,348,000	(30,348,000)	-	-	(30,348,000)	(22,154,040)	(8,193,960)
Reserves	297,775,977		297,775,977	-	-	297,775,977	217,376,463	80,399,514
Total	**942,644,245**	**34,102,800**	**908,541,445**	**-**	**-**	**908,541,445**	**663,235,255**	**245,306,190**

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

#	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
1	3634	221131	Water Main	400-mm Water Main - Future Financial Drive (Bram West)	Construction of a 400-mm water main on the future Financial Drive from Heritage Road to Winston Churchill Boulevard.	2022	3,647,200	-		3,647,200	-		3,647,200	2,662,456	984,744
2	20734	251199	Design	400-mm Water Main - Bovaird Drive West	Construction of a 400-mm water main on Bovaird Drive West from Heritage Road to a future street. Design in 2027.	2027	299,600	-		299,600	-		299,600	218,708	80,892
3	20735	251199	Water Main	400-mm Water Main - Bovaird Drive West	Construction of a 400-mm water main on Bovaird Drive West from Heritage Road to a future street. Design in 2027.	2029	1,402,800	-		1,402,800	-		1,402,800	1,024,044	378,756
4	20742	251198	Water Main	600-mm Water Main - Future Sandalwood Parkway West	Construction of a 600-mm water main on the future Sandalwood Parkway West from Mississauga Road to Heritage Road.	2031	3,701,200	-		3,701,200	-		3,701,200	2,701,876	999,324
5	20745	251198	Water Main	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street from Heritage Road to 750 metres westerly.	2028	1,365,000	-		1,365,000	-		1,365,000	996,450	368,550
6	20752	251199	Design	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Mississauga Road to Heritage Road. Design in 2031.	2031	494,400	-		494,400	-		494,400	360,912	133,488
7	20753	251199	Water Main	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Mississauga Road to Heritage Road. Design in 2031.	2033	2,314,800	-		2,314,800	-		2,314,800	1,689,804	624,996
8	20754	251199	Design	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Winston Churchill Boulevard to Heritage Road. Design in 2032.	2032	519,900	-		519,900	-		519,900	379,527	140,373
9	20755	251199	Water Main	400-mm Water Main - Wanless Drive	Construction of a 400-mm water main on Wanless Drive from Winston Churchill Boulevard to Heritage Road. Design in 2032.	2034	2,434,200	-		2,434,200	-		2,434,200	1,776,966	657,234
10	32599	251199	Design	400-mm Water Main - Mayfield Road	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard. Design in 2035.	2035	850,100	-		850,100	-		850,100	620,573	229,527
11	32600	251199	Water Main	400-mm Water Main - Mayfield Road	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard. Design in 2035.	2037	4,042,000	-		4,042,000	-		4,042,000	2,950,660	1,091,340
12	21114	221171	Design	600-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Countryside Drive from Clarkway Drive to the future north-south road. Design in 2022.	2022	368,200	-		368,200	-		368,200	268,786	99,414
13	20915	221171	Water Main	600-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Countryside Drive from Clarkway Drive to the future north-south road. Design in 2022.	2024	1,724,100	-		1,724,100	-		1,724,100	1,258,593	465,507
14	21121	231174	Design	600-mm Water Main - Clarkway Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Clarkway Drive from Countryside Drive to Mayfield Road. Design in 2023.	2023	568,400	-		568,400	-		568,400	414,932	153,468
15	20918	231174	Water Main	600-mm Water Main - Clarkway Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Clarkway Drive from Countryside Drive to Mayfield Road. Design in 2023.	2025	2,661,700	-		2,661,700	-		2,661,700	1,943,041	718,659

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

#	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
16	20920	221178	Water Main	400-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 400-mm water main on the future east-west road from The Gore Road to Clarkway Drive.	2022	2,513,700	-		2,513,700	-		2,513,700	1,835,001	678,699
17	20922	251198	Water Main	400-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 400-mm water main on the future east-west road from Coleraine Drive to the future north-south road.	2025	1,153,800	-		1,153,800	-		1,153,800	842,274	311,526
18	21137	251198	Water Main	400-mm Water Main - New Road A (Bram West)	Construction of a 400-mm water main on New Road A (Bram West) from Winston Churchill Boulevard to Heritage Road.	2026	2,609,600	-		2,609,600	-		2,609,600	1,905,008	704,592
19	21134	251199	Design	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from New Road A (Bram West) to the future Bramwest Parkway. Design in 2025.	2025	607,400	-		607,400	-		607,400	443,402	163,998
20	21141	251199	Water Main	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from New Road A (Bram West) to the future Bramwest Parkway. Design in 2025.	2027	2,844,300	-		2,844,300	-		2,844,300	2,076,339	767,961
21	52711	241173	Water Main	600-mm Water Main - Future Street (Highway 427 Industrial)	Construction of a 600-mm water main on the future north-south road from the future east-west road to Countryside Drive.	2024	4,656,100	-		4,656,100	-		4,656,100	3,398,953	1,257,147
22	37587	251199	Design	400-mm Water Main - Queen Street East	Construction of a 400-mm water main on Queen Street East from Kennedy Road to Highway 410. Design in 2028.	2028	429,800	-		429,800	-		429,800	313,754	116,046
23	37588	251199	Water Main	400-mm Water Main - Queen Street East	Construction of a 400-mm water main on Queen Street East from Kennedy Road to Highway 410. Design in 2028.	2030	2,042,400	-		2,042,400	-		2,042,400	1,490,952	551,448
24	30032	211112	Design	400-mm Water Main - Derry Road West (Ninth Line Lands)	Construction of a 400-mm water main on Derry Road West from Tenth Line West to Ninth Line. Design in 2021.	2021	491,800	-		491,800	-		491,800	359,014	132,786
25	30033	211112	Water Main	400-mm Water Main - Derry Road West (Ninth Line Lands)	Construction of a 400-mm water main on Derry Road West from Tenth Line West to Ninth Line. Design in 2021.	2023	2,302,600	-		2,302,600	-		2,302,600	1,680,898	621,702
26	30034	211113	Design	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to Terragar Boulevard. Design in 2021.	2021	435,500	-		435,500	-		435,500	317,915	117,585
27	30035	211113	Water Main	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to Terragar Boulevard. Design in 2021.	2023	2,038,300	-		2,038,300	-		2,038,300	1,487,959	550,341
28	30038	201157	Design	400-mm Water Main - Future Clark Boulevard	Construction of a 400-mm water main on future extension of Clark Boulevard from Rutherford Road to Hansen Road South. Design in 2020.	2020	156,200	-		156,200	-		156,200	114,026	42,174
29	30039	201157	Water Main	400-mm Water Main - Future Clark Boulevard	Construction of a 400-mm water main on future extension of Clark Boulevard from Rutherford Road to Hansen Road South. Design in 2020.	2021	730,500	-		730,500	-		730,500	533,265	197,235
30	30710	201176	Design	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from the future east-west road to Countryside Drive. Design in 2020.	2020	545,700	-		545,700	-		545,700	398,361	147,339
31	30711	201176	Water Main	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from the future east-west road to Countryside Drive. Design in 2020.	2022	2,554,500	-		2,554,500	-		2,554,500	1,864,785	689,715

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

#	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
32	30712	201177	Design	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from Countryside Drive to Mayfield Road. Design in 2020.	2020	373,300	-		373,300	-		373,300	272,509	100,791
33	30713	201177	Water Main	400-mm Water Main - Coleraine Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Coleraine Drive from Countryside Drive to Mayfield Road. Design in 2020.	2022	1,748,600	-		1,748,600	-		1,748,600	1,276,478	472,122
34	32141	251199	Design	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from Mayfield Road to Wanless Drive. Design in 2033.	2033	331,300	-		331,300	-		331,300	241,849	89,451
35	32142	251199	Water Main	400-mm Water Main - Winston Churchill Boulevard	Construction of a 400-mm water main on Winston Churchill Boulevard from Mayfield Road to Wanless Drive. Design in 2033.	2035	1,550,700	-		1,550,700	-		1,550,700	1,132,011	418,689
36	30717	251198	Water Main	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street (Heritage Heights) from Bovaird Drive northerly to a future street.	2029	2,038,300	-		2,038,300	-		2,038,300	1,487,959	550,341
37	33352	161126	Water Main	400-mm Water Main - Hurontario Street	Construction of a 400-mm water main on Hurontario Street from Matheson Boulevard to Britannia Road. In coordination with the Hurontario LRT.	2020	3,484,942	-		3,484,942	-		3,484,942	2,544,008	940,934
38	32584	251199	Design	400-mm Water Main - Mississauga Road (Mount Pleasant West)	Construction of a 400-mm water main on Mississauga Road From Mayfield Road southerly to a future street. Design in 2029.	2029	401,600	-		401,600	-		401,600	293,168	108,432
39	32585	251199	Water Main	400-mm Water Main - Mississauga Road (Mount Pleasant West)	Construction of a 400-mm water main on Mississauga Road From Mayfield Road southerly to a future street. Design in 2029.	2031	1,880,200	-		1,880,200	-		1,880,200	1,372,546	507,654
40	32032	251199	Design	400-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard. Design in 2035.	2035	850,100	-		850,100	-		850,100	620,573	229,527
41	32033	251199	Water Main	400-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 400-mm water main on Mayfield Road from Heritage Road to Winston Churchill Boulevard. Design in 2035.	2037	4,042,000	-		4,042,000	-		4,042,000	2,950,660	1,091,340
42	31995	251199	Design	600-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 600-mm water main on Mayfield Road from Mississauga Road to Heritage Road. Design in 2035.	2035	1,176,300	-		1,176,300	-		1,176,300	858,699	317,601
43	31996	251199	Water Main	600-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 600-mm water main on Mayfield Road from Mississauga Road to Heritage Road. Design in 2035.	2037	5,591,700	-		5,591,700	-		5,591,700	4,081,941	1,509,759
44	20732	241130	Design	750-mm Water Main - Bovaird Drive West (Heritage Heights)	Construction of a 750-mm water main on Bovaird Drive West from Mississauga Road to Heritage Road. Design in 2024.	2024	1,264,300	-		1,264,300	-		1,264,300	922,939	341,361
45	20733	241130	Water Main	750-mm Water Main - Bovaird Drive West (Heritage Heights)	Construction of a 750-mm water main on Bovaird Drive West from Mississauga Road to Heritage Road. Design in 2024.	2026	6,010,000	-		6,010,000	-		6,010,000	4,387,300	1,622,700
46	20748	251199	Design	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from Bovaird Drive northerly to a future street. Design in 2025.	2025	644,500	-		644,500	-		644,500	470,485	174,015
47	20749	251199	Water Main	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from Bovaird Drive northerly to a future street. Design in 2025.	2027	3,063,600	-		3,063,600	-		3,063,600	2,236,428	827,172

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

#	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
48	20750	251199	Design	600-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 600-mm water main on Heritage Road from the future extension of Sandalwood Parkway to Wanless Drive. Design in 2031.	2031	699,200	-		699,200	-		699,200	510,416	188,784
49	20751	251199	Water Main	600-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 600-mm water main on Heritage Road from the future extension of Sandalwood Parkway to Wanless Drive. Design in 2031.	2033	3,323,800	-		3,323,800	-		3,323,800	2,426,374	897,426
50	20758	251199	Design	750-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 750-mm water main on Mayfield Road from Heritage Road to Mississauga Road. Design in 2035.	2035	1,341,100	-		1,341,100	-		1,341,100	979,003	362,097
51	20759	251199	Water Main	750-mm Water Main - Mayfield Road (Mount Pleasant West)	Construction of a 750-mm water main on Mayfield Road from Heritage Road to Mississauga Road. Design in 2035.	2037	6,375,200	-		6,375,200	-		6,375,200	4,653,896	1,721,304
52	20766	251199	Design	750-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 750-mm sub-transmission main on Heritage Road from Wanless Drive to Mayfield Road. Design in 2035.	2035	715,400	-		715,400	-		715,400	522,242	193,158
53	20767	251199	Water Main	750-mm Water Main - Heritage Road (Mount Pleasant West)	Construction of a 750-mm sub-transmission main on Heritage Road from Wanless Drive to Mayfield Road. Design in 2035.	2037	3,400,300	-		3,400,300	-		3,400,300	2,482,219	918,081
54	21135	231133	Water Main	600-mm Water Main - Future Williams Parkway (Bram West)	Construction of a 600-mm water main on the future extension of Williams Parkway from Heritage Road to Mississauga Road. Design in 2023.	2025	2,772,900	-		2,772,900	-		2,772,900	2,024,217	748,683
55	21129	231138	Design	600-mm Water Main - Heritage Road (Bram West)	Construction of a 600-mm water main on Heritage Road from the future extension of Williams Parkway to the New Road A. Design in 2023.	2023	1,443,600	-		1,443,600	-		1,443,600	1,053,828	389,772
56	21136	231138	Water Main	600-mm Water Main - Heritage Road (Bram West)	Construction of a 600-mm water main on Heritage Road from the future extension of Williams Parkway to the New Road A. Design in 2023.	2025	6,862,800	-		6,862,800	-		6,862,800	5,009,844	1,852,956
57	21921	251199	Design	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from a future street to the future extension of Sandalwood Parkway. Design in 2025.	2025	673,500	-		673,500	-		673,500	491,655	181,845
58	21919	251199	Water Main	600-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 600-mm water main on Heritage Road from a future street to the future extension of Sandalwood Parkway. Design in 2025.	2027	3,201,400	-		3,201,400	-		3,201,400	2,337,022	864,378
59	21358	211170	Design	750-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 750-mm water main on Countryside Drive from The Gore Road to Clarkway Drive. Design in 2021.	2021	1,144,000	-		1,144,000	-		1,144,000	835,120	308,880
60	28911	211170	Water Main	750-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 750-mm water main on Countryside Drive from The Gore Road to Clarkway Drive. Design in 2021.	2023	5,438,600	-		5,438,600	-		5,438,600	3,970,178	1,468,422
61	30024	191156	Design	750-mm Water Main - Centre Street	Construction of a 750-mm sub-transmission main on Centre Street from Williams Parkway to John Street. Design in 2021.	2021	2,221,900	-		2,221,900	-		2,221,900	1,621,987	599,913
62	30025	191156	Water Main	750-mm Water Main - Centre Street	Construction of a 750-mm sub-transmission main on Centre Street from Williams Parkway to John Street. Design in 2021.	2023	11,060,300	-		11,060,300	-		11,060,300	8,074,019	2,986,281

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
63	30037	181169	Water Main	600-mm Water Main - Queen Street East (Bram East)	Construction of a 600-mm water main on Queen Street East and McVean Drive from Goreway Drive to Ebenezer Road.	2020	6,697,600	-		6,697,600	-		6,697,600	4,889,248	1,808,352
64	29680	251199	Design	600-mm Water Main - Lakeshore Road	Construction of a 600-mm water main on Lakeshore Road from the Arthur P. Kennedy Water Treatment Plant to Front Street South. Design in 2028.	2028	6,110,300	-		6,110,300	-		6,110,300	4,460,519	1,649,781
65	29681	251199	Water Main	600-mm Water Main - Lakeshore Road	Construction of a 600-mm water main on Lakeshore Road from the Arthur P. Kennedy Water Treatment Plant to Front Street South. Design in 2028.	2030	36,961,100	-		36,961,100	-		36,961,100	26,981,603	9,979,497
66	35934	251199	Design	600-mm Water Main - Lakeshore Road	Construction of a 600-mm water main on Lakeshore Road from the Arthur P. Kennedy Water Treatment Plant to Front Street South. Design in 2028.	2028	3,258,200	-		3,258,200	-		3,258,200	2,378,486	879,714
67	34224	251199	Water Main	600-mm Water Main - Lakeshore Road	Construction of a 600-mm water main on Lakeshore Road from the Arthur P. Kennedy Water Treatment Plant to Front Street South. Design in 2028.	2030	19,708,900	-		19,708,900	-		19,708,900	14,387,497	5,321,403
68	32646	241134	Design	900-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 900-mm sub-transmission main on Heritage Road from the West Brampton Pumping Station to Bovaird Drive. Design in 2024.	2024	1,487,200	-		1,487,200	-		1,487,200	1,085,656	401,544
69	32336	241134	Water Main	900-mm Water Main - Heritage Road (Heritage Heights)	Construction of a 900-mm sub-transmission main on Heritage Road from the West Brampton Pumping Station to Bovaird Drive. Design in 2024.	2026	7,069,900	-		7,069,900	-		7,069,900	5,161,027	1,908,873
70	33581	251199	Design	900-mm Sub-Transmission Main - Confederation Parkway	Construction of a 900-mm sub-transmission main on Confederation Parkway from Burnhamthorpe Road West to Eglinton Avenue West. Design in 2030.	2030	6,420,900	-		6,420,900	-		6,420,900	4,687,257	1,733,643
71	33582	251199	Water Main	900-mm Sub-Transmission Main - Confederation Parkway	Construction of a 900-mm sub-transmission main on Confederation Parkway from Burnhamthorpe Road West to Eglinton Avenue West. Design in 2030.	2032	38,840,500	-		38,840,500	-		38,840,500	28,353,565	10,486,935
72	30702	251199	Design	600-mm Water Main - Chinguacousy Road/Creditview Road	Construction of a 600-mm sub-transmission main on Chinguacousy Road/Creditview Road from the future West Caledon Elevated Tank to future east-west road in Mayfield West Phase 2. Design in 2027.	2023	3,008,600	300,900		2,707,700	-		2,707,700	1,976,621	731,079

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Region of Peel
Service: Regional Water

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
73	30703	251199	Water Main	600-mm Water Main - Chinguacousy Road/Creditview Road	Construction of a 600-mm sub-transmission main on Chinguacousy Road/Creditview Road from the future West Caledon Elevated Tank to future east-west road in Mayfield West Phase 2. Design in 2027.	2025	17,671,400	1,767,100		15,904,300	-		15,904,300	11,610,139	4,294,161
74	34696	251199	Design	400-mm Water Main - Torbram Road (Tullamore Industrial)	Construction of a 400-mm water main on Torbram Road from Mayfield Road northerly to a future street. Design in 2033.	2033	675,600	-		675,600	-		675,600	493,188	182,412
75	34697	251199	Water Main	400-mm Water Main - Torbram Road (Tullamore Industrial)	Construction of a 400-mm water main on Torbram Road from Mayfield Road northerly to a future street. Design in 2033.	2035	3,162,600	-		3,162,600	-		3,162,600	2,308,698	853,902
76	37593	251198	Design	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street north of Mayfield Road from Torbram Road to Airport Road. Design in 2033.	2035	369,700	-		369,700	-		369,700	269,881	99,819
77	37594	251198	Water Main	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street north of Mayfield Road from Torbram Road to Airport Road. Design in 2033.	2035	1,731,200	-		1,731,200	-		1,731,200	1,263,776	467,424
78	37576	251199	Design	400-mm Water Main - Airport Road (Tullamore Industrial)	Construction of a 400-mm water main on Airport Road from Mayfield Road northerly to a future street. Design in 2033.	2033	387,600	-		387,600	-		387,600	282,948	104,652
79	37577	251199	Water Main	400-mm Water Main - Airport Road (Tullamore Industrial)	Construction of a 400-mm water main on Airport Road from Mayfield Road northerly to a future street. Design in 2033.	2035	1,814,900	-		1,814,900	-		1,814,900	1,324,877	490,023
80	37596	251198	Water Main	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street north of Mayfield Road from Innis Lake Road to Centreville Creek Road.	2035	3,235,000	-		3,235,000	-		3,235,000	2,361,550	873,450
81	38603	251199	Design	400-mm Water Main - Centreville Creek Road (Tullamore Industrial)	Construction of a 400-mm water main on Centeville Creek Road from Mayfield Road to 1300 metres northerly. Design in 2033.	2033	675,600	-		675,600	-		675,600	493,188	182,412
82	38604	251199	Water Main	400-mm Water Main - Centreville Creek Road (Tullamore Industrial)	Construction of a 400-mm water main on Centeville Creek Road from Mayfield Road to 1300 metres northerly. Design in 2033.	2035	3,162,600	-		3,162,600	-		3,162,600	2,308,698	853,902
83	30975	251199	Design	750-mm Water Main - Innis Lake Road	Construction of a 750-mm sub-transmission main on Innis Lake Road from the Tullamore Pumping Station to Healey Road. Design in 2028.	2028	1,520,100	206,500		1,313,600	-		1,313,600	958,928	354,672
84	30976	251199	Water Main	750-mm Water Main - Innis Lake Road	Construction of a 750-mm sub-transmission main on Innis Lake Road from the Tullamore Pumping Station to Healey Road. Design in 2028.	2030	7,226,000	981,500		6,244,500	-		6,244,500	4,558,485	1,686,015
85	32587	231193	Design	600-mm Water Main - Healey Road (Bolton West)	Construction of a 600-mm sub-transmission main on Healy Road from Humber Station Road to Coleraine Drive. Design in 2023.	2023	667,900	-		667,900	-		667,900	487,567	180,333
86	32588	231193	Water Main	600-mm Water Main - Healey Road (Bolton West)	Construction of a 600-mm sub-transmission main on Healy Road from Humber Station Road to Coleraine Drive. Design in 2023.	2025	3,174,800	-		3,174,800	-		3,174,800	2,317,604	857,196

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Region of Peel
Service: Regional Water

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87	37578	251199	Design	600-mm Water Main - Healey Road	Construction of a 600-mm sub-transmission main on Healy Road from Innis Lake Road to Humber Station Road. Design in 2027.	2027	2,181,200	-		2,181,200	-		2,181,200	1,592,276	588,924
88	37579	251199	Water Main	600-mm Water Main - Healey Road	Construction of a 600-mm sub-transmission main on Healy Road from Innis Lake Road to Humber Station Road. Design in 2027.	2029	12,811,300	-		12,811,300	-		12,811,300	9,352,249	3,459,051
89	32590	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street north of Healey Road from West Bolton Elevated Tank to Humber Station Road.	2025	1,070,200	-		1,070,200	-		1,070,200	781,246	288,954
90	32591	241194	Design	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Healey Road to a future street northerly. Design in 2024.	2024	365,100	-		365,100	-		365,100	266,523	98,577
91	32592	241194	Water Main	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Healey Road to a future street northerly. Design in 2024.	2026	1,709,800	-		1,709,800	-		1,709,800	1,248,154	461,646
92	32593	251199	Design	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Healey Road to approximately 1200 metres northerly. Design in 2025.	2025	328,600	-		328,600	-		328,600	239,878	88,722
93	32594	251199	Water Main	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Healey Road to approximately 1200 metres northerly. Design in 2025.	2027	1,538,400	-		1,538,400	-		1,538,400	1,123,032	415,368
94	32596	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street north of Mayfield Road from Humber Station Road to Coleraine Drive. Design in 2025.	2025	2,086,300	-		2,086,300	-		2,086,300	1,522,999	563,301
95	32597	231195	Design	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Mayfield Road to Healey Road. Design in 2023.	2023	570,600	-		570,600	-		570,600	416,538	154,062
96	32598	231195	Water Main	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from a future street north of Mayfield Road to Healey Road. Design in 2023.	2025	2,671,900	-		2,671,900	-		2,671,900	1,950,487	721,413
97	35702	211160	Design	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from McVean Drive to the Gore Road. Design in 2021.	2021	831,800	-		831,800	-		831,800	607,214	224,586
98	35703	211160	Water Main	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from McVean Drive to the Gore Road. Design in 2021.	2023	3,954,300	-		3,954,300	-		3,954,300	2,886,639	1,067,661
99	35359	251199	Design	400-mm Water Main - Camilla Road	Construction of a 400-mm water main on Camilla Road from Dundas Street East to King Street East. Design in 2025.	2025	109,100	-		109,100	-		109,100	79,643	29,457
100	35360	251199	Water Main	400-mm Water Main - Camilla Road	Construction of a 400-mm water main on Camilla Road from Dundas Street East to King Street East. Design in 2025.	2027	519,300	-		519,300	-		519,300	379,089	140,211

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Region of Peel
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101	35871	201119	Design	400-mm Water Main - Future Square One Drive Extension	Construction of a 400-mm water main on the future extension of Square One Drive from Rathburn Road West to Confederation Parkway.	2020	129,400	-		129,400	-		129,400	94,462	34,938
102	35872	201119	Water Main	400-mm Water Main - Future Square One Drive Extension	Construction of a 400-mm water main on the future extension of Square One Drive from Rathburn Road West to Confederation Parkway.	2020	614,200	-		614,200	-		614,200	448,366	165,834
103	35873	251199	Design	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2025	142,600	-		142,600	-		142,600	104,098	38,502
104	35874	251199	Water Main	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2027	677,400	-		677,400	-		677,400	494,502	182,898
105	32586	251199	Design	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2025	99,200	-		99,200	-		99,200	72,416	26,784
106	35875	251199	Water Main	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2027	471,300	-		471,300	-		471,300	344,049	127,251
107	32601	251199	Design	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2025	206,000	-		206,000	-		206,000	150,380	55,620
108	35876	251199	Water Main	400-mm Water Main - Centre View Drive (Mississauga City Centre)	Construction of a 400-mm water main on Centre View Drive from Confederation Parkway to Duke of York Boulevard. Design in 2025.	2027	979,400	-		979,400	-		979,400	714,962	264,438
109	35704	251199	Design	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from The Gore Road to Highway 50. Design in 2025.	2025	306,500	-		306,500	-		306,500	223,745	82,755
110	35705	251199	Water Main	400-mm Water Main - Queen Street East (Bram East)	Construction of a 400-mm water main on Queen Street East from The Gore Road to Highway 50. Design in 2025.	2027	1,456,800	-		1,456,800	-		1,456,800	1,063,464	393,336
111	51940	251198	Water Main	400-mm Water Main - Future Street (Heritage Heights)	Construction of a 400-mm water main on a future street from Wanless Drive southeasterly to a future street.	2029	2,703,500	-		2,703,500	-		2,703,500	1,973,555	729,945
112	37966	251198	Water Main	400-mm Water Main - Hydro Road (Inspiration Lakeview)	Construction of a 400-mm water main on Hydro Road from Lakeshore Road East to the future Street A.	2030	969,200	-		969,200	-		969,200	707,516	261,684
113	30981	251198	Water Main	400-mm Water Main - Future Street (Inspiration Lakeview)	Construction of a 400-mm water main on the future Street A from the future Street F to the future Street H.	2030	718,200	-		718,200	-		718,200	524,286	193,914
114	32031	251198	Water Main	400-mm Water Main - Lakefront Promenade (Inspiration Lakeview)	Construction of a 400-mm water main on Lakefront Promenade from Rangeview Road to the future Street A.	2030	849,800	-		849,800	-		849,800	620,354	229,446

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115	28914	191172	Water Main	600-mm Water Main - Clarkway Drive (Highway 427 Industrial)	Construction of a 600-mm water main on Clarkway Drive from Castlemore Road northerly to the future east-west road. Design in 2019.	2022	3,087,100	-		3,087,100	-		3,087,100	2,253,583	833,517
116	51582	251199	Design	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Chinguacousy Road to McLaughlin Road. Design in 2033.	2033	831,800	-		831,800	-		831,800	607,214	224,586
117	51583	251199	Water Main	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Chinguacousy Road to McLaughlin Road. Design in 2033.	2035	3,954,300	-		3,954,300	-		3,954,300	2,886,639	1,067,661
118	51584	251199	Design	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from McLaughlin Road to Hurontario Street. Design in 2033.	2033	497,400	-		497,400	-		497,400	363,102	134,298
119	51585	251199	Water Main	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from McLaughlin Road to Hurontario Street. Design in 2033.	2035	2,329,100	-		2,329,100	-		2,329,100	1,700,243	628,857
120	51586	251199	Design	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Hurontario Street to Heart Lake Road. Design in 2033.	2033	1,207,900	-		1,207,900	-		1,207,900	881,767	326,133
121	51587	251199	Water Main	400-mm Water Main - Old School Road (Mayfield West Phase 3)	Construction of a 400-mm water main on Old School Road from Hurontario Street to Heart Lake Road. Design in 2033.	2035	5,655,900	-		5,655,900	-		5,655,900	4,128,807	1,527,093
122	51589	251198	Water Main	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Heart Lake Road to Dixie Road, north of Mayfield Road.	2030	1,754,700	-		1,754,700	-		1,754,700	1,280,931	473,769
123	51591	251198	Water Main	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Bramalea Road, north of Mayfield Road.	2032	1,742,500	-		1,742,500	-		1,742,500	1,272,025	470,475
124	51592	251199	Design	400-mm Water Main - Dixie Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Dixie Road from Mayfield Road to 1,340 metres northerly.	2028	649,600	-		649,600	-		649,600	474,208	175,392
125	51593	251199	Water Main	400-mm Water Main - Dixie Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Dixie Road from Mayfield Road to 1,340 metres northerly.	2030	3,041,200	-		3,041,200	-		3,041,200	2,220,076	821,124
126	51595	251198	Water Main	400-mm Water Main - Future Street (Tullamore Industrial)	Construction of a 400-mm water main on a future street from Airport Road to Innis Lake Road, north of Mayfield Road.	2035	2,122,000	-		2,122,000	-		2,122,000	1,549,060	572,940
127	51597	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Healy Road to approximately 1680 metres southerly, east of Humber Station Road.	2031	2,482,100	-		2,482,100	-		2,482,100	1,811,933	670,167
128	51599	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 660 metres westerly.	2031	3,059,500	-		3,059,500	-		3,059,500	2,233,435	826,065
129	51600	211196	Design	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Mayfield Road to 1450 metres northerly. Design in 2021.	2021	1,208,100	-		1,208,100	-		1,208,100	881,913	326,187
130	51601	211196	Water Main	400-mm Water Main - Humber Station Road (Bolton West)	Construction of a 400-mm water main on Humber Station Road from Mayfield Road to 1450 metres northerly. Design in 2021.	2023	5,742,700	-		5,742,700	-		5,742,700	4,192,171	1,550,529
131	51603	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Healey Road to 1220 metres northerly, west of Humber Station Road.	2035	1,562,900	-		1,562,900	-		1,562,900	1,140,917	421,983

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

#	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
132	51605	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 680 metres westerly, south of King Street.	2035	913,100	-		913,100	-		913,100	666,563	246,537
133	51607	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from Humber Station Road to 680 metres westerly.	2035	913,100	-		913,100	-		913,100	666,563	246,537
134	51609	251198	Water Main	400-mm Water Main - Future Street (Bolton West)	Construction of a 400-mm water main on a future street from future street north of Healey Road to 910 metres northerly, west of Humber Station Road.	2035	1,189,500	-		1,189,500	-		1,189,500	868,335	321,165
135	51610	251199	Design	400-mm Water Main - Bramalea Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Bramalea Road from north of Mayfield Road to 290 metres northerly. Design in 2030.	2030	248,200	-		248,200	-		248,200	181,186	67,014
136	51611	251199	Water Main	400-mm Water Main - Bramalea Road (Mayfield West Phase 4)	Construction of a 400-mm water main on Bramalea Road from north of Mayfield Road to 290 metres northerly. Design in 2030.	2032	1,162,000	-		1,162,000	-		1,162,000	848,260	313,740
137	51613	251198	Water Main	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Bramalea Road.	2031	2,098,500	-		2,098,500	-		2,098,500	1,531,905	566,595
138	51614	191190	Design	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from the future Abbotside Way to 720 metres northerly.	2020	223,900	-		223,900	-		223,900	163,447	60,453
139	51615	191190	Water Main	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from the future Abbotside Way to 720 metres northerly.	2020	1,048,700	-		1,048,700	-		1,048,700	765,551	283,149
140	51617	251198	Water Main	400-mm Water Main - Future Street (Mayfield West Phase 4)	Construction of a 400-mm water main on a future street from Dixie Road to Heart Lake Road, north of Mayfield Road.	2030	1,779,200	-		1,779,200	-		1,779,200	1,298,816	480,384
141	23443	231123	Design	600-mm Water Main - Atlantic Drive/Creekbank Road	Construction of a 600-mm water main on Atlantic Drive and the future Creekbank Road from Britannia Road East to Sismet Road. Design in 2023.	2023	980,200	-		980,200	-		980,200	715,546	264,654
142	23444	231123	Water Main	600-mm Water Main - Atlantic Drive/Creekbank Road	Construction of a 600-mm water main on Atlantic Drive and the future Creekbank Road from Britannia Road East to Sismet Road. Design in 2023.	2025	4,660,200	-		4,660,200	-		4,660,200	3,401,946	1,258,254
143	23445	231123	Design	600-mm Water Main - Atlantic Drive/Creekbank Road	Construction of a 600-mm water main on Atlantic Drive and the future Creekbank Road from Britannia Road East to Sismet Road. Design in 2023.	2023	1,183,900	-		1,183,900	-		1,183,900	864,247	319,653
144	23446	231123	Water Main	600-mm Water Main - Atlantic Drive/Creekbank Road	Construction of a 600-mm water main on Atlantic Drive and the future Creekbank Road from Britannia Road East to Sismet Road. Design in 2023.	2025	5,628,400	-		5,628,400	-		5,628,400	4,108,732	1,519,668
145	51618	221114	Design	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to 620 metres southerly. Design in 2022.	2022	362,100	-		362,100	-		362,100	264,333	97,767
146	51619	221114	Water Main	400-mm Water Main - Ninth Line (Ninth Line Lands)	Construction of a 400-mm water main on Ninth Line from Derry Road West to 620 metres southerly. Design in 2022.	2024	1,695,500	-		1,695,500	-		1,695,500	1,237,715	457,785

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Water

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
147	50540	191120	Water Main	600-mm Water Main - Lakeshore Road West	Construction of a 600-mm water main on Lakeshore Road West from the Lorne Park Water Treatment Plant to Front Street South.	2022	10,551,800	-		10,551,800	-		10,551,800	7,702,814	2,848,986
148	51620	251199	Design	400-mm Water Main - McLaughlin Road (Mayfield West Phase 3)	Construction of a 400-mm water main on McLaughlin Road from Old School Road to the south side of the Etobicoke Creek. Design in 2033.	2033	494,400	-		494,400	-		494,400	360,912	133,488
149	51621	251199	Water Main	400-mm Water Main - McLaughlin Road (Mayfield West Phase 3)	Construction of a 400-mm water main on McLaughlin Road from Old School Road to the south side of the Etobicoke Creek. Design in 2033.	2035	2,314,800	-		2,314,800	-		2,314,800	1,689,804	624,996
150	51312	221161	Design	600-mm Water Main - Goreway Drive	Construction of a 600-mm water main on Goreway Drive from Intermodal Drive to Steeles Avenue East. Design in 2022.	2022	974,800	-		974,800	-		974,800	711,604	263,196
151	51313	221161	Water Main	600-mm Water Main - Goreway Drive	Construction of a 600-mm water main on Goreway Drive from Intermodal Drive to Steeles Avenue East. Design in 2022.	2024	4,634,700	-		4,634,700	-		4,634,700	3,383,331	1,251,369
152	52299	211830	Design	Caledon East - New Groundwater Well	Construction of a new municipal groundwater well in Caledon East to service future development. Design in 2021.	2021	1,275,000	-		1,275,000	-		1,275,000	930,750	344,250
153	52300	211830	Wells	Caledon East - New Groundwater Well	Construction of a new municipal groundwater well in Caledon East to service future development. Design in 2021.	2023	8,500,000	-		8,500,000	-		8,500,000	6,205,000	2,295,000
154	31813	201582	Study	Inglewood - New Groundwater Well - Class Environmental Assessment	Class Environmental Assessment for a new groundwater well to service future development in Inglewood.	2020	750,000	-		750,000	-		750,000	547,500	202,500
155	52301	221831	Design	Inglewood - New Groundwater Well	Construction of a new municipal groundwater well in Inglewood to service future development. Design in 2022.	2022	1,500,000	-		1,500,000	-		1,500,000	1,095,000	405,000
156	52302	221831	Wells	Inglewood - New Groundwater Well	Construction of a new municipal groundwater well in Inglewood to service future development. Design in 2022.	2024	10,000,000	-		10,000,000	-		10,000,000	7,300,000	2,700,000
157	31814	201583	Study	Palgrave - New Groundwater Well - Class Environmental Assessment	Class Environmental Assessment for a new groundwater well to service future development in Palgrave.	2020	750,000	-		750,000	-		750,000	547,500	202,500
158	52303	221832	Design	Palgrave - New Groundwater Well	Construction of a new municipal groundwater well in Palgrave to service future development in Palgrave Village and Palgrave Estates. Design in 2022.	2022	150,000	-		150,000	-		150,000	109,500	40,500
159	52304	221832	Wells	Palgrave - New Groundwater Well	Construction of a new municipal groundwater well in Palgrave to service future development in Palgrave Village and Palgrave Estates. Design in 2022.	2024	600,000	-		600,000	-		600,000	438,000	162,000
160	34626	191189	Water Main	400-mm Water Main - Old School Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Old School Road from Heart Lake Road to Dixie Road.	2020	1,594,441	-		1,594,441	-		1,594,441	1,163,942	430,499

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
161	34628	191190	Water Main	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from Old School Road to 2620 metres southerly.	2020	2,179,452	-		2,179,452	-		2,179,452	1,591,000	588,452
162	51614	191190	Design	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from Old School Road to 2620 metres southerly.	2020	184,797	-		184,797	-		184,797	134,902	49,895
163	51615	191190	Water Main	400-mm Water Main - Dixie Road (Mayfield West Phase 1)	Construction of a 400-mm water main on Dixie Road from Old School Road to 2620 metres southerly.	2020	899,699	-		899,699	-		899,699	656,780	242,919
164	52144	221140	Water Main	400-mm Water Main - Future Lagerfeld Drive (Mount Pleasant)	Construction of a 400-mm water main on the future extension of Lagerfeld Drive from Mississauga Road to Creditview Road.	2022	697,800	-		697,800	-		697,800	509,394	188,406
165	52642	251199	Water Main	600-mm Water Main - Rangeview Road (Inspiration Lakeview)	Construction of a 600-mm water main on Rangeview Road from East Avenue to Lakefront Promenade. Design in 2028.	2030	1,123,200	-		1,123,200	-		1,123,200	819,936	303,264
166	52643	251199	Design	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street from Cawthra Road to Confederation Parkway. Design in 2028.	2028	1,834,400	-		1,834,400	-		1,834,400	1,339,112	495,288
167	52644	251199	Water Main	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street from Cawthra Road to Confederation Parkway. Design in 2028.	2030	8,720,600	-		8,720,600	-		8,720,600	6,366,038	2,354,562
168	52645	201129	Design	400-mm Water Main - Eglinton Avenue East	Construction of a 400-mm water main on Eglinton Avenue East from Hurontario Street to Sorrento Drive.	2020	308,100	-		308,100	-		308,100	224,913	83,187
169	52646	201129	Water Main	400-mm Water Main - Eglinton Avenue East	Construction of a 400-mm water main on Eglinton Avenue East from Hurontario Street to Sorrento Drive.	2020	1,442,500	-		1,442,500	-		1,442,500	1,053,025	389,475
170	52647	251199	Design	600-mm Water Main - Hurontario Street	Construction of a 600-mm water main on Hurontario Street from Steeles Avenue to County Court Boulevard. Design in 2036.	2036	1,082,800	-		1,082,800	-		1,082,800	790,444	292,356
171	52648	251199	Water Main	600-mm Water Main - Hurontario Street	Construction of a 600-mm water main on Hurontario Street from Steeles Avenue to County Court Boulevard. Design in 2036.	2038	5,146,900	-		5,146,900	-		5,146,900	3,757,237	1,389,663
172	52649	251199	Design	600-mm Water Main - County Court Boulevard and Future Street	Construction of a 600-mm water main on County Court Boulevard and a future street from Hurontario Street to the future alignment of First Gulf Boulevard. Design in 2036.	2036	1,467,000	-		1,467,000	-		1,467,000	1,070,910	396,090
173	52650	251199	Water Main	600-mm Water Main - County Court Boulevard and Future Street	Construction of a 600-mm water main on County Court Boulevard and a future street from Hurontario Street to the future alignment of First Gulf Boulevard. Design in 2036.	2038	6,974,000	-		6,974,000	-		6,974,000	5,091,020	1,882,980
174	52651	251199	Design	600-mm Water Main - Future First Gulf Boulevard	Construction of a 600-mm water main on the future alignment of First Gulf Boulevard from Steeles Avenue East to a future street. Design in 2036.	2036	998,400	-		998,400	-		998,400	728,832	269,568
175	52652	251199	Water Main	600-mm Water Main - Future First Gulf Boulevard	Construction of a 600-mm water main on the future alignment of First Gulf Boulevard from Steeles Avenue East to a future street. Design in 2036.	2038	4,745,900	-		4,745,900	-		4,745,900	3,464,507	1,281,393
176	52653	251199	Design	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street East from Cawthra Road to Dixie Road. Design in 2028.	2028	1,747,500	-		1,747,500	-		1,747,500	1,275,675	471,825

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
177	52654	251199	Water Main	600-mm Water Main - Dundas Street East	Construction of a 600-mm water main on Dundas Street East from Cawthra Road to Dixie Road. Design in 2028.	2030	8,307,400	-		8,307,400	-		8,307,400	6,064,402	2,242,998
178	52708	211151	Design	600-mm Water Main - Church Street East	Construction of a 600-mm water main on Church Street East from Centre Street North to Main Street. Design in 2021.	2021	2,058,200	-		2,058,200	-		2,058,200	1,502,486	555,714
179	52709	211151	Water Main	600-mm Water Main - Church Street East	Construction of a 600-mm water main on Church Street East from Centre Street North to Main Street. Design in 2021.	2023	12,089,300	-		12,089,300	-		12,089,300	8,825,189	3,264,111
180	52713	251199	Water Main	400-mm Water Main - Lakefront Promenade (Inspiration Lakeview)	Construction of a 400-mm water main on Lakefront Promenade from Lakeshore Road East to Rangeview Road. Design in 2028.	2030	471,300	-		471,300	-		471,300	344,049	127,251
181	6219	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2020	750,000	-		750,000	-		750,000	547,500	202,500
182	6220	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2021	750,000	-		750,000	-		750,000	547,500	202,500
183	12921	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2022	750,000	-		750,000	-		750,000	547,500	202,500
184	12922	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2023	750,000	-		750,000	-		750,000	547,500	202,500
185	12923	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2024	750,000	-		750,000	-		750,000	547,500	202,500
186	20644	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2025	750,000	-		750,000	-		750,000	547,500	202,500
187	20645	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2026	750,000	-		750,000	-		750,000	547,500	202,500
188	20646	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2027	750,000	-		750,000	-		750,000	547,500	202,500
189	20647	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2028	750,000	-		750,000	-		750,000	547,500	202,500
190	20648	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2029	750,000	-		750,000	-		750,000	547,500	202,500
191	20649	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2030	750,000	-		750,000	-		750,000	547,500	202,500
192	20650	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2031	750,000	-		750,000	-		750,000	547,500	202,500
193	38063	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2032	750,000	-		750,000	-		750,000	547,500	202,500
194	38064	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2033	750,000	-		750,000	-		750,000	547,500	202,500
195	38065	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2034	750,000	-		750,000	-		750,000	547,500	202,500
196	38066	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2035	750,000	-		750,000	-		750,000	547,500	202,500
197	38067	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2036	750,000	-		750,000	-		750,000	547,500	202,500
198	38068	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2037	750,000	-		750,000	-		750,000	547,500	202,500
199	38069	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2038	750,000	-		750,000	-		750,000	547,500	202,500
200	38070	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2039	750,000	-		750,000	-		750,000	547,500	202,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
201	38071	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2040	750,000	-		750,000	-		750,000	547,500	202,500
202	38072	201530	Study	Development-Related Water Infrastructure Planning	Funding for water infrastructure planning and studies related to new development.	2041	750,000	-		750,000	-		750,000	547,500	202,500
203	23709	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2022	750,000	-		750,000	-		750,000	547,500	202,500
204	23710	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2027	750,000	-		750,000	-		750,000	547,500	202,500
205	23711	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2032	750,000	-		750,000	-		750,000	547,500	202,500
206	36272	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2037	750,000	-		750,000	-		750,000	547,500	202,500
			Provisional Reduction for WAH and NFPOW Adjustment					30,348,000		(30,348,000)	-		(30,348,000)	(22,154,040)	(8,193,960)
			Existing Debt Principal			2020-2033	67,946,965	-		67,946,965	-		67,946,965	49,601,284	18,345,681
			Existing Debt Interest (Discounted)			2020-2033	23,194,565	-		23,194,565	-		23,194,565	16,932,032	6,262,533
			New Debt Interest (Discounted)	Total Debt Issuance of $30,000,000		2020-2050	8,901,408	498,800		8,402,608	-		8,402,608	6,133,903	2,268,704
			Reserve Fund Adjustment			Reserve	297,775,977	-		297,775,977	-		297,775,977	217,376,463	80,399,514
			Total				**942,644,245**	**34,102,800**	**-**	**908,541,445**	**-**	**-**	**908,541,445**	**663,235,255**	**245,306,190**

5.4.1.1.6 Summary of Capital Costs Included in D.C. Calculation – South Peel Water

The detailed listing of the South Peel water capital costs included in the D.C. calculation are provided at the end of this section. The Region has identified the need for $1.08 billion in additional water projects with a post period benefit of $177.97 million and a benefit to existing development of $30.02 million. These amounts have been deducted from the calculation. A further deduction of $5.69 million has been made to recognize cost recovery expected from York Region. Existing growth-related debt principal and interest (discounted) in the amount of $772.69 million has been included in the D.C. calculations. The Region anticipates an additional $815 million in growth-related debt issuances over the forecast period. The discounted interest costs of $418.86 million have been included in the calculations ($23.47 million of this amount is considered a post period benefit and has been deducted). As with the Regional water capital program, a post period benefit reduction of $48.76 million has been made to account for W.A.H. and N.F.P.O.W. employment that was included in the capital forecast but not in the D.C. growth forecast. A reserve adjustment of $644.72 million has been included in the calculations. The net amount included in the D.C. calculation is $2.63 billion. Table 5-19 provides a summary of these capital costs and related deductions.

These costs are attributed 73% to residential and 27% non-residential development which is based on the incremental population to employment growth (multiplied by their respective design criteria) over the 2020-2041 forecast period.

Table 5-19
Region of Peel
Summary of South Peel Water Capital Costs

South Peel Water Capital Costs	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Costs	Benefit to Existing	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Projects	1,083,726,400	177,968,000	905,758,400	30,021,000	5,685,325	870,052,075	635,138,015	234,914,060
Existing Debt Principal and Interest (Discounted)	772,690,387	-	772,690,387	-	-	772,690,387	564,063,983	208,626,404
New Debt Interest (Discounted)	418,855,274	23,471,000	395,384,274	-	-	395,384,274	288,630,520	106,753,754
Provisional Reduction for WAH and NFPOW Adjustment		48,755,000	(48,755,000)	-	-	(48,755,000)	(35,591,150)	(13,163,850)
Reserves	644,715,993	-	644,715,993	-	-	644,715,993	470,642,675	174,073,318
Total	**2,919,988,055**	**250,194,000**	**2,669,794,055**	**30,021,000**	**5,685,325**	**2,634,087,730**	**1,922,884,043**	**711,203,687**

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Water

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
1	34485	251999	Design	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station. Design in 2026.	2026	388,100	-		388,100	-	-	388,100	283,313	104,787
2	16350	251999	Pumping Station	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station. Design in 2026.	2027	1,496,100	-		1,496,100	-	-	1,496,100	1,092,153	403,947
3	25259	251999	Design	West Brampton Reservoir Expansion	Expansion of the West Brampton Reservoir with the construction of a third 20-ML reservoir cell. Design in 2031.	2028	5,227,200	2,614,000		2,613,200	-	-	2,613,200	1,907,636	705,564
4	26196	251999	Reservoir	West Brampton Reservoir Expansion	Expansion of the West Brampton Reservoir with the construction of a third 20-ML reservoir cell. Design in 2031.	2030	31,619,600	15,810,000		15,809,600	-	-	15,809,600	11,541,008	4,268,592
5	33335	211974	Design	Beckett Sproule Transfer Pumping Station - Capacity Expansion	Installation of additional transfer pumping capacity at the Beckett Sproule Pumping Station. Approximately 71% funded from York Region. Design in 2021.	2021	1,044,500	-		1,044,500	-	741,595	302,905	221,121	81,784
6	33336	211974	Pumping Station	Beckett Sproule Transfer Pumping Station - Capacity Expansion	Installation of additional transfer pumping capacity at the Beckett Sproule Pumping Station. Approximately 71% funded from York Region. Design in 2021.	2022	6,963,000	-		6,963,000	-	4,943,730	2,019,270	1,474,067	545,203
7	20688	101966	Reservoir	Victoria Reservoir	Construction of a new 40-ML reservoir in the vicinity of King Street and Hurontario Street to provide storage for Pressure Zone 6.	2020	60,000,000	-		60,000,000	-	-	60,000,000	43,800,000	16,200,000
8	33347	221226	Design	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East. Design in 2022.	2022	9,201,300	-		9,201,300	1,840,000	-	7,361,300	5,373,749	1,987,551
9	33348	221226	Water Main	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East. Design in 2022.	2024	55,658,400	-		55,658,400	11,132,000	-	44,526,400	32,504,272	12,022,128
10	33345	221226	Design	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East. Design in 2022.	2022	955,350	-		955,350	191,000	-	764,350	557,976	206,375
11	33346	221226	Water Main	Queensway Sub-Transmission Main Extension	Construction of a 900/1050-mm sub-transmission main on Bloor Street and Cawthra Road from the Silverthorn Pumping Station to The Queensway East. Design in 2022.	2024	5,413,650	-		5,413,650	1,083,000	-	4,330,650	3,161,375	1,169,276
12	35354	251299	Design	Mayfield Road Sub-Transmission Main	Construction of a 900-mm sub-transmission main on Mayfield Road from Innis Lake Road to the North Brampton Reservoir. Design in 2023.	2033	4,364,000	-		4,364,000	-	-	4,364,000	3,185,720	1,178,280
13	35355	251299	Water Main	Mayfield Road Sub-Transmission Main	Construction of a 900-mm sub-transmission main on Mayfield Road from Innis Lake Road to the North Brampton Reservoir. Design in 2023.	2035	26,398,500	-		26,398,500	-	-	26,398,500	19,270,905	7,127,595

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Water

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
14	52332	141256	Water Main	Williams Parkway Sub-Transmission Main (Phase 1 and Phase 2)	Construction of a 900-mm sub-transmission main on WIlliams Parkway from Dixie Road to McLaughlin Road.	2020	20,000,000	-		20,000,000	2,000,000	-	18,000,000	13,140,000	4,860,000
15	29885	141256	Water Main	Williams Parkway Sub-Transmission Main (Phase 1 and Phase 2)	Construction of a 900-mm sub-transmission main on WIlliams Parkway from Dixie Road to McLaughlin Road.	2022	31,000,000	-		31,000,000	3,100,000	-	27,900,000	20,367,000	7,533,000
16	50395	141257	Water Main	Central Brampton Sub-Transmission Main	Construction of a 1200/1050/900-mm sub-transmission main from the Beckett Sproule Pumping Station to the East Brampton Pumping Station.	2021	8,200,000	-		8,200,000	820,000	-	7,380,000	5,387,400	1,992,600
17	29892	141256	Design	Williams Parkway Sub-Transmission Main (Phase 3)	Construction of a 900-mm sub-transmission main on WIlliams Parkway from the West Brampton Pumping Station to McLaughlin Road.	2022	4,901,400	-		4,901,400	490,000	-	4,411,400	3,220,322	1,191,078
18	29891	141256	Water Main	Williams Parkway Sub-Transmission Main (Phase 3)	Construction of a 900-mm sub-transmission main on WIlliams Parkway from the West Brampton Pumping Station to McLaughlin Road.	2022	29,648,400	-		29,648,400	2,965,000	-	26,683,400	19,478,882	7,204,518
19	50393	141240	Water Main	East Brampton Transmission Main Twinning	Construction of a 1500-mm transmission main from the Beckett Sproule Pumping Station to East Brampton Reservoir.	2021	10,000,000	-		10,000,000	-	-	10,000,000	7,300,000	2,700,000
20	29196	211566	Study	Streetsville Transmission Main	Class EA for a new transmission main from the Herridge Pumping Station to the Streetsville Reservoir.	2021	1,500,000	-		1,500,000	-	-	1,500,000	1,095,000	405,000
21	27413	251299	Design	Streetsville Transmission Main	Construction of a 2100-mm transmission main on Erin Mills Parkway from the Herridge Pumping Station to the Streetsville Reservoir. Design in 2025.	2025	21,116,100	2,112,000		19,004,100	-	-	19,004,100	13,872,993	5,131,107
22	28707	251299	Property	Streetsville Transmission Main	Construction of a 2100-mm transmission main on Erin Mills Parkway from the Herridge Pumping Station to the Streetsville Reservoir. Design in 2025.	2025	2,639,500	264,000		2,375,500	-	-	2,375,500	1,734,115	641,385
23	27414	251299	Water Main	Streetsville Transmission Main	Construction of a 2100-mm transmission main on Erin Mills Parkway from the Herridge Pumping Station to the Streetsville Reservoir. Design in 2025.	2030	174,242,200	17,424,000		156,818,200	-	-	156,818,200	114,477,286	42,340,914
24	32004	241565	Study	Meadowvale North Transmission Main - Class EA	Class EA for a new transmission main from the Streetsville Pumping Station to the Meadowvale North Reservoir.	2024	1,500,000	-		1,500,000	-	-	1,500,000	1,095,000	405,000
25	32001	251299	Design	Meadowvale North Transmission Main	Construction of an 1800-mm transmission main from the Streetsville Pumping Station to the Meadowvale North Reservoir. Design in 2026.	2026	30,670,900	3,067,000		27,603,900	-	-	27,603,900	20,150,847	7,453,053
26	32370	251299	Property	Meadowvale North Transmission Main	Construction of an 1800-mm transmission main from the Streetsville Pumping Station to the Meadowvale North Reservoir. Design in 2026.	2026	3,833,900	383,000		3,450,900	-	-	3,450,900	2,519,157	931,743
27	32002	251299	Water Main	Meadowvale North Transmission Main	Construction of an 1800-mm transmission main from the Streetsville Pumping Station to the Meadowvale North Reservoir. Design in 2026.	2031	253,083,400	25,308,000		227,775,400	-	-	227,775,400	166,276,042	61,499,358
28	6739	201570	Study	West Caledon Transmission Main	Class EA for a new transmission main from the Alloa Pumping Station to the West Caledon Elevated Tank	2020	1,500,000	-		1,500,000	-	-	1,500,000	1,095,000	405,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Water

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
29	20696	231270	Design	West Caledon Transmission Main	Construction of a 750-mm transmission main from the Alloa Pumping Station to the West Caledon Elevated Tank. Design in 2023.	2023	3,833,000	383,000		3,450,000	-	-	3,450,000	2,518,500	931,500
30	32373	231270	Property	West Caledon Transmission Main	Construction of a 750-mm transmission main from the Alloa Pumping Station to the West Caledon Elevated Tank. Design in 2023.	2023	302,600	30,000		272,600	-	-	272,600	198,998	73,602
31	20697	231270	Water Main	West Caledon Transmission Main	Construction of a 750-mm transmission main from the Alloa Pumping Station to the West Caledon Elevated Tank. Design in 2023.	2025	24,290,700	2,429,000		21,861,700	-	-	21,861,700	15,959,041	5,902,659
32	20692	231941	Design	West Caledon Elevated Tank	Construction of a new 10-ML elevated tank in southwest Caledon. Design in 2023.	2023	2,376,000	238,000		2,138,000	-	-	2,138,000	1,560,740	577,260
33	24529	231941	Property	West Caledon Elevated Tank	Construction of a new 10-ML elevated tank in southwest Caledon. Design in 2023.	2023	237,600	24,000		213,600	-	-	213,600	155,928	57,672
34	20685	231941	Reservoir	West Caledon Elevated Tank	Construction of a new 10-ML elevated tank in southwest Caledon. Design in 2023.	2025	15,809,300	1,581,000		14,228,300	-	-	14,228,300	10,386,659	3,841,641
35	23389	251999	Design	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station. Design in 2034.	2034	72,500	-		72,500	-	-	72,500	52,925	19,575
36	23390	251999	Pumping Station	West Brampton Pumping Station - Capacity Expansion	Installation of additional low-lift pumping capacity at the West Brampton Pumping Station. Design in 2034.	2035	361,100	-		361,100	-	-	361,100	263,603	97,497
37	23387	251999	Design	Lorne Park Pumping Station - Capacity Expansion	Installation of additional PZ2W high-lift pumping capacity at the Lorne Park Water Treatment Plant. Design in 2029.	2029	252,500	-		252,500	-	-	252,500	184,325	68,175
38	23388	251999	Pumping Station	Lorne Park Pumping Station - Capacity Expansion	Installation of additional PZ2W high-lift pumping capacity at the Lorne Park Water Treatment Plant. Design in 2029.	2030	1,326,800	-		1,326,800	-	-	1,326,800	968,564	358,236
39	28726	151940	Reservoir	Silverthorn Reservoir and Pumping Station Expansion	Construction of major improvements and upgrades at the Silverthorn Reservoir and Pumping Station.	2021	21,735,000	16,301,000		5,434,000	-	-	5,434,000	3,966,820	1,467,180
40	23451	251599	Study	Arthur P. Kennedy Water Treatment Plant - New Intake	Construction of a new intake pipe and structure at the Arthur P. Kennedy Water Treatment Plant. Design in 2037.	2035	2,000,000	1,800,000		200,000	-	-	200,000	146,000	54,000
41	23452	251997	Design	Arthur P. Kennedy Water Treatment Plant - New Intake	Construction of a new intake pipe and structure at the Arthur P. Kennedy Water Treatment Plant. Design in 2037.	2037	13,000,000	11,700,000		1,300,000	-	-	1,300,000	949,000	351,000
42	23453	251997	Water Main	Arthur P. Kennedy Water Treatment Plant - New Intake	Construction of a new intake pipe and structure at the Arthur P. Kennedy Water Treatment Plant. Design in 2037.	2039	85,000,000	76,500,000		8,500,000	-	-	8,500,000	6,205,000	2,295,000
43	23391	241983	Design	West Brampton Pumping Station - Capacity Expansion	Installation of additional high-lift pumping capacity at the West Brampton Pumping Station. Design in 2024.	2024	177,900	-		177,900	-	-	177,900	129,867	48,033
44	23392	241983	Pumping Station	West Brampton Pumping Station - Capacity Expansion	Installation of additional high-lift pumping capacity at the West Brampton Pumping Station. Design in 2024.	2025	832,500	-		832,500	-	-	832,500	607,725	224,775
45	52726	211923	Study	Arthur P. Kennedy Water Treatment Plant - Reservoir Expansion	Construction of a new 35-million-litre treated water reservoir at the Arthur P. Kennedy Water Treatment Plant. Class Environmental Assessment in 2021 and design in 2022.	2021	1,000,000	-		1,000,000	-	-	1,000,000	730,000	270,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Water

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
46	23395	211923	Design	Arthur P. Kennedy Water Treatment Plant - Reservoir Expansion	Construction of a new 35-million-litre treated water reservoir at the Arthur P. Kennedy Water Treatment Plant. Class Environmental Assessment in 2021 and design in 2022.	2022	8,775,000	-		8,775,000	-	-	8,775,000	6,405,750	2,369,250
47	23396	211923	Reservoir	Arthur P. Kennedy Water Treatment Plant - Reservoir Expansion	Construction of a new 35-million-litre treated water reservoir at the Arthur P. Kennedy Water Treatment Plant. Class Environmental Assessment in 2021 and design in 2022.	2024	58,500,000	-		58,500,000	-	-	58,500,000	42,705,000	15,795,000
48	23404	251997	Design	Arthur P. Kennedy Water Treatment Plant - Waste Building Expansion	Expansion of the Waste Building at the Arthur P. Kennedy Water Treatment Plant. Design in 2032.	2032	3,450,000	-		3,450,000	-	-	3,450,000	2,518,500	931,500
49	23405	251997	WTP	Arthur P. Kennedy Water Treatment Plant - Waste Building Expansion	Expansion of the Waste Building at the Arthur P. Kennedy Water Treatment Plant. Design in 2032.	2034	23,000,000	-		23,000,000	-	-	23,000,000	16,790,000	6,210,000
50	52656	241179	Water Main	600-mm Water Main - Future East-West Road (Highway 427 Industrial)	Construction of a 600-mm water main on the future east-west road from Clarkway Drive to the future north-south road.	2024	1,071,200	-		1,071,200	-	-	1,071,200	781,976	289,224
51	52657	241172	Design	400-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Countryside Drive from Coleraine Drive to the future north-south road. Design in 2024.	2024	269,000	-		269,000	-	-	269,000	196,370	72,630
52	52658	241172	Water Main	400-mm Water Main - Countryside Drive (Highway 427 Industrial)	Construction of a 400-mm water main on Countryside Drive from Coleraine Drive to the future north-south road. Design in 2024.	2026	1,259,900	-		1,259,900	-	-	1,259,900	919,727	340,173
53	52660	201175	Water Main	400-mm Water Main - Future Street (Highway 427 Industrial)	Construction of a 400-mm water main on a future street from Highway 50 to Coleraine Drive.	2022	1,228,300	-		1,228,300	-	-	1,228,300	896,659	331,641
54	52725	201922	WTP	Arthur P. Kennedy Water Treatment Plant - Yard Piping Improvements	Various yard piping improvements at the Arthur P. Kennedy Water Treatment Plant to facilitate new infrastructure.	2020	8,000,000	-		8,000,000	6,400,000	-	1,600,000	1,168,000	432,000
55	23709	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2022	750,000	-		750,000	-	-	750,000	547,500	202,500
56	23710	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2027	750,000	-		750,000	-	-	750,000	547,500	202,500
57	23711	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2032	750,000	-		750,000	-	-	750,000	547,500	202,500
58	36272	221504	Study	Water Master Servicing Plan	Review and update of the Region of Peel's Master Plan for the lake-based water supply system.	2037	750,000	-		750,000	-	-	750,000	547,500	202,500
			Provisional Reduction for WAH and NFPOW Adjustment					48,755,000		(48,755,000)	-	-	(48,755,000)	(35,591,150)	(13,163,850)
			Existing Debt Principal			2020-2042	362,721,584	-		362,721,584	-	-	362,721,584	264,786,757	97,934,828
			Existing Debt Interest (Discounted)			2020-2042	409,968,803	-		409,968,803	-	-	409,968,803	299,277,226	110,691,577
			New Debt Interest (Discounted)	Total Debt Issuance of $815,000,000		2020-2054	418,855,274	23,471,000		395,384,274	-	-	395,384,274	288,630,520	106,753,754
			Reserve Fund Adjustment			Reserve	644,715,993	-		644,715,993	-	-	644,715,993	470,642,675	174,073,318
										-	-				
			Total				**2,919,988,055**	**250,194,000**	**-**	**2,669,794,055**	**30,021,000**	**5,685,325**	**2,634,087,730**	**1,922,884,043**	**711,203,687**

5.4.1.2 Wastewater Services

5.4.1.2.1 Treatment and Primary Collection System

The primary collection and treatment system (also referred to as the lake-based wastewater system) includes the wastewater treatment facilities (W.W.T.F.), sewage pumping stations, force mains and the interconnecting major sanitary trunk sewers between these facilities. The major sanitary trunk sewers range in size from 675 mm diameter to 3000 mm diameter and are generally dedicated to the conveyance of wastewater between the local sanitary trunk sewers and the water pollution control plants.

The sanitary trunk sewers are designed based on Regional design criteria, as described below.

The wastewater treatment facilities are designed based on the criteria used to determine the sizing of the sewers (i.e., peak instantaneous flows), with the exception that some components of the wastewater treatment facilities are designed based on average flows (i.e., a peaking factor is not applied). The daily equivalent average flows are approximately 206 ML/d at the Clarkson W.W.T.F. and 467 ML/d at the G.E. Booth W.W.T.F. The G.E. Booth W.W.T.F. includes flows received from both York Region and the City of Toronto and has a greater I.C.I. component.

5.4.1.2.2 Local Collection System

The local collection system (also referred to as the Regional wastewater system) conveys wastewater from the local sanitary sewers within each subdivision to the primary collection system and treatment facilities. Under Regional policy, all trunk sewers with a diameter of 375 mm or larger are financed through development charges. All sewers are designed to meet the minimum and maximum flow velocity requirements for sanitary sewers.

5.4.1.2.3 Wastewater Flow Criteria

The average residential daily wastewater flow, Regional design criteria, is 315 L/cap/d. This represents the flow seen at each treatment plant on an average day. This flow includes dry weather flow as well as an element of average inflow and infiltration. This

flow rate can be applied either directly to a known residential population, a projected residential population or an equivalent population for I.C.I. lands. Under Regional design criteria, the standard equivalent populations, range from 50 persons/hectare (ppha) of gross land area for commercial areas, to 70 ppha for light industrial areas. Individual studies are to be made for areas where density is likely to differ from this (e.g., major industrial areas or land use intensification).

The Region of Peel's design criteria use this average day flow as the basis for calculating total flows at the treatment plants.

Sanitary sewers and sewage pumping stations are sized for peak flows. The Harmon Peaking Factor is applied to the average flows to allow capacity for morning and evening peaks. For sanitary trunk sewer design, the minimum peaking factor applied is 2.0 and the maximum peaking factor is 4.0.

An additional factor is applied to compensate for extraneous sources of wastewater flows, such as infiltration (groundwater leakage through joints or cracked pipes) and inflow (such as through the holes in the tops of manholes). A recent analysis found there was evidence to support increasing the allowance for inflow and infiltration from 0.00020 $m^3/s/ha$ (17,280 L/ha/day) to 0.00026 $m^3/s/ha$ (22,464 L/ha/day).

Similar to the water program, confirmation of the wastewater design criteria used in the previous Master Plan was undertaken as part of the 2020 Master Plan. Plant flow data from 1998 onwards were evaluated. Historical flows were correlated to recent population data.

It is difficult to establish per capita flow rates due to the fluctuation in plant flow records typically related to fluctuations in rainfall. On average, the wastewater flow criteria used in the Master Plan approximates actual records. The average daily flow in some years approaches or exceeds the design flows. These occurrences may be caused by wetter than average years. At an infrastructure planning level at the plants the Regional design criteria is reasonable when compared to actual flows, and will cater for wetter than average years without excessive overdesign.

Similar to the water analysis, recent flow trends in average flows under dry weather support the reduction of the average dry weather flow design criteria from a total

equivalent 302.8 L/person or employee/day to a total equivalent 285 L/person or employee/day. This represents a reduction of approximately 5.9 percent.

Similar to the water program, the employment design criteria are related to the number of employees. Based on the water billing splits for residential and I.C.I. population, it was determined that the total equivalent design criteria equates to 290 L/cap/d for residential and 270 L/emp/d for I.C.I. population.

The average per capita flow and extraneous flow allowance also falls within the MECP. Guidelines for wastewater design (225 L/cap/d to 450 L/cap/d for average flows and 8,640 L/ha/d to 24,190 L/ha/d for extraneous flows).

The updated sanitary sewer design criteria are summarized in Table 5-20.

Table 5-20
Region of Peel
Updated Sanitary Sewer Design Criteria

Land Use Type	Average Day Flow	Peaking Factor	Infiltration
Residential	290 L/cap/d	Harmon (min 2, max 4)	0.26 L/s/ha
I/C/I	270 L/emp/d	Harmon (min 2, max 4)	

Table 5-21
Region of Peel
2020 Sanitary Sewer Unit Costs (5-10 m deep open cut construction)

Size	**Unit Cost $/m ($2020)**
375	$2,756
450	$2,860

Size	Unit Cost $/m ($2020)
525	$2,955
600	$3,234
675	$3,573
750	$3,757
825	$3,912
900	$4,285
975	$4,453
1,050	$4,776
1,200	$5,134
1,350	$5,566
1,500	$5,957
1,800	$7,024
2,100	$8,254
2,400	$9,651

The above unit costs are for sewers with depths between 5 and 10 metres and assume open cut construction. For trunk infrastructure, this is considered appropriate as they are likely to be laid deep. Costs include rock excavation, materials, installation and restoration. Contingencies, engineering fees and the Region's costs are not included. Special circumstances, which require urban area uplift, tunnelling and dewatering, are not included in the above unit costs.

5.4.1.2.4 Wastewater Service Standards Recommendation

That the Wastewater Service Standards based on Regional policy, guidelines and the standards outlined above, be used for the preparation of the new development charges By-law.

That the allocation of the residential/non-residential share of eligible growth expenditures is based on the incremental population vs. employment growth (multiplied by their respective design criteria) for wastewater service areas over the 2020-2041 forecast period as follows:

- Residential: 73%
- Non-residential: 27%

5.4.1.2.5 Summary of Capital Costs Included in D.C. Calculation – Regional Wastewater

The Region has identified the need for $337.76 million in additional wastewater projects with $51 million of this amount benefitting existing development. In addition, $6.46 million has been deducted from the calculation to account for the benefit to growth beyond the forecast period. Existing growth-related debt principal and interest (discounted) has also been included in the calculation at an amount of $9.47 million. As with water services, the wastewater capital forecast to 2041 utilized employment figures that included W.A.H. and N.F.P.O.W. employment, whereas the D.C. growth forecast excludes these categories. Therefore, a post period provisional reduction for this employment in the amount of $15.83 million has been deducted from the calculations. A reserve adjustment of $72.80 million has been made to reflect the existing reserve fund deficit. The net amount included in the D.C. calculation is $346.74 million. Table 5-22 provides a summary of these capital costs and related deductions.

Table 5-22
Region of Peel
Summary of Regional Wastewater Capital Costs

Regional Wastewater Capital Costs	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Costs	Benefit to Existing	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Projects	337,762,590	6,457,200	331,305,390	51,000,000	-	280,305,390	204,622,935	75,682,455
Existing Debt Principal and Interest (Discounted)	9,465,972	-	9,465,972	-	-	9,465,972	6,910,160	2,555,812
Provisional Reduction for WAH and NFPOW Adjustment		15,830,000	(15,830,000)	-	-	(15,830,000)	(11,555,900)	(4,274,100)
Reserves	72,799,391	-	72,799,391	-	-	72,799,391	53,143,556	19,655,836
Total	**420,027,954**	**22,287,200**	**397,740,754**	**51,000,000**	**-**	**346,740,754**	**253,120,750**	**93,620,003**

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
1	3768	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Countryside Drive from Highway 50 to approximately 810 metres northwesterly.	2025	3,071,800	-		3,071,800	-	-	3,071,800	2,242,414	829,386
2	3769	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street west of Coleraine Drive from Countryside Drive to approximately 600 metres northerly.	2027	576,400	-		576,400	-	-	576,400	420,772	155,628
3	35446	242176	Design	525-mm Sanitary Sewer - Countryside Drive	Construction of a 525-mm sanitary sewer on Countryside Drive from Clarkway Drive to approximately 690 metres easterly. Design in 2024.	2024	659,400	-		659,400	-	-	659,400	481,362	178,038
4	3772	242176	Wastewater Main	525-mm Sanitary Sewer - Countryside Drive	Construction of a 525-mm sanitary sewer on Countryside Drive from Clarkway Drive to approximately 690 metres easterly. Design in 2024.	2026	3,087,100	-		3,087,100	-	-	3,087,100	2,253,583	833,517
5	35450	212269	Design	750-mm Sanitary Sewer - Clarkway Drive	Construction of a 750-mm sanitary sewer on Clarkway Drive from Countryside Drive to Mayfield Road. Design in 2021.	2021	1,586,500	-		1,586,500	-	-	1,586,500	1,158,145	428,355
6	3770	212269	Wastewater Main	750-mm Sanitary Sewer - Clarkway Drive	Construction of a 750-mm sanitary sewer on Clarkway Drive from Countryside Drive to Mayfield Road. Design in 2021.	2023	7,428,000	-		7,428,000	-	-	7,428,000	5,422,440	2,005,560
7	3827	222175	Wastewater Main	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Castlemore Road from Clarkway Drive to approximately 1060 metres northeasterly.	2022	4,020,500	-		4,020,500	-	-	4,020,500	2,934,965	1,085,535
8	3845	232155	Wastewater Main	600-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 600-mm sanitary sewer on a future street west of Airport Road from Mayfield Road to approximately 760 metres southerly.	2023	3,383,900	292,000		3,091,900	-	-	3,091,900	2,257,087	834,813
9	3849	222152	Wastewater Main	600-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 600-mm sanitary sewer on a future street from Airport Road to approximately 1070 metres northwesterly, north of Countryside Drive.	2022	4,764,300	412,000		4,352,300	-	-	4,352,300	3,177,179	1,175,121
10	3856	212156	Wastewater Main	525-mm Sanitary Sewer - Future Inspire Boulevard (Countryside Villages)	Construction of a 525-mm sanitary sewer on the future Inspire Boulevard from Torbram Road to approximately 1050 metres westerly.	2021	4,271,500	-		4,271,500	-	-	4,271,500	3,118,195	1,153,305

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
11	3988	252198	Wastewater Main	375-mm Sanitary Sewer - Easement (Clarkson)	Construction of a 375-mm sanitary sewer in an easement north of Lakeshore Road and east of Winston Churchill Boulevard.	2025	915,100	-		915,100	-	-	915,100	668,023	247,077
12	5757	221131	Wastewater Main	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street from Heritage Road to approximately 2740 metres northwesterly, north of Steeles Avenue West.	2022	3,085,000	-		3,085,000	-	-	3,085,000	2,252,050	832,950
13	5820	222157	Wastewater Main	525-mm Sanitary Sewer - Future Street (Countryside Villages)	Construction of a 525-mm sanitary sewer on a future street east of Bramalea Road from Mayfield Road to approximately 400 metres southerly.	2022	1,627,200	-		1,627,200	-	-	1,627,200	1,187,856	439,344
14	52091	112104	Wastewater Main	600-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 600-mm sanitary sewer on a future street from Heritage Road to 1735 metres southeasterly.	2020	2,200,000	-		2,200,000	-	-	2,200,000	1,606,000	594,000
15	21021	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on a future street east of Winston Churchill Boulevard from Wanless Drive to 560 metres northerly.	2035	2,494,300	289,000		2,205,300	-	-	2,205,300	1,609,869	595,431
16	21022	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on a future street east of Winston Churchill Boulevard from Mayfield Road to 680 metres southerly.	2035	3,027,900	448,000		2,579,900	-	-	2,579,900	1,883,327	696,573
17	35449	252199	Design	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Mayfield Road to 620 metres southerly. Design in 2032.	2032	648,600	96,100		552,500	-	-	552,500	403,325	149,175
18	21036	252199	Wastewater Main	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Mayfield Road to 620 metres southerly. Design in 2032.	2034	3,037,100	449,900		2,587,200	-	-	2,587,200	1,888,656	698,544
19	35458	252199	Design	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Wanless Drive to 620 metres northerly. Design in 2032.	2032	648,600	75,500		573,100	-	-	573,100	418,363	154,737
20	21038	252199	Wastewater Main	600-mm Sanitary Sewer - Heritage Road (Mount Pleasant West)	Construction of a 600-mm sanitary sewer on Heritage Road from Wanless Drive to 620 metres northerly. Design in 2032.	2034	3,037,100	353,500		2,683,600	-	-	2,683,600	1,959,028	724,572

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
21	21043	252198	Wastewater Main	525-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 525-mm sanitary sewer on a future street north of Bovaird Drive, west of Heritage Road, from a future street to 830 metres northerly.	2030	3,651,200	-		3,651,200	-	-	3,651,200	2,665,376	985,824
22	21050	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 450-mm sanitary sewer on a future street south of Wanless Drive from Winston Churchill Boulevard to 1310 metres southeasterly.	2030	5,429,400	-		5,429,400	-	-	5,429,400	3,963,462	1,465,938
23	21051	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 600-mm sanitary sewer on a future street north of Bovaird Drive from Heritage Road to 340 metres westerly.	2028	1,831,200	-		1,831,200	-	-	1,831,200	1,336,776	494,424
24	21054	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Huttonville North)	Construction of a 375-mm sanitary sewer on a future street south of Bovaird Drive from Heritage Road to 770 metres westerly.	2027	2,920,800	-		2,920,800	-	-	2,920,800	2,132,184	788,616
25	21553	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street north of Embleton from east of Winston Churchill Boulevard Road to 440 metres west of Heritage Road.	2025	2,092,400	-		2,092,400	-	-	2,092,400	1,527,452	564,948
26	21555	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street north of Embleton from 440 metres west of Heritage Road to 540 metres west of Heritage Road.	2026	2,126,100	-		2,126,100	-	-	2,126,100	1,552,053	574,047
27	21556	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street north of Embleton from Heritage Road to 440 metres westerly.	2025	1,732,300	-		1,732,300	-	-	1,732,300	1,264,579	467,721
28	21557	232134	Wastewater Main	375-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 375-mm sanitary sewer on a future street east of Winston Churchil Boulevard from north of Embleton Road to 1580 metres southeastely.	2023	6,569,000	-		6,569,000	-	-	6,569,000	4,795,370	1,773,630
29	21558	222132	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street south of Embleton Road from approximately 1000 metres southeast of Winston Churchill Boulevard to approximately 840 metres southeast.	2022	3,306,400	-		3,306,400	-	-	3,306,400	2,413,672	892,728
30	21559	222135	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 450-mm sanitary sewer on a future street south of Embleton Road from Heritage Road to 700 metres westerly.	2022	2,755,500	-		2,755,500	-	-	2,755,500	2,011,515	743,985

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
31	21561	212133	Wastewater Main	525-mm Sanitary Sewer - Future Street (Bram West)	Construction of a 525-mm sanitary sewer on a future street from Embleton Road northwesterly to Heritage Road.	2020	2,928,900	-		2,928,900	-	-	2,928,900	2,138,097	790,803
32	29711	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2020	500,000	-		500,000	250,000	-	250,000	182,500	67,500
33	32079	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2021	500,000	-		500,000	250,000	-	250,000	182,500	67,500
34	33596	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2022	500,000	-		500,000	250,000	-	250,000	182,500	67,500
35	35062	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2023	500,000	-		500,000	250,000	-	250,000	182,500	67,500
36	32061	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2024	500,000	-		500,000	250,000	-	250,000	182,500	67,500
37	35063	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2025	500,000	-		500,000	250,000	-	250,000	182,500	67,500
38	35064	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2026	500,000	-		500,000	250,000	-	250,000	182,500	67,500
39	35065	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2027	500,000	-		500,000	250,000	-	250,000	182,500	67,500
40	35066	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2028	500,000	-		500,000	250,000	-	250,000	182,500	67,500
41	35067	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2029	500,000	-		500,000	250,000	-	250,000	182,500	67,500
42	35068	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2030	500,000	-		500,000	250,000	-	250,000	182,500	67,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
43	35069	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2031	500,000	-		500,000	250,000	-	250,000	182,500	67,500
44	13119	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2032	500,000	-		500,000	250,000	-	250,000	182,500	67,500
45	35512	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2033	500,000	-		500,000	250,000	-	250,000	182,500	67,500
46	50129	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2034	500,000	-		500,000	250,000	-	250,000	182,500	67,500
47	35500	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2035	500,000	-		500,000	250,000	-	250,000	182,500	67,500
48	50128	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2036	500,000	-		500,000	250,000	-	250,000	182,500	67,500
49	50127	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2037	500,000	-		500,000	250,000	-	250,000	182,500	67,500
50	35511	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2038	500,000	-		500,000	250,000	-	250,000	182,500	67,500
51	35513	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2039	500,000	-		500,000	250,000	-	250,000	182,500	67,500
52	38205	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2040	500,000	-		500,000	250,000	-	250,000	182,500	67,500
53	38221	202512	General	Inflow and Infiltration Remediation Program	Collection and analysis of data and development of solutions to reduce inflow and infiltration in the sanitary collection system.	2041	500,000	-		500,000	250,000	-	250,000	182,500	67,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
54	35395	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2020	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
55	35396	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2021	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
56	35397	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2022	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
57	35398	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2023	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
58	35399	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2024	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
59	35400	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2025	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
60	35401	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2026	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
61	35402	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2027	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
62	35403	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2028	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
63	35404	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2029	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
64	35405	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2030	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
65	35406	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2031	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
66	50564	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2032	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
67	50565	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2033	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
68	50566	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2034	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
69	50567	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2035	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
70	50568	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2036	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
71	50569	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2037	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
72	50570	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2038	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
73	50571	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2039	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
74	50572	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2040	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
75	50573	202301	General	Implementation of Inflow and Infiltration Remediation Measures	Funding for the implementation of remediation measures to reduce inflow and infiltration into the Region's lake-based sanitary sewer system.	2041	3,500,000	-		3,500,000	1,750,000	-	1,750,000	1,277,500	472,500
76	35918	152153	Wastewater Main	1200-mm Sanitary Sewer - Kennedy Road North/Conservation Drive	Construction of a 1200-mm sanitary sewer on Kennedy Road from Mayfield Road to Christie Drive.	2020	8,500,000	-		8,500,000	-	-	8,500,000	6,205,000	2,295,000
77	13070	222174	Wastewater Main	375-mm Sanitary Sewer - Future Street (Highway 427 Industrial)	Construction of a 375-mm sanitary sewer on a future street north of Castlemore Road from The Gore Road to approx. 750 metres northeasterly.	2022	719,200	-		719,200	-	-	719,200	525,016	194,184
78	37547	222154	Wastewater Main	375-mm Sanitary Sewer - Future Street (Countryside Villages)	Sub-Trunk Sewer: 375 mm on future street north of Countryside Drive from approx. 900 m northwest of Airport Rd to approx. 920 m northwest	2022	1,111,000	-		1,111,000	-	-	1,111,000	811,030	299,970
79	33585	222189	Design	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 525-mm sanitary sewer on McLaughlin Road from 350 metres north of the future east-west spine road to 420 metres northerly. Design in 2022.	2022	111,600	-		111,600	-	-	111,600	81,468	30,132
80	33586	222189	Wastewater Main	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 2)	Construction of a 525-mm sanitary sewer on McLaughlin Road from 350 metres north of the future east-west spine road to 420 metres northerly. Design in 2022.	2024	522,300	-		522,300	-	-	522,300	381,279	141,021

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
81	36244	252199	Design	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from the future east-west spine road to approximately 820 metres northerly. Design in 2028.	2028	747,600	-		747,600	-	-	747,600	545,748	201,852
82	36246	252199	Wastewater Main	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 2)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from the future east-west spine road to approximately 820 metres northerly. Design in 2028.	2030	3,500,200	-		3,500,200	-	-	3,500,200	2,555,146	945,054
83	34032	232191	Design	600-mm Sanitary Sewer - Coleraine Drive (Bolton West)	Construction of a 600-mm sanitary sewer on Coleraine Drive from Manchester Court to McEwan Drive. Design in 2023.	2023	771,800	220,000		551,800	-	-	551,800	402,814	148,986
84	34033	232191	Wastewater Main	600-mm Sanitary Sewer - Coleraine Drive (Bolton West)	Construction of a 600-mm sanitary sewer on Coleraine Drive from Manchester Court to McEwan Drive. Design in 2023.	2025	3,613,500	1,030,100		2,583,400	-	-	2,583,400	1,885,882	697,518
85	52123	252198	Design	600-mm Sanitary Sewer - Innis Lake Road	Construction of a 600-mm sanitary sewer on Innis Lake Road from Mayfield Road to 1190 metres northerly.	2028	1,131,700	98,200		1,033,500	-	-	1,033,500	754,455	279,045
86	33725	252199	Wastewater Main	600-mm Sanitary Sewer - Innis Lake Road	Construction of a 600-mm sanitary sewer on Innis Lake Road from Mayfield Road to 1190 metres northerly.	2030	5,298,800	459,800		4,839,000	-	-	4,839,000	3,532,470	1,306,530
87	32163	252199	Forcemain	Inspiration Lakeview Force Main	Construction of a 300-mm force main on the Lakefront Promenade from the future Inspiration Lakeview Sewage Pumping Station to Lakeshore Road East. Design in 2032.	2030	873,300	-		873,300	-	-	873,300	637,509	235,791
88	32455	252199	Wastewater Main	450-mm Sanitary Sewer - Future Street (Inspiration Lakeview)	Construction of a 450-mm sanitary sewer on the future Street A from the future Street H to the future Street F. Design in 2028.	2030	436,600	-		436,600	-	-	436,600	318,718	117,882
89	32457	252199	Wastewater Main	600-mm Sanitary Sewer - Future Street (Inspiration Lakeview)	Construction of a 600-mm sanitary sewer on the future Street A from the future Street F to the future Inspiration Lakeview Sewage Pumping Station. Design in 2028.	2030	319,300	-		319,300	-	-	319,300	233,089	86,211
90	51913	212270	Design	Humber Station Road Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Mayfield Road to 1600 metres northerly. Design in 2021.	2021	837,300	-		837,300	-	-	837,300	611,229	226,071
91	51914	212270	Wastewater Main	Humber Station Road Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Mayfield Road to 1600 metres northerly. Design in 2021.	2023	3,919,500	-		3,919,500	-	-	3,919,500	2,861,235	1,058,265

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
92	51915	232271	Design	Humber Station Road Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Healey Road to 1500 metres southerly. Design in 2023.	2023	790,700	-		790,700	-	-	790,700	577,211	213,489
93	51916	232271	Wastewater Main	Humber Station Road Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Humber Station Road from Healey Road to 1500 metres southerly. Design in 2023.	2025	3,702,200	-		3,702,200	-	-	3,702,200	2,702,606	999,594
94	34020	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 600-mm sanitary sewer on a future street west of Airport Road from Mayfield Road to approximate 1700 metres northwesterly.	2035	7,568,700	655,000		6,913,700	-	-	6,913,700	5,047,001	1,866,699
95	51623	252199	Design	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 3)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from 820 metres north of the future east-west spine road to approximately 590 metres northerly. Design in 2033.	2033	478,100	-		478,100	-	-	478,100	349,013	129,087
96	51624	252199	Wastewater Main	450-mm Sanitary Sewer - Chinguacousy Road (Mayfield West Phase 3)	Construction of a 450-mm sanitary sewer on Chinguacousy Road from 820 metres north of the future east-west spine road to approximately 590 metres northerly. Design in 2033.	2035	2,238,300	-		2,238,300	-	-	2,238,300	1,633,959	604,341
97	51626	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from Chinguacousy Road to 300 metres easterly, south old Old School Road. Design in 2036.	2035	287,700	-		287,700	-	-	287,700	210,021	77,679
98	51628	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from a future street to 450 metres northerly, south old Old School Road.	2035	431,500	-		431,500	-	-	431,500	314,995	116,505
99	51630	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 375-mm sanitary sewer on a future street from a future street to 1000 metres easterly, south old Old School Road.	2035	959,000	-		959,000	-	-	959,000	700,070	258,930
100	51631	242180	Design	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 3)	Construction of a 525-mm sanitary sewer on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to 800 metres northerly. Design in 2024.	2024	212,200	-		212,200	-	-	212,200	154,906	57,294

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
101	51632	242180	Wastewater Main	525-mm Sanitary Sewer - McLaughlin Road (Mayfield West Phase 3)	Construction of a 525-mm sanitary sewer on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to 800 metres northerly. Design in 2024.	2026	993,700	-		993,700	-	-	993,700	725,401	268,299
102	51634	252198	Wastewater Main	525-mm Sanitary Sewer - Future Street (Mayfield West Phase 3)	Construction of a 525-mm sanitary sewer on a future street from McLaughlin Road to 950 metres easterly.	2035	1,072,200	-		1,072,200	-	-	1,072,200	782,706	289,494
103	51635	252199	Design	525-mm Sanitary Sewer - Dixie Road (Mayfield West Phase 4)	Construction of a 525-mm sanitary sewer on Dixie Road from 500 metres north of Mayfield Road to 840 metres northerly. Design in 2028.	2028	222,700	-		222,700	-	-	222,700	162,571	60,129
104	51636	252199	Wastewater Main	525-mm Sanitary Sewer - Dixie Road (Mayfield West Phase 4)	Construction of a 525-mm sanitary sewer on Dixie Road from 500 metres north of Mayfield Road to 840 metres northerly. Design in 2028.	2030	1,042,600	-		1,042,600	-	-	1,042,600	761,098	281,502
105	51638	252198	Wastewater Main	525-mm Sanitary Sewer - Future Street (Mayfield West Phase 4)	Construction of a 525-mm sanitary sewer on a future street from Dixie Road to Heart Lake Road.	2029	3,298,300	-		3,298,300	-	-	3,298,300	2,407,759	890,541
106	51639	252199	Design	450-mm Sanitary Sewer - Heart Lake Road (Mayfield West Phase 4)	Construction of a 450-mm sanitary sewer on Heart Lake Road from 1200 metres north of Mayfield Road to 1240 metres northerly. Design in 2027.	2029	368,800	-		368,800	-	-	368,800	269,224	99,576
107	51640	252199	Wastewater Main	450-mm Sanitary Sewer - Heart Lake Road (Mayfield West Phase 4)	Construction of a 450-mm sanitary sewer on Heart Lake Road from 1200 metres north of Mayfield Road to 1240 metres northerly. Design in 2027.	2031	1,726,200	-		1,726,200	-	-	1,726,200	1,260,126	466,074
108	51642	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street from Innis Lake Road to 920 metres westerly, north of Mayfield Road.	2035	962,000	-		962,000	-	-	962,000	702,260	259,740
109	51644	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street from a future street to 570 metres northerly, east of Airport Road and north of Mayfield Road.	2035	596,800	-		596,800	-	-	596,800	435,664	161,136
110	51646	242192	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 960 metres northeasterly.	2024	1,003,900	-		1,003,900	-	-	1,003,900	732,847	271,053

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
111	51648	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 750 metres northwesterly.	2031	1,057,900	-		1,057,900	-	-	1,057,900	772,267	285,633
112	51650	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 710 metres northeasterly, south of Healey Road.	2025	742,700	-		742,700	-	-	742,700	542,171	200,529
113	51652	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 600-mm sanitary sewer on a future street from Humber Station Road to 690 metres easterly, north of Healey Road.	2025	998,800	220,000		778,800	-	-	778,800	568,524	210,276
114	51654	252198	Wastewater Main	600-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 600-mm sanitary sewer on a future street from Coleraine Drive to 680 metres westerly, north of Healey Road.	2025	1,300,700	257,900		1,042,800	-	-	1,042,800	761,244	281,556
115	51656	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 375-mm sanitary sewer on a future street from a future street east of Humber Station Road to 780 metres northerly.	2027	747,800	-		747,800	-	-	747,800	545,894	201,906
116	51657	252199	Design	450-mm Sanitary Sewer - Humber Station Road	Construction of a 400-mm sanitary sewer on Humber Station Road from Healey Road to 630 metres northerly. Design in 2028.	2028	154,900	-		154,900	-	-	154,900	113,077	41,823
117	51658	252199	Wastewater Main	450-mm Sanitary Sewer - Humber Station Road	Construction of a 400-mm sanitary sewer on Humber Station Road from Healey Road to 630 metres northerly. Design in 2028.	2030	725,300	-		725,300	-	-	725,300	529,469	195,831
118	51659	252199	Design	600-mm Sanitary Sewer - Humber Station Road	Construction of a 600-mm sanitary sewer on Humber Station Road from 890 metres north of Healey Road to 790 metres northerly. Design in 2025.	2025	268,900	74,800		194,100	-	-	194,100	141,693	52,407
119	51660	252199	Wastewater Main	600-mm Sanitary Sewer - Humber Station Road	Construction of a 600-mm sanitary sewer on Humber Station Road from 890 metres north of Healey Road to 790 metres northerly. Design in 2025.	2027	1,258,900	350,200		908,700	-	-	908,700	663,351	245,349
120	51662	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 450-mm sanitary sewer on a future street from Humber Station Road to 670 metres westerly.	2035	700,900	-		700,900	-	-	700,900	511,657	189,243

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
121	51664	252198	Wastewater Main	375-mm Sanitary Sewer - Future Street (Bolton West)	Construction of a 375-mm sanitary sewer on a future street from a future street 890 metres north of Healey Road to 800 metres northerly.	2035	767,200	-		767,200	-	-	767,200	560,056	207,144
122	51666	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Mayfield West Phase 4)	Construction of a 450-mm sanitary sewer on a future street from Mayfield Road to 2160 metres northwesterly, crossing Bramalea Road.	2030	2,885,100	-		2,885,100	-	-	2,885,100	2,106,123	778,977
123	51963	202101	Wastewater Main	525-mm Sanitary Sewer - Front Street South (West Village)	Construction of a 525-mm sanitary sewer from Lakeshore Road West to Port Street.	2020	984,645	-		984,645	-	-	984,645	718,791	265,854
124	51965	202102	Wastewater Main	525-mm Sanitary Sewer - Port Street (West Village)	Construction of a 525-mm sanitary sewer from Front Street South to 310 metres westerly.	2020	457,078	-		457,078	-	-	457,078	333,667	123,411
125	51966	212103	Wastewater Main	375-mm/450-mm Sanitary Sewer - Future Street (West Village)	Construction of a 375-mm/450-mm sanitary sewer from the west end of Port Street to 385 metres westerly.	2021	348,322	-		348,322	-	-	348,322	254,275	94,047
126	51967	212103	Wastewater Main	375-mm/450-mm Sanitary Sewer - Future Street (West Village)	Construction of a 375-mm/450-mm sanitary sewer from the west end of Port Street to 385 metres westerly.	2021	90,882	-		90,882	-	-	90,882	66,344	24,538
127	52813	202118	Design	450-mm Sanitary Sewer - Rathburn Road West	Construction of a 450-mm sanitary sewer on Rathburn Road West from Duke of York Boulevard to Station Gate Road.	2020	77,951	-		77,951	-	-	77,951	56,904	21,047
128	52814	202118	Wastewater Main	450-mm Sanitary Sewer - Rathburn Road West	Construction of a 450-mm sanitary sewer on Rathburn Road West from Duke of York Boulevard to Station Gate Road.	2020	344,785	-		344,785	-	-	344,785	251,693	93,092
129	51031	202119	Wastewater Main	525/600-mm Sanitary Sewer - Rathburn Road West	Construction of a 375/450/525/600-mm sanitary sewer on Rathburn Road West from City Centre Drive to Duke of York Boulevard. In conjunction with the Hurontario LRT.	2020	2,460,127	-		2,460,127	-	-	2,460,127	1,795,893	664,234
130	51061	192158	Wastewater Main	450-mm Sanitary Sewer - Easement at Herdmans Road (Steeles and Hurontario)	Construction of a 450-mm sanitary sewer from New London Court to the Fletcher's Creek Sanitary Trunk Sewer.	2020	230,600	-		230,600	-	-	230,600	168,338	62,262
131	52674	252199	Design	600-mm Sanitary Sewer - Goreway Drive	Construction of a 600-mm sanitary sewer on Goreway Drive from Mayfield Road to Countryside Drive. Design in 2028.	2028	1,697,300	118,800		1,578,500	-	-	1,578,500	1,152,305	426,195

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
132	52675	252199	Wastewater Main	600-mm Sanitary Sewer - Goreway Drive	Construction of a 600-mm sanitary sewer on Goreway Drive from Mayfield Road to Countryside Drive. Design in 2028.	2030	7,948,200	556,400		7,391,800	-	-	7,391,800	5,396,014	1,995,786
133	52681	252198	Wastewater Main	450-mm Sanitary Sewer - Future Street (Tullamore Industrial)	Construction of a 450-mm sanitary sewer on a future street east of Innis Lake Road from Mayfield Road to 1100 metres northerly.	2035	4,330,700	-		4,330,700	-	-	4,330,700	3,161,411	1,169,289
134	52678	252199	Design	525-mm Sanitary Sewer - Mayfield Road	Construction of a 525-mm sanitary sewer on Mayfield Road from McVean Drive to a future street east of Innis Lake Road. Design in 2028.	2028	781,300	-		781,300	-	-	781,300	570,349	210,951
135	52679	252199	Wastewater Main	525-mm Sanitary Sewer - Mayfield Road	Construction of a 525-mm sanitary sewer on Mayfield Road from McVean Drive to a future street east of Innis Lake Road. Design in 2028.	2030	3,658,400	-		3,658,400	-	-	3,658,400	2,670,632	987,768
136	52676	252199	Design	600-mm Sanitary Sewer - McVean Drive	Construction of a 600-mm sanitary sewer on McVean Drive from Mayfield Road to Countryside Drive. Design in 2028.	2028	1,307,700	-		1,307,700	-	-	1,307,700	954,621	353,079
137	52677	252199	Wastewater Main	600-mm Sanitary Sewer - McVean Drive	Construction of a 600-mm sanitary sewer on McVean Drive from Mayfield Road to Countryside Drive. Design in 2028.	2030	6,122,100	-		6,122,100	-	-	6,122,100	4,469,133	1,652,967
138	52843	212120	Wastewater Main	525-mm Sanitary Sewer - Aviation Road and Lakeshore Road East	Construction of a 525-mm sanitary sewer on Aviation Road and Lakeshore Road East for the Beach Street Sewage Pumping Station to the Beechwood Sewage Pumping Station.	2021	35,000,000	-		35,000,000	7,000,000	-	28,000,000	20,440,000	7,560,000
139	53625	202122	Wastewater Main	375-mm Sanitary Sewer - Future Thornwood Drive and Future Armdale Road	Construction of a 375-mm sanitary sewer on the future extension of Thornwood Drive and Armdale Road.	2020	230,600	-		230,600	-	-	230,600	168,338	62,262
140	35140	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2020	750,000	-		750,000	-	-	750,000	547,500	202,500
141	33696	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2021	750,000	-		750,000	-	-	750,000	547,500	202,500
142	33697	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2022	750,000	-		750,000	-	-	750,000	547,500	202,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
143	34981	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2023	750,000	-		750,000	-	-	750,000	547,500	202,500
144	34982	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2024	750,000	-		750,000	-	-	750,000	547,500	202,500
145	34983	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2025	750,000	-		750,000	-	-	750,000	547,500	202,500
146	34984	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2026	750,000	-		750,000	-	-	750,000	547,500	202,500
147	34986	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	0	750,000	-		750,000	-	-	750,000	547,500	202,500
148	34985	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2028	750,000	-		750,000	-	-	750,000	547,500	202,500
149	34987	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2029	750,000	-		750,000	-	-	750,000	547,500	202,500
150	34988	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2030	750,000	-		750,000	-	-	750,000	547,500	202,500
151	34989	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2031	750,000	-		750,000	-	-	750,000	547,500	202,500
152	32157	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2032	750,000	-		750,000	-	-	750,000	547,500	202,500
153	32158	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2033	750,000	-		750,000	-	-	750,000	547,500	202,500
154	34860	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2034	750,000	-		750,000	-	-	750,000	547,500	202,500
155	32159	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2035	750,000	-		750,000	-	-	750,000	547,500	202,500
156	32909	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2036	750,000	-		750,000	-	-	750,000	547,500	202,500
157	34867	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2037	750,000	-		750,000	-	-	750,000	547,500	202,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
158	34999	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2038	750,000	-		750,000	-	-	750,000	547,500	202,500
159	35002	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2039	750,000	-		750,000	-	-	750,000	547,500	202,500
160	35003	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2040	750,000	-		750,000	-	-	750,000	547,500	202,500
161	35004	202530	Study	Development-Related Wastewater Infrastructure Planning	Funding for wastewater infrastructure planning and studies related to new development.	2041	750,000	-		750,000	-	-	750,000	547,500	202,500
162	33872	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2022	750,000	-		750,000	-	-	750,000	547,500	202,500
163	23726	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2027	750,000	-		750,000	-	-	750,000	547,500	202,500
164	23728	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2032	750,000	-		750,000	-	-	750,000	547,500	202,500
165	38538	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2037	750,000	-		750,000	-	-	750,000	547,500	202,500
166	52352	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2020	150,000	-		150,000	-	-	150,000	109,500	40,500
167	52353	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2021	150,000	-		150,000	-	-	150,000	109,500	40,500
168	52354	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2022	150,000	-		150,000	-	-	150,000	109,500	40,500
169	52355	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2023	150,000	-		150,000	-	-	150,000	109,500	40,500
170	52356	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2024	150,000	-		150,000	-	-	150,000	109,500	40,500
171	52357	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2025	150,000	-		150,000	-	-	150,000	109,500	40,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
172	52358	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2026	150,000	-		150,000	-	-	150,000	109,500	40,500
173	52359	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2027	150,000	-		150,000	-	-	150,000	109,500	40,500
174	52360	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2028	150,000	-		150,000	-	-	150,000	109,500	40,500
175	52361	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2029	150,000	-		150,000	-	-	150,000	109,500	40,500
176	52362	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2030	150,000	-		150,000	-	-	150,000	109,500	40,500
177	52363	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2031	150,000	-		150,000	-	-	150,000	109,500	40,500
178	52364	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2032	150,000	-		150,000	-	-	150,000	109,500	40,500
179	52365	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2033	150,000	-		150,000	-	-	150,000	109,500	40,500
180	52366	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2034	150,000	-		150,000	-	-	150,000	109,500	40,500
181	52367	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2035	150,000	-		150,000	-	-	150,000	109,500	40,500
182	52368	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2036	150,000	-		150,000	-	-	150,000	109,500	40,500
183	52369	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2037	150,000	-		150,000	-	-	150,000	109,500	40,500
184	52370	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2038	150,000	-		150,000	-	-	150,000	109,500	40,500
185	52371	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2039	150,000	-		150,000	-	-	150,000	109,500	40,500
186	52372	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2040	150,000	-		150,000	-	-	150,000	109,500	40,500

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: Regional Wastewater

No.	Comp. #	Proj. #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
187	52373	202100	General	Flow Monitoring Program for New Subdivisions	Program to install flow monitors at the sanitary sewer outlets of new subdivisions.	2041	150,000	-		150,000	-	-	150,000	109,500	40,500
			Provisional Reduction for WAH and NFPOW Adjustment					15,830,000		(15,830,000)	-	-	(15,830,000)	(11,555,900)	(4,274,100)
			Existing Debt Principal			2020-2040	7,273,580	-		7,273,580	-	-	7,273,580	5,309,714	1,963,867
			Existing Debt Interest (Discounted)			2020-2040	2,192,392	-		2,192,392	-	-	2,192,392	1,600,446	591,946
			Reserve Fund Adjustment			Reserve	72,799,391	-		72,799,391	-	-	72,799,391	53,143,556	19,655,836
							420,027,954	**22,287,200**	**-**	**397,740,754**	**51,000,000**	**-**	**346,740,754**	**253,120,750**	**93,620,003**

5.4.1.2.6 Summary of Capital Costs Included in D.C. Calculation – South Peel Wastewater

The Region has identified the need for $3,073.95 million in additional wastewater projects. Deductions of $482.95 million to account for the post period benefit and $250.47 million to account for the benefit to existing development have been made. A further $20.60 million has been deducted to account for developer contributions. $564.27 million has been included in the calculations to account for existing growth-related debt and interest (discounted). The Region anticipates issuing $655 million in new debt for the growth-related capital projects. As a result, $360.18 million of discounted interest has been included in the calculations, with $20.34 million of this amount deducted to account for the post period benefit. Similar to Regional Wastewater, a post-period deduction of $131.02 million to account for the W.A.H. and N.F.P.O.W. employment included in the capital forecast but not in the D.C. growth forecast has also been made. Finally, an adjustment of $234.21 million has been made to account for the existing reserve fund deficit. The net amount included in the D.C. calculation is $3,327.23 million. Table 5-23 provides a summary of these capital costs related to wastewater.

These costs are attributed 73% to residential and 27% non-residential development which is the incremental population to employment growth (multiplied by their respective design criteria) in wastewater service areas over the forecast period.

Table 5-23
Region of Peel
Summary of South Peel Wastewater Capital Costs

South Peel Wastewater Capital Costs	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Costs	Benefit to Existing	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Projects	3,073,949,700	482,952,000	2,590,997,700	250,472,400	20,599,500	2,319,925,800	1,693,545,834	626,379,966
Existing Debt Principal and Interest (Discounted)	564,272,085	-	564,272,085	-	-	564,272,085	411,918,622	152,353,463
New Debt Interest (Discounted)	360,175,431	20,340,800	339,834,631	-	-	339,834,631	248,079,281	91,755,350
Provisional Reduction for WAH and NFPOW Adjustment		131,017,000	(131,017,000)	-	-	(131,017,000)	(95,642,410)	(35,374,590)
Reserves	234,214,674	-	234,214,674	-	-	234,214,674	170,976,712	63,237,962
Total	**4,232,611,890**	**634,309,800**	**3,598,302,090**	**250,472,400**	**20,599,500**	**3,327,230,190**	**2,428,878,039**	**898,352,151**

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
1	52734	172280	Wastewater Main	Albion-Vaughan Road Sanitary Trunk Sewer (Phase 2)	Construction of a 900-mm sanitary trunk sewer on Albion Vaughan Road and Nunneville Road from Royalton Drive to the end of Nunneville Road.	2020	10,000,000	1,000,000		9,000,000	-	-	9,000,000	6,570,000	2,430,000
2	16355	182271	Wastewater Main	McVean Force Main Twinning	Construction of a 900-mm force main on Queen Street East from the McVean Sewage Pumping Station to Goreway Drive.	2020	4,978,000	-		4,978,000	-	-	4,978,000	3,633,940	1,344,060
3	35447	252299	Design	Northwest Brampton Sanitary Trunk Sewer (Phase 3)	Construction of a 675-mm sanitary trunk sewer on Wanless Drive from Heritage Road to 820 metres westerly. Design in 2032.	2032	1,038,800	190,600		848,200	-	-	848,200	619,186	229,014
4	21030	252299	Wastewater Main	Northwest Brampton Sanitary Trunk Sewer (Phase 3)	Construction of a 675-mm sanitary trunk sewer on Wanless Drive from Heritage Road to 820 metres westerly. Design in 2032.	2034	4,864,200	892,400		3,971,800	-	-	3,971,800	2,899,414	1,072,386
5	35451	252299	Design	Northwest Brampton Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Heritage Road from the future Sandalwood Parkway extension to Wanless Drive. Design in 2031.	2031	1,549,900	72,100		1,477,800	-	-	1,477,800	1,078,794	399,006
6	21041	252299	Wastewater Main	Northwest Brampton Sanitary Trunk Sewer (Phase 2)	Construction of a 750-mm sanitary trunk sewer on Heritage Road from the future Sandalwood Parkway extension to Wanless Drive. Design in 2031.	2033	7,257,600	337,800		6,919,800	-	-	6,919,800	5,051,454	1,868,346
7	36857	252299	Design	Northwest Brampton Sanitary Trunk Sewer (Phase 1)	Construction of a 825-mm sanitary trunk sewer on the future extension of Sandalwood Parkway from Heritage Road to Mississauga Road. Design in 2029.	2029	2,415,600	259,300		2,156,300	-	-	2,156,300	1,574,099	582,201
8	21042	252299	Wastewater Main	Northwest Brampton Sanitary Trunk Sewer (Phase 1)	Construction of a 825-mm sanitary trunk sewer on the future extension of Sandalwood Parkway from Heritage Road to Mississauga Road. Design in 2029.	2031	11,483,300	1,232,700		10,250,600	-	-	10,250,600	7,482,938	2,767,662
9	35452	242222	Design	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 630 metres northerly. Design in 2024.	2024	789,300	-		789,300	-	-	789,300	576,189	213,111
10	21044	242222	Wastewater Main	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 630 metres northerly. Design in 2024.	2026	3,752,300	-		3,752,300	-	-	3,752,300	2,739,179	1,013,121
11	35411	252299	Design	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Mayfield Road to 680 metres southerly. Design in 2030.	2030	942,300	336,400		605,900	-	-	605,900	442,307	163,593
12	21055	252299	Wastewater Main	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Mayfield Road to 680 metres southerly. Design in 2030.	2032	4,412,300	1,575,400		2,836,900	-	-	2,836,900	2,070,937	765,963
13	35412	252299	Design	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to 570 metres northerly. Design in 2030.	2030	789,800	262,600		527,200	-	-	527,200	384,856	142,344
14	21056	252299	Wastewater Main	Credit Valley Sanitary Trunk Sewer (Phase 4)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to 570 metres northerly. Design in 2030.	2032	3,698,200	1,229,400		2,468,800	-	-	2,468,800	1,802,224	666,576

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
15	35772	252299	Design	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway. Design in 2028.	2028	498,900	82,700		416,200	-	-	416,200	303,826	112,374
16	21057	252299	Wastewater Main	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway. Design in 2028.	2030	2,335,200	387,300		1,947,900	-	-	1,947,900	1,421,967	525,933
17	35773	252299	Design	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway. Design in 2026.	2026	1,274,900	157,300		1,117,600	-	-	1,117,600	815,848	301,752
18	21058	252299	Wastewater Main	Credit Valley Sanitary Trunk Sewer (Phase 3)	Construction of a 900-mm sanitary trunk sewer on Mississauga Road from Wanless Drive to Sandalwood Parkway. Design in 2026.	2028	5,970,100	736,700		5,233,400	-	-	5,233,400	3,820,382	1,413,018
19	35453	242222	Design	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 880 metres southerly. Design in 2024.	2024	1,201,400	-		1,201,400	-	-	1,201,400	877,022	324,378
20	21060	242222	Wastewater Main	Heritage Heights Sanitary Trunk Sewer (Phase 2)	Construction of a 675-mm sanitary trunk sewer on Heritage Road from Bovaird Drive to 880 metres southerly. Design in 2024.	2026	5,711,000	-		5,711,000	-	-	5,711,000	4,169,030	1,541,970
21	35312	232221	Design	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2023	1,037,700	-		1,037,700	-	-	1,037,700	757,521	280,179
22	21061	232221	Wastewater Main	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2025	4,858,100	-		4,858,100	-	-	4,858,100	3,546,413	1,311,687
23	50542	232221	Design	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2023	331,300	-		331,300	-	-	331,300	241,849	89,451
24	21062	232221	Wastewater Main	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2025	1,550,700	-		1,550,700	-	-	1,550,700	1,132,011	418,689
25	50543	232221	Design	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2023	736,900	-		736,900	-	-	736,900	537,937	198,963
26	21063	232221	Wastewater Main	Heritage Heights Sanitary Trunk Sewer (Phase 1)	Construction of a 750-mm sanitary trunk sewer on the future extension of Williams Parkway from Mississauga Road to Heritage Road. Design in 2023.	2025	3,450,300	-		3,450,300	-	-	3,450,300	2,518,719	931,581
27	35459	252299	Design	750-mm Sanitary Sewer - The Gore Road	Construction of a 750-mm sanitary sewer on The Gore Road from Mayfield Road to approximately 860 metres southerly. Design in 2032.	2032	950,000	202,900		747,100	-	-	747,100	545,383	201,717
28	24608	252299	Wastewater Main	750-mm Sanitary Sewer - The Gore Road	Construction of a 750-mm sanitary sewer on The Gore Road from Mayfield Road to approximately 860 metres southerly. Design in 2032.	2034	4,448,000	950,100		3,497,900	-	-	3,497,900	2,553,467	944,433

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
29	38790	252599	Study	Lower West Sanitary Trunk Sewer Twinning - Class EA	Construction of a 2400-mm sanitary trunk sewer on Southdown Road and through easements from Lakeshore Road West to the Clarkson WWTP. Design in 2028.	2026	2,000,000	-		2,000,000	-	-	2,000,000	1,460,000	540,000
30	35326	252299	Design	Lower West Sanitary Trunk Sewer Twinning	Construction of a 2400-mm sanitary trunk sewer on Southdown Road and through easements from Lakeshore Road West to the Clarkson WWTP. Design in 2028.	2028	9,690,400	1,938,100		7,752,300	-	-	7,752,300	5,659,179	2,093,121
31	15615	252299	Wastewater Main	Lower West Sanitary Trunk Sewer Twinning	Construction of a 2400-mm sanitary trunk sewer on Southdown Road and through easements from Lakeshore Road West to the Clarkson WWTP. Design in 2028.	2030	71,077,700	14,215,500		56,862,200	-	-	56,862,200	41,509,406	15,352,794
32	50541	182976	Property	McVean Sewage Pumping Station Expansion	Expansion of the McVean Sewage Pumping Station from 1400 L/s to 2100 L/s.	2021	9,000,000	-		9,000,000	-	-	9,000,000	6,570,000	2,430,000
33	37396	182976	Pumping Station	McVean Sewage Pumping Station Expansion	Expansion of the McVean Sewage Pumping Station from 1400 L/s to 2100 L/s.	2021	9,000,000	-		9,000,000	-	-	9,000,000	6,570,000	2,430,000
34	15816	162291	Wastewater Main	East-to-West Diversion Sanitary Trunk Sewer	Construction of a 2400-mm sanitary trunk sewer on Derry Road from the East Trunk sewer at Spring Creek to West Trunk Sewer at Highway 401 and Creditview Road.	2020	195,000,000	19,500,000		175,500,000	-	-	175,500,000	128,115,000	47,385,000
35	15817	162291	Wastewater Main	East-to-West Diversion Sanitary Trunk Sewer	Construction of a 2400-mm sanitary trunk sewer on Derry Road from the East Trunk sewer at Spring Creek to West Trunk Sewer at Highway 401 and Creditview Road.	2021	140,000,000	14,000,000		126,000,000	-	-	126,000,000	91,980,000	34,020,000
36	33588	222255	Design	Queensway East Sanitary Trunk Sewer	Construction of a 1800-mm sanitary trunk sewer on The Queensway from Hurontario Street to the East Sanitary Trunk Sewer. Design in 2022.	2022	19,347,200	1,741,200		17,606,000	1,934,700	-	15,671,300	11,440,049	4,231,251
37	33590	222255	Wastewater Main	Queensway East Sanitary Trunk Sewer	Construction of a 1800-mm sanitary trunk sewer on The Queensway from Hurontario Street to the East Sanitary Trunk Sewer. Design in 2022.	2024	141,906,600	12,771,600		129,135,000	14,190,700	-	114,944,300	83,909,339	31,034,961
38	52735	182252	Wastewater Main	Cawthra Road Sanitary Trunk Sewer (Phases 2 and 3)	Construction of a 1500-mm sanitary trunk sewer on Cawthra Road from Burnhamthorpe Road East to south of Dundas Street East to connect to the existing CPR Trunk. Additional funds.	2020	2,000,000	-		2,000,000	1,000,000	-	1,000,000	730,000	270,000
39	33591	212254	Design	Cawthra Road Sanitary Trunk Sewer (Phase 4)	Construction of a 1500-mm sanitary trunk sewer on Burnhamthorpe Road East from Central Parkway East to Cawthra Road. Design in 2021.	2021	4,077,400	367,000		3,710,400	407,700	-	3,302,700	2,410,971	891,729
40	33593	212254	Wastewater Main	Cawthra Road Sanitary Trunk Sewer (Phase 4)	Construction of a 1500-mm sanitary trunk sewer on Burnhamthorpe Road East from Central Parkway East to Cawthra Road. Design in 2021.	2023	24,663,900	2,219,800		22,444,100	2,466,400	-	19,977,700	14,583,721	5,393,979
41	34861	222256	Design	Cawthra Road Sanitary Trunk Sewer (Phase 5)	Construction of a 1500-mm sanitary trunk sewer on Cawthra Road from the CPR to The Queensway. Design in 2022.	2022	3,912,500	352,100		3,560,400	391,300	-	3,169,100	2,313,443	855,657
42	34863	222256	Wastewater Main	Cawthra Road Sanitary Trunk Sewer (Phase 5)	Construction of a 1500-mm sanitary trunk sewer on Cawthra Road from the CPR to The Queensway. Design in 2022.	2024	23,666,500	2,130,000		21,536,500	2,366,700	-	19,169,800	13,993,954	5,175,846

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
43	52737	192215	Design	Lakeshore Road West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Lakeshore Road West from Front Street to the Richard's Memorial Sewage Pumping Station. Design in 2019.	2020	2,500,000	200,000		2,300,000	500,000	-	1,800,000	1,314,000	486,000
44	50093	192215	Wastewater Main	Lakeshore Road West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Lakeshore Road West from Front Street to the Richard's Memorial Sewage Pumping Station. Design in 2019.	2022	31,000,000	2,480,000		28,520,000	6,200,000	-	22,320,000	16,293,600	6,026,400
45	50094	192215	Wastewater Main	Lakeshore Road West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Lakeshore Road West from Front Street to the Richard's Memorial Sewage Pumping Station. Design in 2019.	2022	31,000,000	2,480,000		28,520,000	6,200,000	-	22,320,000	16,293,600	6,026,400
46	34918	242593	Study	Fletcher's Creek Sanitary Trunk Sewer Twinning - Class EA	Construction of a 1050-mm sanitary trunk sewer on McLaughlin Road from Queen Street West to Steeles Avenue West. Design in 2026.	2024	1,500,000	-		1,500,000	-	-	1,500,000	1,095,000	405,000
47	34919	252299	Design	Fletcher's Creek Sanitary Trunk Sewer Twinning	Construction of a 1050-mm sanitary trunk sewer on McLaughlin Road from Queen Street West to Steeles Avenue West. Design in 2026.	2026	10,338,000	2,067,600		8,270,400	-	-	8,270,400	6,037,392	2,233,008
48	34921	252299	Wastewater Main	Fletcher's Creek Sanitary Trunk Sewer Twinning	Construction of a 1050-mm sanitary trunk sewer on McLaughlin Road from Queen Street West to Steeles Avenue West. Design in 2026.	2028	75,826,500	15,165,300		60,661,200	-	-	60,661,200	44,282,676	16,378,524
49	27417	252999	Design	Inspiration Lakeview Sewage Pump Station	Construction of a new sewage pumping station within the future Inspiration Lakeview development. Design in 2028.	2028	712,200	-		712,200	-	-	712,200	519,906	192,294
50	27418	252999	Pumping Station	Inspiration Lakeview Sewage Pump Station	Construction of a new sewage pumping station within the future Inspiration Lakeview development. Design in 2028.	2030	3,386,000	-		3,386,000	-	-	3,386,000	2,471,780	914,220
51	35073	222262	Design	Kennedy Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Kennedy Road from the Etobicoke Creek Sanitary Trunk Sewer to the future East-West Sanitary Trunk Sewer Diversion. Design in 2022.	2022	3,907,400	1,953,700		1,953,700	-	-	1,953,700	1,426,201	527,499
52	35075	222262	Wastewater Main	Kennedy Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Kennedy Road from the Etobicoke Creek Sanitary Trunk Sewer to the future East-West Sanitary Trunk Sewer Diversion. Design in 2022.	2024	23,635,900	11,818,000		11,817,900	-	-	11,817,900	8,627,067	3,190,833
53	34978	172926	WWTP	G.E. Booth WWTP - New Plant 1	Major capital improvement at the treatment facility including demolition works, new inlet conduit, new odour control facility, new primary clarifiers and a new by-pass conduit to replace Plant 1 and to support future expansion of the facility.	2020	10,000,000	-		10,000,000	5,000,000	-	5,000,000	3,650,000	1,350,000
54	34979	172926	WWTP	G.E. Booth WWTP - New Plant 1	Major capital improvement at the treatment facility including demolition works, new inlet conduit, new odour control facility, new primary clarifiers and a new by-pass conduit to replace Plant 1 and to support future expansion of the facility.	2022	67,000,000	-		67,000,000	33,500,000	-	33,500,000	24,455,000	9,045,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
55	52393	172926	WWTP	G.E. Booth WWTP - New Plant 1	Major capital improvement at the treatment facility including demolition works, new inlet conduit, new odour control facility, new primary clarifiers and a new by-pass conduit to replace Plant 1 and to support future expansion of the facility.	2022	14,000,000	-		14,000,000	7,000,000	-	7,000,000	5,110,000	1,890,000
56	51943	192940	WWTP	G.E. Booth WWTP - Capacity Restoration	Recovery of 40 million litres per day of liquid treatment capacity to restore the G.E. Booth Wastewater Treatment Plant capacity to 518 ML/d.	2022	11,500,000	-		11,500,000	-	1,069,500	10,430,500	7,614,265	2,816,235
57	34975	192940	WWTP	G.E. Booth WWTP - Capacity Restoration	Recovery of 40 million litres per day of liquid treatment capacity to restore the G.E. Booth Wastewater Treatment Plant capacity to 518 ML/d.	2022	71,500,000	-		71,500,000	-	6,649,500	64,850,500	47,340,865	17,509,635
58	38619	202561	Study	G.E. Booth WWTP Expansion	Class EA for the expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d.	2020	3,000,000	-		3,000,000	-	-	3,000,000	2,190,000	810,000
59	38620	252999	Design	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d. Design in 2025.	2025	2,500,000	-		2,500,000	-	-	2,500,000	1,825,000	675,000
60	38621	252999	WWTP	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d. Design in 2025.	2027	23,500,000	-		23,500,000	-	-	23,500,000	17,155,000	6,345,000
61	51944	252999	Design	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d. Design in 2025.	2025	40,000,000	-		40,000,000	-	-	40,000,000	29,200,000	10,800,000
62	51945	252999	WWTP	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d. Design in 2025.	2027	200,000,000	-		200,000,000	-	-	200,000,000	146,000,000	54,000,000
63	52838	252999	Construction	G.E. Booth WWTP Expansion	Expansion of the G.E. Booth WWTP from 518 ML/d to 600 ML/d. Design in 2025.	2028	200,000,000	-		200,000,000	-	-	200,000,000	146,000,000	54,000,000
64	51946	232943	WWTP	G.E. Booth WWTP Expansion	Expansion of the administration/maintenance building at the G.E. Booth WWTP to accommodate the treatment capacity expansion from 518 ML/d to 600 ML/d. Design in 2023.	2033	3,000,000	-		3,000,000	-	-	3,000,000	2,190,000	810,000
65	51947	232943	WWTP	G.E. Booth WWTP Expansion	Expansion of the administration/maintenance building at the G.E. Booth WWTP to accommodate the treatment capacity expansion from 518 ML/d to 600 ML/d. Design in 2023.	2035	15,000,000	-		15,000,000	-	-	15,000,000	10,950,000	4,050,000
66	37933	202560	Study	Clarkson WWTP Expansion	Class EA for the expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d.	2020	2,500,000	-		2,500,000	-	-	2,500,000	1,825,000	675,000
67	35965	222952	Design	Clarkson WWTP Expansion - Headworks	Expansion of headworks at the Clarkson WWTP to accommodate treatment capacity expansion from 350 ML/d to 500 ML/d. Design in 2022.	2022	6,250,000	4,687,500		1,562,500	-	-	1,562,500	1,140,625	421,875
68	35966	222952	WWTP	Clarkson WWTP Expansion - Headworks	Expansion of headworks at the Clarkson WWTP to accommodate treatment capacity expansion from 350 ML/d to 500 ML/d. Design in 2022.	2024	70,000,000	52,500,000		17,500,000	-	-	17,500,000	12,775,000	4,725,000
69	51956	222950	WWTP	Clarkson WWTP Expansion	Expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d. Design in 2022.	2022	7,750,000	3,875,000		3,875,000	-	-	3,875,000	2,828,750	1,046,250
70	51957	222950	WWTP	Clarkson WWTP Expansion	Expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d. Design in 2022.	2024	80,000,000	40,000,000		40,000,000	-	-	40,000,000	29,200,000	10,800,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

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			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
71	51958	222950	WWTP	Clarkson WWTP Expansion	Expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d. Design in 2022.	2022	12,100,000	6,050,000		6,050,000	-	-	6,050,000	4,416,500	1,633,500
72	51959	222950	WWTP	Clarkson WWTP Expansion	Expansion of the Clarkson WWTP from 350 ML/d to 500 ML/d. Design in 2022.	2024	100,000,000	50,000,000		50,000,000	-	-	50,000,000	36,500,000	13,500,000
73	51917	252299	Design	McLaughlin Road Force Main	Construction of a 400-mm sewage force main on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to the south side of the Etobicoke Creek. Design in 2033.	2025	131,700	-		131,700	-	-	131,700	96,141	35,559
74	51918	252299	Wastewater Main	McLaughlin Road Force Main	Construction of a 400-mm sewage force main on McLaughlin Road from the future McLaughlin Road Sewage Pumping Station to the south side of the Etobicoke Creek. Design in 2033.	2027	616,200	-		616,200	-	-	616,200	449,826	166,374
75	TBD	252999	Design	McLaughlin Road Sewage Pumping Station	Construction of a new sewage pumping station in the vicinity of McLaughlin Road and the Etobicoke Creek. Design in 2032.	2025	1,112,800	-		1,112,800	-	-	1,112,800	812,344	300,456
76	TBD	252999	Pumping Station	McLaughlin Road Sewage Pumping Station	Construction of a new sewage pumping station in the vicinity of McLaughlin Road and the Etobicoke Creek. Design in 2032.	2027	5,290,700	-		5,290,700	-	-	5,290,700	3,862,211	1,428,489
77	51919	202240	Design	Centre View Sanitary Trunk Sewer	Construction of a 1200-mm sanitary trunk sewer on Centre View Drive from the proposed interceptor chamber to Duke of York Boulevard and on Duke of York Boulevard from Centre View Drive to Rathburn Road. Design in 2020.	2020	3,201,300	1,600,700		1,600,600	-	-	1,600,600	1,168,438	432,162
78	51920	202240	Wastewater Main	Centre View Sanitary Trunk Sewer	Construction of a 1200-mm sanitary trunk sewer on Centre View Drive from the proposed interceptor chamber to Duke of York Boulevard and on Duke of York Boulevard from Centre View Drive to Rathburn Road. Design in 2020.	2021	19,365,200	9,682,600		9,682,600	-	-	9,682,600	7,068,298	2,614,302
79	52670	212261	Design	Etobicoke Creek Sanitary Trunk Sewer Diversion (Phase 2)	Construction of a 1500-mm sanitary trunk sewer on future easement from the Etobicoke Creek Sanitary Trunk Sewer to the proposed diversion on Kennedy Road. Design in 2021.	2021	2,429,900	-		2,429,900	1,215,000	-	1,214,900	886,877	328,023
80	52672	212261	Wastewater Main	Etobicoke Creek Sanitary Trunk Sewer Diversion (Phase 2)	Construction of a 1500-mm sanitary trunk sewer on future easement from the Etobicoke Creek Sanitary Trunk Sewer to the proposed diversion on Kennedy Road. Design in 2021.	2023	14,698,800	-		14,698,800	7,349,400	-	7,349,400	5,365,062	1,984,338
81	53012	222980	Pumping Station	Richard's Memorial Sewage Pumping Station Expansion	Reconstruction of the sewage pumping station with an expanded capacity to service growth in Port Credit. Design in 2020.	2022	15,000,000	1,200,000		13,800,000	3,000,000	-	10,800,000	7,884,000	2,916,000
82	51950	252999	Design	G.E. Booth WWTP Expansion - Biosolids Management Phase 1	First phase of expansion of the biosolids management process at the G.E. Booth WWTP. Design in 2029.	2029	7,500,000	-		7,500,000	-	697,500	6,802,500	4,965,825	1,836,675
83	51951	252999	WWTP	G.E. Booth WWTP Expansion - Biosolids Management Phase 1	First phase of expansion of the biosolids management process at the G.E. Booth WWTP. Design in 2029.	2031	85,000,000	-		85,000,000	-	7,905,000	77,095,000	56,279,350	20,815,650

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
84	51952	252999	Design	G.E. Booth WWTP Expansion - Biosolids Management Phase 2	Second phase of expansion of the biosolids management process at the G.E. Booth WWTP. Design in 2029.	2029	7,500,000	3,750,000		3,750,000	-	-	3,750,000	2,737,500	1,012,500
85	51953	252999	WWTP	G.E. Booth WWTP Expansion - Biosolids Management Phase 2	Second phase of expansion of the biosolids management process at the G.E. Booth WWTP. Design in 2029.	2034	96,100,000	48,050,000		48,050,000	-	-	48,050,000	35,076,500	12,973,500
86	35964	252999	WWTP	G.E. Booth WWTP Expansion - Biosolids Management Phase 2	Second phase of expansion of the biosolids management process at the G.E. Booth WWTP. Design in 2029.	2036	66,000,000	33,000,000		33,000,000	-	-	33,000,000	24,090,000	8,910,000
87	51948	252999	Design	G.E. Booth WWTP Expansion - New Outfall	Construction of a new outfall at the G.E. Booth WWTP to accommodate the full site capacity. Design in 2027.	2027	7,000,000	158,900		6,841,100	3,500,000	325,500	3,015,600	2,201,388	814,212
88	51949	252999	WWTP	G.E. Booth WWTP Expansion - New Outfall	Construction of a new outfall at the G.E. Booth WWTP to accommodate the full site capacity. Design in 2027.	2029	85,000,000	1,929,500		83,070,500	42,500,000	3,952,500	36,618,000	26,731,140	9,886,860
89	51954	202951	Design	Clarkson WWTP - Biosolids Expansion	Expansion of the biosolids process at the Clarkson WWTP. Design in 2020.	2020	4,000,000	-		4,000,000	-	-	4,000,000	2,920,000	1,080,000
90	51955	202951	WWTP	Clarkson WWTP - Biosolids Expansion	Expansion of the biosolids process at the Clarkson WWTP. Design in 2020.	2021	26,000,000	-		26,000,000	-	-	26,000,000	18,980,000	7,020,000
91	52071	212923	Design	G.E. Booth WWTP - Plant 2 Blower Replacement	Replacement of the existing three blowers at Plant 2 with six multi-stage high-efficiency blowers. Design in 2021.	2021	3,000,000	-		3,000,000	1,500,000	-	1,500,000	1,095,000	405,000
92	52072	212923	WWTP	G.E. Booth WWTP - Plant 2 Blower Replacement	Replacement of the existing three blowers at Plant 2 with six multi-stage high-efficiency blowers. Design in 2021.	2023	18,000,000	-		18,000,000	9,000,000	-	9,000,000	6,570,000	2,430,000
93	52835	192941	WWTP	G.E. Booth WWTP - Cake Exportation	Modification of the existing cake silos and pumping system to allow the exportation of cake offsite.	2020	5,000,000	-		5,000,000	-	-	5,000,000	3,650,000	1,350,000
94	35924	202961	Design	G.E. Booth WWTP - Odour Control Improvements	Implementation of the recommendations of the odour study with the anticipation of additional odour control necessary as redevelopment occurs in the vicinity of the treatment facility.	2020	5,000,000	-		5,000,000	250,000	-	4,750,000	3,467,500	1,282,500
95		202961	WWTP	G.E. Booth WWTP - Odour Control Improvements	Implementation of the recommendations of the odour study with the anticipation of additional odour control necessary as redevelopment occurs in the vicinity of the treatment facility.	2021	15,000,000	-		15,000,000	750,000	-	14,250,000	10,402,500	3,847,500
96		202961	WWTP	G.E. Booth WWTP - Odour Control Improvements	Implementation of the recommendations of the odour study with the anticipation of additional odour control necessary as redevelopment occurs in the vicinity of the treatment facility.	2022	50,000,000	-		50,000,000	2,500,000	-	47,500,000	34,675,000	12,825,000
97	38871	202961	WWTP	G.E. Booth WWTP - Odour Control Improvements	Implementation of the recommendations of the odour study with the anticipation of additional odour control necessary as redevelopment occurs in the vicinity of the treatment facility.	2024	120,000,000	-		120,000,000	6,000,000	-	114,000,000	83,220,000	30,780,000
98	52349	242592	Study	McVean Diversion Sanitary Trunk Sewer - Class Environmental Assessment	Class Environmental Assessment to determine the preferred strategy to defer flows away from the McVean Sewage Pumping Station to service future development in northeast Brampton and southeast Caledon.	2024	1,500,000	-		1,500,000	-	-	1,500,000	1,095,000	405,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
99	52386	192208	Wastewater Main	Britannia West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Mississauga Road from Erin Mills Parkway to Britannia Road West and on Britannia Road West from the Credit River to Erin Mills Parkway.	2021	45,000,000	-		45,000,000	4,500,000	-	40,500,000	29,565,000	10,935,000
100	52388	192210	Wastewater Main	Eglinton West Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Mississauga Road from the CPR to Eglinton Avenue West and on Eglinton Avenue West from the Credit River to Erin Mills Parkway.	2021	45,000,000	-		45,000,000	4,500,000	-	40,500,000	29,565,000	10,935,000
101	52736	192205	Wastewater Main	West Sanitary Trunk Sewer Twinning	Installation of a structural liner for the entire length of the new West Sanitary Trunk Sewer.	2020	25,000,000	-		25,000,000	-	-	25,000,000	18,250,000	6,750,000
102	50940	182260	Design	Etobicoke Creek Sanitary Trunk Sewer Twinning	Replacement of a 2150-metre section of twinned sanitary trunk sewers in the vicinity of the Wastewater Treatment Plant (near Highway 407 and Highway 401). Design in 2021.	2021	8,116,700	-		8,116,700	4,058,400	-	4,058,300	2,962,559	1,095,741
103	50941	182260	Wastewater Main	Etobicoke Creek Sanitary Trunk Sewer Twinning	Replacement of a 2150-metre section of twinned sanitary trunk sewers in the vicinity of the Wastewater Treatment Plant (near Highway 407 and Highway 401). Design in 2021.	2023	49,098,300	-		49,098,300	24,549,200	-	24,549,100	17,920,843	6,628,257
104	52661	252299	Design	Castlemore Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Castlemore Road from Highway 50 to Airport Road. Design in 2030.	2030	16,686,400	7,508,900		9,177,500	1,668,600	-	7,508,900	5,481,497	2,027,403
105	52663	252299	Wastewater Main	Castlemore Road Sanitary Trunk Sewer	Construction of a 1500-mm sanitary trunk sewer on Castlemore Road from Highway 50 to Airport Road. Design in 2030.	2032	122,419,400	55,088,700		67,330,700	12,241,900	-	55,088,800	40,214,824	14,873,976
106	52664	252299	Design	Upper East Sanitary Trunk Sewer (Phase 1)	Construction of a 2400-mm sanitary trunk sewer on Airport Road from Castlemore Road to Queen Street and on Queen Street from Airport Road to Sun Pac Boulevard. Design in 2030.	2030	12,945,600	5,825,500		7,120,100	1,294,600	-	5,825,500	4,252,615	1,572,885
107	52666	252299	Wastewater Main	Upper East Sanitary Trunk Sewer (Phase 1)	Construction of a 2400-mm sanitary trunk sewer on Airport Road from Castlemore Road to Queen Street and on Queen Street from Airport Road to *** metres east of Delta Park Boulevard. Design in 2030.	2032	94,975,800	42,739,100		52,236,700	9,497,600	-	42,739,100	31,199,543	11,539,557
108	52833	242942	Design	G.E. Booth Wastewater Treatment Plant - Ash Management Facility	Construction of a new ash management facility at the G.E. Booth Wastewater Treatment Plant. Design in 2024.	2024	5,000,000	-		5,000,000	-	-	5,000,000	3,650,000	1,350,000
109	52834	242942	WWTP	G.E. Booth Wastewater Treatment Plant - Ash Management Facility	Construction of a new ash management facility at the G.E. Booth Wastewater Treatment Plant. Design in 2024.	2026	25,000,000	-		25,000,000	-	-	25,000,000	18,250,000	6,750,000
110	52753	222562	Study	Collection System Odour and Corrosion Control Master Plan	Update of the Region's collection system odour and control Master Plan.	2022	750,000	-		750,000	375,000	-	375,000	273,750	101,250
111	35221	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	1,606,800	-		1,606,800	1,205,100	-	401,700	293,241	108,459
112	35364	242960	Design	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	330,400	-		330,400	247,800	-	82,600	60,298	22,302

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
											Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
			Component Description	Proj. Name	Project Description										
113	34285	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2026	1,951,400	-		1,951,400	1,463,600	-	487,800	356,094	131,706
114	35223	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	1,071,200	-		1,071,200	803,400	-	267,800	195,494	72,306
115	35358	242960	Design	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	415,800	-		415,800	311,900	-	103,900	75,847	28,053
116	34286	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2026	1,951,400	-		1,951,400	1,463,600	-	487,800	356,094	131,706
117	35224	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	1,071,200	-		1,071,200	803,400	-	267,800	195,494	72,306
118	35383	242960	Design	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2024	990,200	-		990,200	742,700	-	247,500	180,675	66,825
119	34287	242960	General	Future Odour and Corrosion Control Facilities	Construction of new odour and corrosion control facilities at various locations in the Region of Peel.	2026	5,398,200	-		5,398,200	4,048,700	-	1,349,500	985,135	364,365
120	52214	252999	Design	Clarkson and G.E. Booth WWTP - Standby Power Expansion	Installation of outdoor modular systems with external ehouses for switchgear systems. Clarkson includes aerial conversion for the remaining power system to buried duct and switchgear modules. Design in 2026.	2026	3,000,000	-		3,000,000	-	-	3,000,000	2,190,000	810,000
121	52215	252999	WWTP	Clarkson and G.E. Booth WWTP - Standby Power Expansion	Installation of outdoor modular systems with external ehouses for switchgear systems. Clarkson includes aerial conversion for the remaining power system to buried duct and switchgear modules. Design in 2026.	2027	30,000,000	-		30,000,000	-	-	30,000,000	21,900,000	8,100,000
122	52754	222970	Design	Beach Street Sewage Pumping Station - Rehabilitation and Repurposing	Rehabilitation and repurposing of the Beach Street Sewage Pumping Station. Design in 2022.	2022	1,000,000	-		1,000,000	200,000	-	800,000	584,000	216,000
123	52755	222970	Pumping Station	Beach Street Sewage Pumping Station - Rehabilitation and Repurposing	Rehabilitation and repurposing of the Beach Street Sewage Pumping Station. Design in 2022.	2023	3,500,000	-		3,500,000	700,000	-	2,800,000	2,044,000	756,000
124	52085	142429	Wastewater Main	Fletcher's Creek Sanitary Trunk Sewer - Rehabilitation	Rehabilitation of the Fletcher's Creek Sanitary Trunk Sewer, north and south of Sandalwood Parkway, including sealing and lining.	2020	13,000,000	-		13,000,000	6,500,000	-	6,500,000	4,745,000	1,755,000
125	52745	182441	Wastewater Main	East Sanitary Trunk Sewer Energy Dissipation Chamber - Rehabilitation	Rehabilitation of the energy dissipation chamber and associated length of sewer on the old East Sanitary Trunk Sewer south of Dundas Street East.	2021	8,000,000	-		8,000,000	4,000,000	-	4,000,000	2,920,000	1,080,000
126	32060	182442	Design	Little Etobicoke Creek (Haig) Sanitary Trunk Sewer - Rehabilitation	Rehabilitation of the Little Etobicoke Creek Sanitary Trunk Sewer from north of the Queen Elizabeth Way to Lakeshore Road East and construction of a local sanitary sewer on Haig Boulevard.	2020	7,000,000	-		7,000,000	3,500,000	-	3,500,000	2,555,000	945,000

Infrastructure Costs Included in the Development Charges Calculation

Region of Peel
Service: South Peel Wastewater

Prj.No	Comp #	Proj #	Increased Service Needs Attributable to Anticipated Development 2020-2041			Timing (year)	Gross Capital Cost Estimate (2020$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
			Component Description	Proj. Name	Project Description						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
127	52756	182442	Wastewater Main	Little Etobicoke Creek (Haig) Sanitary Trunk Sewer - Rehabilitation	Rehabilitation of the Little Etobicoke Creek Sanitary Trunk Sewer from north of the Queen Elizabeth Way to Lakeshore Road East and construction of a local sanitary sewer on Haig Boulevard.	2021	5,000,000	-		5,000,000	2,500,000	-	2,500,000	1,825,000	675,000
128	52831	202421	Design	Fletcher's Creek Sanitary Trunk Sewer - Rehabilitation (Phase 2)	Rehabilitation of the Fletcher's Creek Sanitary Trunk Sewer in the vicinity of Queen Street West. In conjunction with the improvement works in downtown Brampton. Design in 2020.	2020	150,000	-		150,000	75,000	-	75,000	54,750	20,250
129	52832	202421	Wastewater Main	Fletcher's Creek Sanitary Trunk Sewer - Rehabilitation (Phase 2)	Rehabilitation of the Fletcher's Creek Sanitary Trunk Sewer in the vicinity of Queen Street West. In conjunction with the improvement works in downtown Brampton. Design in 2020.	2021	1,000,000	-		1,000,000	500,000	-	500,000	365,000	135,000
130	33872	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2022	750,000	-		750,000	-	-	750,000	547,500	202,500
131	23726	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2027	750,000	-		750,000	-	-	750,000	547,500	202,500
132	23728	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2032	750,000	-		750,000	-	-	750,000	547,500	202,500
133	38538	222504	Study	Wastewater Master Servicing Plan	Review and update of the Region of Peel's Master Servicing Plan for the lake-based wastewater collection system.	2037	750,000	-		750,000	-	-	750,000	547,500	202,500
			Provisional Reduction for WAH and NFPOW Adjustment					131,017,000		(131,017,000)	-	-	(131,017,000)	(95,642,410)	(35,374,590)
			Existing Debt Principal			2020-2042	244,061,978	-		244,061,978	-	-	244,061,978	178,165,244	65,896,734
			Existing Debt Interest (Discounted)			2020-2042	320,210,107	-		320,210,107	-	-	320,210,107	233,753,378	86,456,729
			New Debt Interest (Discounted)	Total Debt Issuance of $655,000,000		2020-2054	360,175,431	20,340,800		339,834,631	-	-	339,834,631	248,079,281	91,755,350
			Reserve Fund Adjustment			Reserve	234,214,674	-		234,214,674	-		234,214,674	170,976,712	63,237,962
			Total				**4,232,611,890**	**634,309,800**	**-**	**3,598,302,090**	**250,472,400**	**20,599,500**	**3,327,230,190**	**2,428,878,039**	**898,352,151**

Chapter 6
D.C. Calculation

6. D.C. Calculation

Table 6-1 calculates the proposed uniform D.C.s to be imposed for water services based upon a water service area 21-year horizon. Table 6-2 calculates the proposed uniform D.C.s to be imposed for wastewater services based upon a wastewater service area 21-year horizon. Table 6-3 calculates the proposed uniform D.C.s to be imposed for Peel Regional Police services based on anticipated development in the Cities of Brampton and Mississauga over a 10-year planning horizon. Table 6-4 calculates the proposed uniform D.C.s to be imposed for O.P.P. services based on anticipated development in the Town of Caledon over a 10-year planning horizon. Table 6-5 calculates the proposed uniform D.C.s to be imposed on anticipated development in the Region for Region-wide transportation services over a 21-year planning horizon. Table 6-6 calculates the proposed uniform D.C. to be imposed on anticipated development in the Region for Region-wide services over a 10-year planning horizon

The calculation for residential development is generated on a per capita basis and is based upon five forms of housing types (singles and semi-detached, apartments >750 sq.ft., small units <=750 sq.ft. and other residential). The non-residential D.C. has been calculated on a per sq.m. of gross floor area basis and is based upon two forms on non-residential development (industrial and non-industrial development).

The D.C.-eligible costs for each service component were developed in Chapter 5 for all Region services, based on their proposed capital programs.

For the residential calculations, the total cost is divided by the “gross” (new resident) population to determine the per capita amount. The eligible D.C. cost calculations set out in Chapter 5 are based on the net anticipated population increase (the forecast new unit population less the anticipated decline in existing units). The cost per capita is then multiplied by the average occupancy of the new units (Appendix A, Schedule 5) to calculate the charge in Tables 6-1 through 6-6.

With respect to non-residential development, the total costs in the charges allocated to non-residential development (based on need for service) have been divided by the anticipated development over the planning period to calculate a cost per sq.m. of gross floor area.

Table 6-7 summarizes the total D.C. that is applicable for municipal-wide services and Table 6-8 summarizes the gross capital expenditures and sources of revenue for works to be undertaken during the 5-year life of the by-law.

Table 6-1
Region of Peel
D.C. Calculation
Urban Services – Water Service Areas
2020-2041 (Water)

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
1. Water Supply Services				
1.1 Regional Water	663,235,255	245,306,190	5,742.78	19.54
1.2 South Peel Water	1,922,884,043	711,203,687	16,649.75	56.65
	2,586,119,298	956,509,877	22,392.53	76.19
TOTAL	**2,586,119,298**	**$956,509,877**	**22,392.53**	**76.19**
D.C.-Eligible Capital Cost	2,586,119,298	$956,509,877		
21-Year (Water) Gross Population/GFA Growth (sq.m.)	485,290	12,554,800		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$5,329.02**	**$76.19**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$22,392.53			
Other Residential 3.328	$17,734.97			
Apartments (>750 sq.ft.) 3.048	$16,242.85			
Small Unit (<=750 sq.ft.) 1.612	$8,590.38			

Table 6-2
Region of Peel
D.C. Calculation
Urban Services – Wastewater Service Areas
2020-2041 (Wastewater)

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
2. Wastewater Services				
2.1 Regional Wastewater	253,120,750	93,620,003	2,205.75	7.46
2.2 South Peel Wastewater	2,428,878,039	898,352,151	21,165.79	71.55
	2,681,998,789	991,972,155	23,371.54	79.01
TOTAL	**2,681,998,789**	**$991,972,155**	**23,371.54**	**79.01**
D.C.-Eligible Capital Cost	2,681,998,789	$991,972,155		
21-Year (Wastewater) Gross Population/GFA Growth (sq.m.)	482,200	12,554,800		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$5,562.00**	**$79.01**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$23,371.54			
Other Residential 3.328	$18,510.35			
Apartments (>750 sq.ft.) 3.048	$16,952.99			
Small Unit (<=750 sq.ft.) 1.612	$8,965.95			

Table 6-3
Region of Peel
D.C. Calculation
Area-Specific Services – Brampton & Mississauga
2020-2029 (Brampton & Mississauga)

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
3. Peel Regional Police Services				
3.1 Police facilities, vehicles and equipment	39,293,050	16,049,274	762.21	3.19
	39,293,050	16,049,274	762.21	3.19
TOTAL	**39,293,050**	**$16,049,274**	**762.21**	**$3.19**
D.C.-Eligible Capital Cost	$39,293,050	$16,049,274		
10-Year (Mississauga & Brampton) Gross Population/GFA Growth (sq.m.)	216,620	5,023,400		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$181.39**	**$3.19**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$762.21			
Other Residential 3.328	$603.67			
Apartments (>750 sq.ft.) 3.048	$552.88			
Small Unit (<=750 sq.ft.) 1.612	$292.40			

Table 6-4
Region of Peel
D.C. Calculation
Area-Specific Services – Caledon
2020-2029 (Caledon)

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
4. Police - O.P.P.				
4.1 O.P.P. facilities	1,034,622	344,874	104.86	0.29
	1,034,622	344,874	104.86	0.29
TOTAL	**1,034,622**	**$344,874**	**104.86**	**$0.29**
D.C.-Eligible Capital Cost	$1,034,622	$344,874		
10-Year (Caledon) Gross Population/GFA Growth (sq.m.)	41,460	1,189,800		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$24.95**	**$0.29**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$104.86			
Other Residential 3.328	$83.05			
Apartments (>750 sq.ft.) 3.048	$76.06			
Small Unit (<=750 sq.ft.) 1.612	$40.23			

Table 6-5
Region of Peel
D.C. Calculation
Region-Wide Services
2020-2041

SERVICE	2020$ D.C.-Eligible Cost			2020$ D.C.-Eligible Cost		
	Residential	Non-Residential		Residential	Industrial	Non-Industrial
		Industrial	Non-Industrial	S.D.U.	per sq.m.	per sq.m.
	$	$	$	$	$	$
5. Services Related to a Highway - Transportation						
5.1 Services Related to a Highway - Transportation	1,066,782,938	138,235,132	297,493,110	9,190.79	16.72	69.42
TOTAL	**1,066,782,938**	**$138,235,132**	**$297,493,110**	**9,190.79**	**$16.72**	**$69.42**
D.C.-Eligible Capital Cost	1,066,782,938	$138,235,132	$297,493,110			
21-Year Gross Population/GFA Growth (sq.m.)	487,730	8,269,200	4,285,600			
Cost Per Capita/Non-Residential GFA (sq.m.)	**$2,187.24**	**$16.72**	**$69.42**			
By Residential Unit Type **P.P.U.**						
Single and Semi-Detached Dwelling 4.202	$9,190.79					
Apartments (>750 sq.ft.) 3.048	$6,666.71					
Small Unit (<=750 sq.ft.) 1.612	$3,525.83					
Other Residential 3.328	$7,279.14					

Table 6-6
Region of Peel
D.C. Calculation
Region-Wide Services
2020-2029

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
6. Public Works				
6.1 Facilities and Vehicles	16,760,107	6,845,677	272.88	1.10
7. Growth Studies				
7.1 Growth Studies	12,931,758	5,281,986	210.55	0.85
8. Long Term Care				
8.1 Long term care facilities	45,262,144	-	736.95	-
9. Public Health				
9.1 Public Health department space	-	-	-	-
10. Paramedics				
10.1 Paramedics facilities, vehicles and equipment	12,406,664	5,067,510	202.00	0.82
11. Housing Services				
11.1 Housing facilities	181,633,443	-	2,957.31	-
12. Waste Diversion				
12.1 Waste diversion facilites, vehicles, equipment and other	20,293,425	1,068,075	330.41	0.17
TOTAL	**289,287,540**	**18,263,249**	**4,710.11**	**$2.94**
D.C.-Eligible Capital Cost	289,287,540	$18,263,249		
10-Year Gross Population/GFA Growth (sq.m.)	258,080	6,213,200		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$1,120.92**	**$2.94**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$4,710.11			
Other Residential 3.328	$3,730.43			
Apartments (>750 sq.ft.) 3.048	$3,416.57			
Small Unit (<=750 sq.ft.) 1.612	$1,806.93			

Table 6-7
Region of Peel
D.C. Calculation
Total All Services

	2020$ D.C.-Eligible Cost			2020$ D.C.-Eligible Cost		
	Residential	Non-Residential		Residential	Non-Industrial, Non-Residential	Industrial
		Non-Industrial	Industrial	S.D.U.	per sq.m.	
	$	$	$	$	$	$
Urban area-specific Services (Water) 21 Year	2,586,119,298	956,509,877	956,509,877	22,392.53	76.19	76.19
Urban area-specific Services (Wastewater) 21 Year	2,681,998,789	991,972,155	991,972,155	23,371.54	79.01	79.01
Area-specific Services (Mississauga & Brampton) 10 Year	39,293,050	16,049,274	16,049,274	762.21	3.19	3.19
Area-specific Services (Caledon) 10 Year	1,034,622	344,874	344,874	104.86	0.29	0.29
Municipal-wide Transportation Services 21 Year	1,066,782,938	297,493,110	138,235,132	9,190.79	69.42	16.72
Municipal-wide Services 10 Year	289,287,540	18,263,249	18,263,249	4,710.11	2.94	2.94
TOTAL (BRAMPTON AND MISSISSAUGA)	**6,663,481,614**	**2,280,287,665**	**2,121,029,686**	**60,427.18**	**230.75**	**178.05**
TOTAL (CALEDON)	**6,625,223,187**	**2,264,583,265**	**2,105,325,287**	**59,769.83**	**227.85**	**175.15**

Table 6-8
Region of Peel
Gross Expenditure and Sources of Revenue Summary for Costs to be Incurred over the Life of the By-law

Service	Total Gross Cost	Sources of Financing						
		Tax Base or Other Non-D.C. Source				Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding	Legislated Reduction		Residential	Non-Residential
1. Water Supply Services								
1.1 Regional Water	150,411,831	0	0	0	0	300,900	109,580,980	40,529,951
1.2 South Peel Water	355,741,600	0	30,021,000	5,685,325	0	16,976,000	221,233,271	81,826,004
2. Wastewater Services								
2.1 Regional Wastewater	133,310,590	0	17,000,000	0	0	924,000	84,232,211	31,154,379
2.2 South Peel Wastewater	1,665,837,800	0	172,793,800	7,719,000	0	242,609,200	907,182,534	335,533,266
3. Peel Regional Police Services								
3.1 Police facilities, vehicles and equipment	130,030,000	0	59,535,600	0	0	44,444,400	18,495,500	7,554,500
4. Police - O.P.P.								
4.1 O.P.P. facilities	1,550,000	0	330,100	0	0	0	914,925	304,975
5. Services Related to a Highway - Transportation								
5.1 Services Related to a Highway - Transportation	621,278,215	0	76,312,499	21,892,622	0	0	371,381,897	151,691,197
6. Public Works								
6.1 Facilities and Vehicles	66,138,000	2,000,000	18,847,250	0	0	23,898,000	15,188,853	6,203,898
7. Growth Studies								
7.1 Growth Studies	8,347,222	0	1,369,444	0	697,778	0	4,458,800	1,821,200
8. Long Term Care								
8.1 Long term care facilities	135,600,000	0	64,414,000	7,962,379	6,236,932	854,300	56,132,389	0
9. Public Health								
9.1 Public Health department space	3,600,000	0	720,000	0	288,000	0	2,462,400	129,600
10. Paramedics								
10.1 Paramedics facilities, vehicles and equipment	33,670,911	5,038,000	0	0	1,162,402	17,008,889	7,427,750	3,033,870
11. Housing Services								
11.1 Housing facilities	870,811,000	186,910,600	298,700,700	57,461,000	18,883,230	138,906,400	169,949,070	0
12. Waste Diversion								
12.1 Waste diversion facilites, vehicles, equipment and other	114,776,667	0	94,163,000	0	1,699,167	3,622,000	14,527,875	764,625
Total Expenditures & Revenues	**$4,291,103,836**	**$193,948,600**	**$834,207,394**	**$100,720,326**	**$28,967,509**	**$489,544,089**	**$1,983,168,454**	**$660,547,466**

Chapter 7
D.C. Policy Recommendations and D.C. By-law Rules

7. D.C. Policy Recommendations and D.C. By-law Rules

7.1 Introduction

Subsection 5 (1) 9 states that rules must be developed:

> "...to determine if a development charge is payable in any particular case and to determine the amount of the charge, subject to the limitations set out in subsection 6."

Paragraph 10 of the section goes on to state that the rules may provide for exemptions, phasing in and/or indexing of D.C.s.

Subsection 5 (6) establishes the following restrictions on the rules:

- the total of all D.C.s that would be imposed on anticipated development must not exceed the capital costs determined under 5(1) 2-8 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay D.C.s that exceed the capital costs that arise from the increase in the need for service for that type of development; however, this requirement does not relate to any particular development; and
- if the rules provide for a type of development to have a lower D.C. than is allowed, the rules for determining D.C.s may not provide for any resulting shortfall to be made up via other development.

With respect to "the rules," section 6 states that a D.C. by-law must expressly address the matters referred to above re subsection 5 (1) paragraphs 9 and 10, as well as how the rules apply to the redevelopment of land.

The rules provided are based on the Region's existing policies, with consideration for the updates from Bill 108 and Bill 197. However, there are items under consideration at this time and these may be refined prior to adoption of the by-law.

7.2 D.C. By-law Structure

It is recommended that:

- the Region use a uniform Region-wide D.C. calculation for all municipal services other than water, wastewater, Peel Regional Police, and O.P.P. services;
- water services be imposed on the water service areas of the Region;
- wastewater services be imposed on the wastewater service areas of the Region;
- Peel Regional Police services be imposed on the Cities of Brampton and Mississauga;
- O.P.P. services be imposed on the Town of Caledon; and
- one municipal D.C. by-law be used for all services.

7.3 D.C. By-law Rules

The following subsections set out the recommended rules governing the calculation, payment and collection of D.C.s in accordance with section 6 of the D.C.A.

It is recommended that the following sections provide the basis for the D.C.s.:

7.3.1 Payment in any Particular Case

In accordance with the D.C.A., subsection 2 (2), a D.C. be calculated, payable and collected where the development requires one or more of the following:

> "(a) the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the Planning Act;
>
> (b) the approval of a minor variance under section 45 of the Planning Act;
>
> (c) a conveyance of land to which a by-law passed under subsection 50 (7) of the Planning Act applies;
>
> (d) the approval of a plan of subdivision under section 51 of the Planning Act;
>
> (e) a consent under section 53 of the Planning Act;

(f) the approval of a description under section 9 of the Condominium Act, 1998; or

(g) the issuing of a permit under the Building Code Act, 1992 in relation to a building or structure."

7.3.2 Determination of the Amount of the Charge

The following conventions be adopted:

1) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type . Costs allocated to non-residential uses will be assigned based on the amount of square metres of gross floor area constructed for eligible uses (i.e. industrial and non-industrial).

2) Costs allocated to residential and non-residential uses are based upon a number of conventions, as may be suited to each municipal circumstance, e.g.

- for growth studies, paramedics, public works, the costs have been based on a population vs. employment growth ratio (71%/29%) for residential and non-residential, respectively) over the 10-year forecast period;
- for public health services and waste diversion services, a 5% non-residential attribution has been made to recognize use by the non-residential sector;
- for long term care services and housing services, a 100% residential attribution has been made to recognize use by the residential sector only;
- for services related to a highway – transportation, a 71% residential/29% non-residential attribution has been made based on a population vs. employment growth ratio over the 21-year forecast period;
- for Peel Regional Police services, a 71% residential/29% non-residential allocation has been made based on population vs. employment growth over the 10-year forecast period in the Cities of Brampton and Mississauga;
- for O.P.P. services, a 75% residential/25% non-residential allocation has been made based on population vs. employment growth over the 10-year forecast period in the Town of Caledon;
- for water services a 73% residential/27% non-residential allocation has been made based on a population vs. employment growth ratio multiplied by design criteria factor over the 21-year forecast period for water service areas; and

- for wastewater services a 73% residential/27% non-residential allocation has been made based on population vs. employment growth multiplied by design criteria factor over the 21-year forecast period for wastewater service areas.

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

Where as a result of the redevelopment of land, a building or structure existing on the same land prior to the date of payment of D.C.s in respect of the redevelopment, has been demolished in whole or in part within 5 years from the date the demolition permit was issued for dwelling units or 10 years for non-residential buildings or structures, the D.C.s otherwise payable with respect to the redevelopment shall be reduced by the aggregate of the following amounts:

1) Where an industrial use is being redeveloped: an amount calculated by multiplying the current industrial D.C. by the industrial total floor area that has been demolished;

2) Where a non-residential, non-industrial use is being redeveloped: an amount calculated by multiplying the current non-residential, non-industrial D.C. by the non-residential, non-industrial total floor area that has been demolished;

3) Where a residential use is being redeveloped for a residential use: an amount calculated by multiplying the current residential D.C. by the number, according to type, of dwelling units that have been demolished; and

4) Where a residential use is being redeveloped for a non-residential use: an amount calculated by multiplying the current residential D.C. by the number according to type, of dwelling units that have been demolished;

provided that evidence satisfactory to the Chief Financial Officer is provided as to the total floor area or type and number of dwelling units that have been demolished and provided the amount of any credit hereunder shall not exceed, in total or in the aggregate, the amount of the development charges otherwise payable with respect to the redevelopment.

7.3.4 Exemptions (full or partial)

a) Statutory exemptions:

- industrial building additions of up to and including 50% of the existing gross floor area (defined in O. Reg. 82/98, section 1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to D.C.s (subsection 4 (3) of the D.C.A.);
- buildings or structures owned by and used for the purposes of any municipality, local board or Board of Education (section 3);
- residential development that would have the effect only of enlarging a dwelling unit, creating a second unit in a new dwelling unit, or adding one dwelling unit in any other existing residential building, excluding the non-residential portion of a mixed-use building.

b) Non-statutory exemptions:

- Land used as a hospital;
- Land owned by a college or university and used only for the purposes of a college or university;
- That portion of a new building or structure, limited to not more than 25% of total floor space, owned by a religious organization which is reserved for the conduct of group worship, services or rites;
- Land owned by an agricultural society and used only for the purposes of an agricultural society;
- Land developed for agriculture use including on-farm diversified use but excluding cannabis growing, processing, and packaging; and
- The development of land by the installation of a mobile temporary sales trailer.

7.3.5 Phasing in

No provisions for phasing in the D.C. are provided in the D.C. by-law.

7.3.6 Timing of Collection

D.C.s are calculated and payable on the date that a permit under the *Building Code* Act is issued in relation to a building or a structure on the land to which the D.C. applies. For residential development other than apartments, the water, wastewater and transportation portion of the D.C. shall be payable upon approval of a subdivision

agreement under Section 51 of the *Planning Act* or a consent under Section 53 of the *Planning Act.* All other D.C.s shall be payable at time of the first building permit.

The Region may enter into an agreement providing for all or part of a D.C. to be paid before or after it would otherwise be payable.

Commencing January 1, 2020, pursuant to Section 26.1 of the D.C.A., rental housing and institutional developments shall pay D.C.s in six equal annual payments commencing at occupancy. Non-profit housing developments shall pay D.C.s in 21 equal annual payments. Moreover, pursuant to Section 26.2 of the D.C.A., the D.C. amount for all developments occurring within 2 years of a Site Plan or Zoning By-law Amendment planning approval (for applications made after January 1, 2020), shall be determined based on the D.C. by-law in effect on the day of the Site Plan or Zoning By-law Amendment application.

Installment payments and development charges determined at the time of Site Plan or Zoning Bylaw Amendment application may be subject to interest charges. On July 9th, 2020, Regional Council approved the Development Charge Interest Rate Policy and enacted the By-law 21-2020 to establish interest rates and impose interest charges in accordance with section 26.1 and section 26.2 of the D.C.A. Staff continues to conduct a review of appropriate interest rates and will present a staff report to Council for further consideration when needed.

For the purposes of section 26.1 of the D.C.A., the following definitions are provided as per O. Reg. 454-19:

“Rental housing” means development of a building or structure with four or more dwelling units all of which are intended for use as rented residential premises.

“Institutional development” means development of a building or structure intended for use,

a. as a long-term care home within the meaning of subsection 2 (1) of the *Long-Term Care Homes Act,* 2007;
b. as a retirement home within the meaning of subsection 2 (1) of the *Retirement Homes Act*, 2010;
c. by any of the following post-secondary institutions for the objects of the institution:

i. a university in Ontario that receives direct, regular and ongoing operating funding from the Government of Ontario,
ii. a college or university federated or affiliated with a university described in subclause (i), or
iii. an Indigenous Institute prescribed for the purposes of section 6 of the *Indigenous Institutes Act*, 2017;

d. as a memorial home, clubhouse or athletic grounds by an Ontario branch of the Royal Canadian Legion; or
e. as a hospice to provide end of life care.

"Non-profit housing development" means development of a building or structure intended for use as residential premises by,

a. a corporation without share capital to which the *Corporations Act* applies, that is in good standing under that Act and whose primary object is to provide housing;
b. a corporation without share capital to which the *Canada Not-for-profit Corporations Act* applies, that is in good standing under that Act and whose primary object is to provide housing; or
c. a non-profit housing co-operative that is in good standing under the *Co-operative Corporations Act.*

7.3.7 Indexing

Indexing of the D.C.s shall be implemented on a mandatory basis semi-annually commencing on February 1st, 2021 and each February 1st and August 1st thereafter, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0135-01)[1] for the most recent year-over-year period.

7.3.8 The Applicable Areas

The charges developed herein provide for varying charges within the Region, as follows:

[1] O. Reg. 82/98 referenced "The Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007" as the index source. Since implementation, Statistics Canada has modified this index twice and the above-noted index is the most current. The draft by-law provided herein refers to O. Reg. 82/98 to ensure traceability should this index continue to be modified over time.

- municipal-wide services – the full residential and non-residential charge will be imposed on all lands within the Region for all services other than water, wastewater, Peel Regional Police, and O.P.P.; and
- water and wastewater – the full residential and non-residential charge will be imposed on the water and wastewater service areas of the Region.
- Peel Regional Police – the full residential and non-residential charge will be imposed on all lands within the City of Brampton and the City of Mississauga;
- O.P.P. – the full residential and non-residential charge will be imposed on all lands within the Town of Caledon; and
- Services Related to a Highway – Roads – the full residential and non-residential charges will be imposed on all lands.

7.4 Other D.C. By-law Provisions

It is recommended that:

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

The Region's development charge collections are currently accounted in 12 separate reserve funds: Regional Roads (Regional Roads and Regional Arterial Roads), Water (Regional Water and South Peel Water, Water OBL), Wastewater (South Peel Wastewater, Regional Wastewater, Wastewater OBL), Social Housing, Shelters, Peel Regional Police (P.R.P. Police and Police OBL), Health, Long Term Care, Transhelp, Paramedics, Ontario Provincial Police and Planning & Growth Studies. It is recommended that the Shelters and Social Housing reserves be combined into one Housing Services reserve, Regional Roads be renamed to Transportation, and the Transhelp reserve should be renamed to Public Works. It is also recommended that the Region create a reserve fund for Waste Diversion as it will commence collection for this previously ineligible service. Appendix F outlines the reserve fund policies that the Region is required to follow as per the D.C.A.

7.4.2 By-law In-force Date

A by-law under the D.C.A. comes into force on the day after which the by-law is passed by Council or the day specified in the by-law, whichever is later.

7.4.3 Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing

The minimum interest rate is the Bank of Canada rate on the day on which the by-law comes into force (as per section 11 of O. Reg. 82/98).

7.4.4 Area Rating

As noted earlier, Bill 73 has introduced two new sections where Council must consider the use of area specific charges:

1. Section 2 (9) of the Act now requires a municipality to implement area-specific D.C.s for either specific services which are prescribed and/or for specific municipalities which are to be regulated (note that at this time, no municipalities or services are prescribed by the Regulations).

2. Section 10 (2) c.1 of the D.C.A. requires that "the development charges background study shall include consideration of the use of more than one development charge by-law to reflect different needs for services in different areas."

In regard to the first item, there are no services or specific municipalities identified in the regulations which must be area-rated. The second item requires Council to consider the use of area-rating.

At present, the Region's by-law provides for water and wastewater services on a water and wastewater service area basis. Peel Regional Police is provided for the Cities of Brampton and Mississauga whereas O.P.P. is provided for the Town of Caledon. All other Regional services are recovered based on a uniform, Region-wide basis. In regard to the Region-wide services, there have been several reasons why they have not been imposed on an area-specific basis:

1. All Regional services, with the exception of water and wastewater, require that the average 10-year service standard be calculated. This average service standard multiplied by growth in the Region, establishes an upper ceiling on the amount of funds which can be collected from all developing landowners. Section 4 (4) of O. Reg. 82/98 provides that "…if a development charge by-law applies to a part of the municipality, the level of service and average level of service cannot

exceed that which would be determined if the by-law applied to the whole municipality." Put in layman terms, the average service standard multiplied by the growth within the specific area, would establish an area specific ceiling which would significantly reduce the total revenue recoverable for the Region hence potentially resulting in D.C. revenue shortfalls and impacts on property taxes.

2. Extending on item 1, attempting to impose an area charge potentially causes equity issues in transitioning from a Region-wide approach to an area specific approach. For example, if all services were now built (and funded) within Area A (which is 75% built out) and this was funded with some revenues from Areas B and C, moving to an area rating approach would see Area A contribute no funds to the costs of services in Areas B and C. The development charges would be lower in Area A (as all services are now funded) and higher in Areas B and C. As well, funding shortfalls may then potentially encourage the municipality to provide less services to Areas B and C due to reduced revenue.

3. Many services which are provided (roads, long-term care, paramedics, etc.) are not restricted to one specific area and are often used by all residents. For example, a particular road is not restricted to certain residents and the entire road network may be used by new development.

For the reasons noted above, it is recommended that Council continue the current D.C. approach to calculate the charges on a uniform Region-wide basis for all services other than water, wastewater and policing services.

7.5 Other Recommendations

It is recommended that Council:

"Whenever appropriate, request that grants, subsidies and other contributions be clearly designated by the donor as being to the benefit of existing development or new development, as applicable;"

"Adopt the assumptions contained herein as an 'anticipation' with respect to capital grants, subsidies and other contributions;"

"Continue the D.C. approach to calculate the charges on a uniform Municipal-wide basis for all services. Continue the approach to charge D.C.s for water and

wastewater services on the water and wastewater service areas. Continue the approach to charge Peel Regional Police services to lands within the City of Brampton and the City of Mississauga and O.P.P. services to lands within the Town of Caledon;"

"Approve the capital project listing set out in Chapter 5 of the D.C.s Background Study dated September 18, 2020, subject to further annual review during the capital budget process;"

"Approve the D.C.s Background Study dated September 18, 2020, as amended (if applicable);"

"Determine that no further public meeting is required;" and

"Approve the D.C. By-law as set out under separate cover."

Chapter 8
By-law Implementation

8. By-law Implementation

8.1 Public Consultation Process

8.1.1 Introduction

This chapter addresses the mandatory, formal public consultation process (section 8.1.2), as well as the optional, informal consultation process (section 8.1.3). The latter is designed to seek the co-operation and participation of those involved, in order to produce the most suitable policy. Section 8.1.4 addresses the anticipated impact of the D.C. on development from a generic viewpoint.

8.1.2 Public Meeting of Council

Section 12 of the D.C.A. indicates that before passing a D.C. by-law, Council must hold at least one public meeting, giving at least 20 clear days' notice thereof, in accordance with the Regulation. Council must also ensure that the proposed by-law and background report are made available to the public at least two weeks prior to the (first) meeting.

Any person who attends such a meeting may make representations related to the proposed by-law.

If a proposed by-law is changed following such a meeting, Council must determine whether a further meeting (under this section) is necessary (i.e. if the proposed by-law which is proposed for adoption has been changed in any respect, Council should formally consider whether an additional public meeting is required, incorporating this determination as part of the final by-law or associated resolution. It is noted that Council's decision, once made, is final and not subject to review by a Court or the Local Planning Appeal Tribunal (L.P.A.T.) (formerly the Ontario Municipal Board (O.M.B.)).

8.1.3 Other Consultation Activity

There are three broad groupings of the public who are generally the most concerned with Region D.C. policy:

1. The first grouping is the residential development community, consisting of land developers and builders, who are typically responsible for generating the majority

of the D.C. revenues. Others, such as realtors, are directly impacted by D.C. policy. They are, therefore, potentially interested in all aspects of the charge, particularly the quantum by unit type, projects to be funded by the D.C. and the timing thereof, and Regional policy with respect to development agreements, D.C. credits and front-ending requirements.

2. The second public grouping embraces the public at large and includes taxpayer coalition groups and others interested in public policy.

3. The third grouping is the industrial/commercial/institutional development sector, consisting of land developers and major owners or organizations with significant construction plans, such as hotels, entertainment complexes, shopping centres, offices, industrial buildings and institutions. Also involved are organizations such as Industry Associations, the Chamber of Commerce, the Board of Trade and the Economic Development Agencies, who are all potentially interested in Regional D.C. policy. Their primary concern is frequently with the quantum of the charge, gross floor area exclusions such as basements, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

8.2 Anticipated Impact of the Charge on Development

The establishment of sound D.C. policy often requires the achievement of an acceptable balance between two competing realities. The first is that high non-residential D.C.s may, to some degree, represent a barrier to increased economic activity and sustained industrial/commercial growth, particularly for capital intensive uses. Also, in many cases, increased residential D.C.s may ultimately be expected to be recovered via higher housing prices and can impact project feasibility in some cases (e.g. rental apartments).

On the other hand, D.C.s or other Region capital funding sources need to be obtained in order to help ensure that the necessary infrastructure and amenities are installed. The timely installation of such works is a key initiative in providing adequate service levels and in facilitating strong economic growth, investment and wealth generation.

8.3 Implementation Requirements

8.3.1 Introduction

Once the Region has calculated the charge, prepared the complete background study, carried out the public process and passed a new by-law, the emphasis shifts to implementation matters.

These include notices, potential appeals and complaints, credits, front-ending agreements, subdivision agreement conditions and finally the collection of revenues and funding of projects.

The sections which follow overview the requirements in each case.

8.3.2 Notice of Passage

In accordance with section 13 of the D.C.A., when a D.C. by-law is passed, the Region clerk shall give written notice of the passing and of the last day for appealing the by-law (the day that is 40 days after the day it was passed). Such notice must be given no later than 20 days after the day the by-law is passed (i.e. as of the day of newspaper publication or the mailing of the notice).

Section 10 of O. Reg. 82/98 further defines the notice requirements which are summarized as follows:

- notice may be given by publication in a newspaper which is (in the Clerk's opinion) of sufficient circulation to give the public reasonable notice, or by personal service, fax or mail to every owner of land in the area to which the by-law relates;
- subsection 10 (4) lists the persons/organizations who must be given notice; and
- subsection 10 (5) lists the eight items which the notice must cover.

8.3.3 By-law Pamphlet

In addition to the "notice" information, the Region must prepare a "pamphlet" explaining each D.C. by-law in force, setting out:

- a description of the general purpose of the D.C.s;

- the “rules” for determining if a charge is payable in a particular case and for determining the amount of the charge;
- the services to which the D.C.s relate; and
- a description of the general purpose of the Treasurer’s statement and where it may be received by the public.

Where a by-law is not appealed to the L.P.A.T., the pamphlet must be readied within 60 days after the by-law comes into force. Later dates apply to appealed by-laws.

The Region must give one copy of the most recent pamphlet without charge, to any person who requests one.

8.3.4 Appeals

Sections 13 to 19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and L.P.A.T. Hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the L.P.A.T. by filing a notice of appeal with the Region’s clerk, setting out the objection to the by-law and the reasons supporting the objection. This must be done by the last day for appealing the by-law, which is 40 days after the by-law is passed.

The Region is carrying out a public consultation process, in order to address the issues that come forward as part of that process, thereby avoiding or reducing the need for an appeal to be made.

8.3.5 Complaints

A person required to pay a D.C., or his agent, may complain to the Region’s Council imposing the charge that:

- the amount of the charge was incorrectly determined;
- the reduction to be used against the D.C. was incorrectly determined; or
- there was an error in the application of the D.C.

Sections 20 to 25 of the D.C.A. set out the requirements that exist, including the fact that a complaint may not be made later than 90 days after a D.C. (or any part of it) is payable. A complainant may appeal the decision of Region’s Council to the L.P.A.T.

8.3.6 Credits

Sections 38 to 41 of the D.C.A. set out a number of credit requirements, which apply where a Region agrees to allow a person to perform work in the future that relates to a service in the D.C. by-law.

These credits would be used to reduce the amount of D.C.s to be paid. The value of the credit is limited to the reasonable cost of the work which does not exceed the average level of service. The credit applies only to the service to which the work relates, unless the Region agrees to expand the credit to other services for which a D.C. is payable.

8.3.7 Front-Ending Agreements

The Region and one or more landowners may enter into a front-ending agreement which provides for the costs of a project which will benefit an area in the Region to which the D.C. by-law applies. Such an agreement can provide for the costs to be borne by one or more parties to the agreement who are, in turn, reimbursed in future by persons who develop land defined in the agreement.

Part III of the D.C.A. (sections 44 to 58) addresses front-ending agreements and removes some of the obstacles to their use which were contained in the D.C.A., 1989. Accordingly, the Region assesses whether this mechanism is appropriate for its use, as part of funding projects prior to Region funds being available.

8.3.8 Severance and Subdivision Agreement Conditions

Section 59 of the D.C.A. prevents a municipality from imposing directly or indirectly, a charge related to development or a requirement to construct a service related to development, by way of a condition or agreement under section 51 or section 53 of the Planning Act, except for:

- "local services, related to a plan of subdivision or within the area to which the plan relates, to be installed or paid for by the owner as a condition of approval under section 51 of the Planning Act;" and
- "local services to be installed or paid for by the owner as a condition of approval under section 53 of the Planning Act."

It is also noted that subsection 59 (4) of the D.C.A. requires that the municipal approval authority for a draft plan of subdivision under subsection 51 (31) of the Planning Act, use its power to impose conditions to ensure that the first purchaser of newly subdivided land is informed of all the D.C.s related to the development, at the time the land is transferred.

In this regard, if the Region in question is a commenting agency, in order to comply with subsection 59 (4) of the D.C.A. it would need to provide to the approval authority, information regarding the applicable Region D.C.s related to the site.

If the Region is an approval authority for the purposes of section 51 of the Planning Act, it would be responsible to ensure that it collects information from all entities which can impose a D.C.

The most effective way to ensure that purchasers are aware of this condition would be to require it as a provision in a registered subdivision agreement, so that any purchaser of the property would be aware of the charges at the time the title was searched prior to closing a transaction conveying the lands.

Appendices

Appendix A
Background Information on Residential and Non-Residential Growth Forecast

Appendix A: Background Information on Residential and Non-Residential Growth Forecast

Schedule 1
Peel Region
Scenario 16[1]
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[2]	Population (Including Census Undercount), Excluding Institutional	Excluding Census Undercount			Housing Units							Person Per Unit (P.P.U.): Total Population/ Total Households
				Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Townhomes	Apartments[3]	Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.	Other	Total Households	
	Mid 2016	1,428,300	1,419,200	1,381,700	9,100	1,372,600	261,585	60,120	105,355	42,145	63,210	490	427,550	3.232
Forecast	*Mid 2020*	1,535,300	1,526,000	1,483,500	9,300	1,474,200	271,925	66,800	113,485	45,395	68,090	490	452,700	3.277
	Mid 2025	1,634,000	1,623,600	1,578,900	10,400	1,568,500	289,030	75,250	128,220	51,290	76,930	490	492,990	3.203
	Mid 2030	1,746,800	1,735,700	1,687,900	11,100	1,676,800	303,290	83,820	145,340	58,140	87,200	490	532,940	3.167
	Mid 2035	1,852,200	1,840,400	1,789,800	11,800	1,778,000	313,720	91,780	164,000	65,600	98,400	490	569,990	3.140
	Mid 2041	1,970,000	1,957,500	1,903,600	12,500	1,891,100	322,425	101,100	187,285	74,915	112,370	490	611,300	3.114
Incremental	**Mid 2016 - Mid 2020**	**107,000**	**106,800**	**101,800**	**200**	**101,600**	**10,340**	**6,680**	**8,130**	**3,250**	**4,880**	**0**	**25,150**	
	Mid 2020 - Mid 2025	**98,700**	**97,600**	**95,400**	**1,100**	**94,300**	**17,105**	**8,450**	**14,735**	**5,895**	**8,840**	**0**	**40,290**	
	Mid 2020 - Mid 2030	**211,500**	**209,700**	**204,400**	**1,800**	**202,600**	**31,365**	**17,020**	**31,855**	**12,745**	**19,110**	**0**	**80,240**	
	Mid 2020 - Mid 2035	**316,900**	**314,400**	**306,300**	**2,500**	**303,800**	**41,795**	**24,980**	**50,515**	**20,205**	**30,310**	**0**	**117,290**	
	Mid 2020 - Mid 2041	**434,700**	**431,500**	**420,100**	**3,200**	**416,900**	**50,500**	**34,300**	**73,800**	**29,520**	**44,280**	**0**	**158,600**	

Derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.

[1]Based on the Region of Peel Growth Management Strategy, Scenario 16. The population and housing for base year (2020) has been updated based on best planning estimates by the Region of Peel.

[2]Census undercount estimated at approximately 3.4%. Note: Population including the undercount has been rounded.

[3]Includes apartments in duplexes, accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Notes: 1) Numbers may not add to totals due to rounding. 2) An adjustment was made to the 2016 Census based on a review by the Region of Peel.

Schedule 2A
Peel Region
Estimate of the Anticipated Amount, Type and Location of Growth

Development Location	Timing	Single & Semi-Detached	Townhouses	Apartments[1]	Apartments[1]		Total Residential Units	Gross Population In New Units	Existing Unit Population Change	Net Population Increase, Excluding Institutional	Institutional Population	Net Population Including Institutional
					Apartments >750 sq.ft.	Apartments equal to or less than 750 sq.ft.						
City of Brampton	2020 - 2025	13,030	3,920	1,910	765	1,145	18,860	71,970	(14,060)	57,910	420	58,330
	2020 - 2030	23,020	8,085	4,630	1,850	2,780	35,735	133,750	(14,130)	119,620	700	120,320
	2020 - 2041	34,540	15,460	16,895	6,760	10,135	66,895	233,530	(24,000)	209,530	1,040	210,570
City of Mississauga	2020 - 2025	915	2,460	12,285	4,915	7,370	15,660	38,900	(17,320)	21,580	620	22,200
	2020 - 2030	2,200	4,915	26,190	10,475	15,715	33,305	82,870	(28,410)	54,460	970	55,430
	2020 - 2041	3,430	9,445	52,580	21,030	31,550	65,455	160,830	(21,940)	138,890	1,880	140,770
Town of Caledon	2020 - 2025	3,160	2,070	540	215	325	5,770	21,350	(3,240)	18,110	60	18,170
	2020 - 2030	6,145	4,020	1,035	415	620	11,200	41,460	(5,840)	35,620	130	35,750
	2020 - 2041	12,530	9,395	4,325	1,730	2,595	26,250	93,370	(10,290)	83,080	280	83,360
Region of Peel	2020 - 2025	17,105	8,450	14,735	5,895	8,840	40,290	132,220	(34,620)	97,600	1,100	98,700
	2020 - 2030	31,365	17,020	31,855	12,745	19,110	80,240	258,080	(48,380)	209,700	1,800	211,500
	2020 - 2041	50,500	34,300	73,800	29,520	44,280	158,600	487,730	(56,230)	431,500	3,200	434,700

Derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.
Note: The growth increment is based on an updated 2020 base estimate (Region of Peel Growth Management Strategy, Scneario 16R) and the 2041 forecast from the Region of Peel Growth Management Strategy, Scenario 16, received April 2020.
[1] Includes apartments in duplexes, accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.
Note: Numbers may not add to totals due to rounding.

Schedule 2B
Region of Peel
Population and Housing by Urban and Rural Area

Period	Urban Growth[1]			Rural Growth (No Water or Wastewater Services)[2]			Rural Growth (Water Only, No Wastewater)[3]			Region of Peel		
	Net Population	Gross Population	Housing	Net Population	Gross Population	Housing	Net Population	Gross Population	Housing	Net Population	Gross Population	Housing
2020 - 2025	98,470	131,060	40,015	-150	550	130	380	610	145	98,700	132,220	40,290
2020 - 2030	211,100	255,930	79,730	-310	970	230	710	1,180	280	211,500	258,080	80,240
2020 - 2041	431,500	482,200	157,285	940	2,440	580	2,260	3,090	735	434,700	487,730	158,600
Percentage												
2020 - 2025	99.8%	99.1%	99.3%	-0.2%	0.4%	0.3%	0.4%	0.5%	0.4%	100%	100.0%	100%
2020 - 2030	99.8%	99.2%	99.4%	-0.1%	0.4%	0.3%	0.3%	0.5%	0.3%	100%	100.0%	100%
2020 - 2041	99.3%	98.9%	99.2%	0.2%	0.5%	0.4%	0.5%	0.6%	0.5%	100%	100.0%	100%

Includes Census Undercount which is estimated at approximately 3.4%. Numbers may not add up precisely due to rounding.

[1.] Urban Growth includes the City of Mississauga, City of Brampton and Settlement Areas within the Town of Caledon.

[2.] Rural Growth (No Water or Wastewater Services) includes all areas outside Settlement Areas.

[3.] Approximately 72% of rural population growth is water only (Palgrave Estates)

Source: Derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.

Schedule 3
Peel Region
Ten Year Growth Forecast
Mid 2020 to Mid 2030

			Population
Mid 2020 Population *(1)*			1,535,300
Occupants of New Housing Units, Mid 2020 to Mid 2030	*Units (2)*	80,240	
	multiplied by P.P.U. (3)	3.217	
	gross population increase	258,100	258,100
Occupants of New Equivalent Institutional Units, Mid 2020 to Mid 2030	*Units*	1,636	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	1,800	1,800
Decline in Housing Unit Occupancy, Mid 2020 to Mid 2030	*Units (4)*	452,700	
	multiplied by P.P.U. decline rate (5)	-0.107	
	total decline in population	-48,380	-48,380
Population Estimate to Mid 2030			1,746,800
Net Population Increase, Mid 2020 to Mid 2030			*211,500*

(1) Based on best planning estimates from the Region of Peel.

(2) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	4.202	39%	1.642
Townhomes (6)	3.328	21%	0.706
Apartments (7)			
Small Apartment Units (= and >750 sq.ft.)	1.612	24%	0.384
Large Apartment Units (<750 sq.ft.)	3.048	16%	0.484
Total		100%	3.217

[1] Persons per unit based on Statistics Canada Custom 2016 Census database.

[2] Forecast unit mix based upon historical trends and housing units in the development process.

(4) Mid 2020 households based upon 430,200 (2016 Census) + 25,040 (Mid 2016 to Mid 2020 unit estimate) = 452,700

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments and apartments in duplexes.

Note: Numbers may not add to totals due to rounding.

Schedule 4
Peel Region
Twenty One Year Growth Forecast
Mid 2020 to 2041

			Population
Mid 2020 Population (1)			1,535,300
Occupants of New Housing Units, Mid 2020 to 2041	*Units (2)*	158,600	
	multiplied by P.P.U. (3)	3.075	
	gross population increase	487,730	487,730
Occupants of New Equivalent Institutional Units, Mid 2020 to 2041	*Units*	2,909	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	3,200	3,200
Decline in Housing Unit Occupancy, Mid 2020 to 2041	*Units (4)*	452,700	
	multiplied by P.P.U. decline rate (5)	-0.124	
	total decline in population	-56,230	-56,230
Population Estimate to Mid 2041			1,970,000
Net Population Increase, Mid 2020 to Mid 2041			*434,700*

(1) Based on best planning estimates from the Region of Peel.

(2) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	4.202	32%	1.338
Multiples (6)	3.328	22%	0.720
Apartments (7)			
Small Apartment Units (= and >750 sq.ft.)	1.612	28%	0.450
Large Apartment Units (<750 sq.ft.)	3.048	19%	0.567
Total		100%	3.075

[1] Persons per unit based on Statistics Canada Custom 2016 Census database.

[2] Forecast unit mix based upon historical trends and housing units in the development process.

(4) Mid 2020 households based upon 430,200 (2016 Census) + 25,040 (Mid 2016 to Mid 2020 unit estimate) = 452,700

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.

Schedule 5
Peel Region
20 Year Average
Persons Per Unit By Age and Type of Dwelling
(2016 Census)

Age of Dwelling	Singles and Semi-Detached						21-Year Forecast with undercount: Singles and Semi-Detached
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	-	3.120	3.022	4.000	5.265	**4.212**	
6-10	-	2.833	2.758	4.029	5.446	**4.274**	
11-15	-	2.933	2.724	3.889	5.184	**4.077**	
16-20	-	2.684	2.466	3.640	4.841	**3.766**	**4.202**
20-25	-	2.250	2.767	3.536	4.636	**3.724**	
25-35	-	2.222	2.512	3.216	4.249	**3.354**	
35+	-	1.833	2.181	2.884	4.054	**2.947**	
Total	2.513	2.339	2.422	3.421	4.749	3.576	

Age of Dwelling	Townhomes[1]						Townhomes
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	-	1.561	2.236	3.198	5.059	**3.026**	
6-10	-	1.667	2.406	3.404	5.042	**3.282**	
11-15	-	1.824	2.463	3.408	5.136	**3.343**	
16-20	-	-	2.066	3.184	5.150	**3.114**	**3.328**
20-25	-	-	2.287	3.284	5.421	**3.227**	
25-35	-	-	2.007	3.089	4.871	**3.013**	
35+	-	2.154	2.239	2.977	4.551	**2.941**	
Total	1.400	1.759	2.236	3.173	4.945	3.101	

Age of Dwelling	Apartments[2]						Apartments (weighted average of small and large apartments)[4]
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	1.429	1.507	2.327	3.362	4.385	**2.044**	
6-10	-	1.483	2.324	3.738	4.617	**2.178**	
11-15	2.221	1.528	2.362	4.013	5.122	**2.636**	
16-20	1.417	1.559	2.596	3.855	4.627	**2.730**	**2.187**
20-25	-	1.512	2.516	3.755	4.869	**2.622**	
25-35	1.278	1.483	2.431	3.438	4.352	**2.578**	
35+	1.524	1.466	2.436	3.240	4.128	**2.452**	
Total	1.750	1.488	2.433	3.425	4.443	2.478	

Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	1.938	1.563	2.375	3.794	5.240	**3.508**
6-10	2.467	1.554	2.383	3.891	5.388	**3.601**
11-15	2.500	1.711	2.442	3.811	5.175	**3.748**
16-20	2.000	1.665	2.506	3.547	4.807	**3.450**
20-25	1.385	1.542	2.509	3.504	4.690	**3.284**
25-35	1.773	1.512	2.410	3.226	4.275	**3.062**
35+	1.459	1.486	2.391	2.955	4.086	**2.761**
Total	1.756	1.539	2.417	3.377	4.705	3.191

[1] Includes townhouses.

[2] Includes bachelor, 1 bedroom and 2 bedroom+ apartments and apartments in duplexes.

[3] Census undercount is estimated at approximately 3.4%.

[4] Adjusted based on a weighted average of small and large apartments (60% small apartments at a P.P.U. of 1.612 and 40% large apartments at a P.P.U. of 3.048).

Note: Does not include Statistics Canada data classified as 'Other'

P.P.U. Not calculated for samples less than or equal to 50 dwelling units, and does not include institutional population.

Schedule 6
Peel Region
Scenario 16[1]
2020 Employment Forecast

Period	Population[2]	Employment Activity Rate	Employment						Employment
			Other Employment[3]	Work at Home	Industrial	Total	N.F.P.O.W.[4]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2016	1,428,300	0.487	341,700	38,200	228,900	608,800	86,500	695,300	570,600
Mid 2020	1,535,300	0.493	374,000	41,500	247,700	663,200	94,300	757,500	621,700
Mid 2025	1,634,000	0.497	402,800	45,750	261,680	710,230	102,230	812,460	664,480
Mid 2030	1,746,800	0.492	431,300	46,250	276,050	753,600	106,400	860,000	707,350
Mid 2041	1,970,000	0.492	494,700	52,300	303,460	850,460	119,600	970,060	798,160
Incremental Change									
Mid 2020 - Mid 2025	98,700	0.004	28,800	4,250	13,980	47,030	7,930	54,960	42,780
Mid 2020 - Mid 2030	211,500	-0.001	57,300	4,750	28,350	90,400	12,100	102,500	85,650
Mid 2020 - Mid 2041	434,700	-0.001	120,700	10,800	55,760	187,260	25,300	212,560	176,460
Annual Average									
Mid 2020 - Mid 2025	19,740	0.0008	5,760	850	2,796	9,406	1,586	10,992	8,556
Mid 2020 - Mid 2030	21,150	-0.0001	5,730	475	2,835	9,040	1,210	10,250	8,565
Mid 2020 - Mid 2041	20,700	0.0000	5,748	514	2,655	8,917	1,205	10,122	8,403

Derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd.

[1]Based on the Region of Peel Growth Management Strategy, Scenario 16. The population and housing for base year (2020) is based on best planning estimates by the Region of Peel, received January 2020.

[2]Includes Census undercount which is estimated at 3.4%

[3]Other Employment includes Primary, Major Office, Institutional and Commercial/Population-Related Employment.

[4]Statistics Canada defines no fixed place of work (N.F.P.O.W.) employees as "persons who do not go from home to the same work place location at the beginning of each shift". Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc.

Schedule 7
Peel Region
Employment & Gross Floor Area (G.F.A) Forecast, 2020 to 2041

Period	Population[1]	Employment[2]			Gross Floor Area in Square Metres (Estimated)[3]		
		Other Employment[2]	Industrial	Total	Other Employment	Industrial	Total
Mid 2016	1,428,300	339,800	228,900	568,700			
Mid 2020	1,535,300	372,000	247,700	619,700			
Mid 2025	1,634,000	400,500	261,680	662,180			
Mid 2030	1,746,800	429,000	276,050	705,050			
Mid 2041	1,970,000	492,000	303,460	795,460			
Incremental Change							
Mid 2020 - Mid 2025	98,700	28,500	13,980	42,480	993,400	2,032,000	3,025,400
Mid 2020 - Mid 2030	211,500	57,000	28,350	85,350	2,045,600	4,167,600	6,213,200
Mid 2020 - Mid 2041	434,700	120,000	55,760	175,760	4,285,600	8,269,200	12,554,800
Annual Average							
Mid 2020 - Mid 2025	19,740	5,700	2,796	8,496	198,680	406,400	605,080
Mid 2020 - Mid 2030	21,150	5,700	2,835	8,535	204,560	416,760	621,320
Mid 2020 - Mid 2041	20,700	5,714	2,655	8,370	204,076	393,771	597,848

Derived from the Region of Peel Growth Management Strategy, Scenario 16. Summarized by Watson & Associates Economists Ltd.

[1]Includes Census undercount which is estimated at 3.4%.
[2]Employment includes office employment accommodated through intensification. Gross Floor Area has been adjusted to reflect employment accommodated through intensification.
[3]Other Employment includes Major Office, Institutional and Commercial/Population-Related Employment.

[4]Square Metre Per Employee Assumptions

2020 - 2030	
Industrial	147
Other	36
2020 - 2041	
Industrial	148
Other	36

Schedule 8a
Region of Peel
Gross Floor Area (G.F.A.) (Sq.m.), 2020 - 2030[1]

Development Location		Industrial	Other Employment[2]	Total Usual Place of Work[3]
City of Mississauga	Employment	4,820	22,350	27,170
	Average F.S.W.	120	31	47
	G.F.A. (Sq.m.)	578,400	699,800	1,278,200
City of Brampton	Employment	17,560	28,790	46,350
	Average F.S.W.	150	39	81
	G.F.A. (Sq.m.)	2,634,000	1,111,200	3,745,200
Town of Caledon	Employment	5,970	5,900	11,870
	Average F.S.W.	160	40	100
	G.F.A. (Sq.m.)	955,200	234,600	1,189,800
Peel Region	Employment	28,350	57,040	85,390
	Average F.S.W.	147	36	73
	G.F.A. (Sq.m.)	4,167,600	2,045,600	6,213,200

Note: Figures have been rounded.

Schedule 8b
Region of Peel
Gross Floor Area (G.F.A.) (Sq.m.), 2020 - 2041[1]

Development Location		Industrial	Other Employment[2]	Total Usual Place of Work[3]
City of Mississauga	Employment	9,480	46,100	55,580
	Average F.S.W.	120	33	48
	G.F.A. (Sq.m.)	1,137,600	1,525,400	2,663,000
City of Brampton	Employment	27,320	55,600	82,920
	Average F.S.W.	150	37	74
	G.F.A. (Sq.m.)	4,098,000	2,046,200	6,144,200
Town of Caledon	Employment	18,960	18,300	37,260
	Average F.S.W.	160	39	101
	G.F.A. (Sq.m.)	3,033,600	714,000	3,747,600
Peel Region	Employment	55,760	120,000	175,760
	Average F.S.W.	148	36	71
	G.F.A. (Sq.m.)	8,269,200	4,285,600	12,554,800

Source: Employment derived from the Region of Peel Growth Management Strategy, Scenario 16, received May 2020. Summarized by Watson & Associates Economists Ltd. Floor Space per Worker Assumptions and Gross Floor Area Forecast is a forecast by Watson & Associates Economists Ltd.

[2]Other Employment includes Major Office, Institutional and Commercial/Population-Related Employment.

[3]Excludes No Fixed Place of Work and Work at Home Employment.

Note: Figures have been rounded.

Appendix B
Level of Service

Appendix B: Level of Service

Appendix B – Level of Service Ceiling
Region of Peel
Summary of Service Standards as per D.C.A., 1997, as Amended

SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED							
Service Category	Sub-Component	10 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Services Related to a Highway - Transportation	Roads	$7,059.80	0.0012	lane km of roadways	5,883,167	per lane km	3,068,895,060
	Bridges & Culverts	$411.10	0.0001	No. of Bridges, Culverts & Structures	4,111,000	per item	178,705,170
Public Works	Public Works Facilities	$78.08	0.0178	sq.m. of building area	4,387	per sq.m.	16,513,920
	Public Works Vehicles	$33.55	0.0004	No. of vehicles and equipment	83,875	per vehicle	7,095,825
Peel Regional Police Services	Peel Regional Police Facilities	$208.86	0.0557	sq.m. of building area	3,750	per sq.m.	36,707,145
	Peel Regional Police Land	$69.51	0.00002	ha. of land	3,678,175	per ha.	12,216,383
	Peel Regional Police Vehicles	$14.50	0.0006	No. of vehicles	24,167	per vehicle	2,548,375
	Peel Regional Police Small Equipment and Gear	$48.85	48.85	Value of equipment and gear	1	per Officer	8,585,388
Police - O.P.P.	Police - O.P.P. Facilities	$157.85	0.0332	sq.m. of building area	4,755	per sq.m.	5,643,138
	Police - O.P.P. Land	$69.79	0.00002	ha. of land	3,489,500	per ha.	2,494,993
Paramedics	Paramedics Facilities	$70.06	0.0099	sq.m. of building area	7,077	per sq.m.	14,817,690
	Paramedics Vehicles	$21.26	0.0002	No. of vehicles and equipment	106,300	per vehicle/equipment	4,496,490
Long Term Care	Long Term Care Facilities	$193.94	0.0389	sq.m. of building area	4,986	per sq.m.	41,018,310
	Long Term Care Land	$50.47	0.0717	sq.m. of land	704	per sq.m.	10,674,405
Housing Services	Housing Services - Shelters	$34.21	0.0089	sq.m. of building area	3,844	per sq.m.	7,235,415
	Housing Services - Shelters Hotel Space	$0.18	0.0027	No. of hotel rooms	67	per hotel room	38,070
	Housing Services - Social Housing	$2,064.48	0.01	No. of units	382,311	per unit	436,637,520
Public Health	Public Health	$12.01	0.0018	sq.m. of building area	6,672	per sq.m.	2,540,115
Waste Diversion	Waste Diversion - Facilities - Recycling/Reuse	$187.22	0.0135	sq.m. of building area	13,868	per sq.m.	39,597,030
	Waste Diversion - Vehicles (Collection)	$29.61	0.0001	No. of vehicles and equipment	296,100	per vehicle	6,262,515
	Waste Diversion - Vehicles & Equipment (Non Collection)	$5.50	5.4979	Value of vehicles and equipment	1	value of vehicle	1,163,250
	Waste Diversion - Other (Blue and Green Carts)	$44.67	0.3030	Number of carts	147	per cart	9,447,705

Region of Peel
Service Standard Calculation Sheet

Service: Roads
Unit Measure: lane km of roadways

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/lane km)
Lane-KM	1,551	1,588	1,590	1,602	1,629	1,646	1,657	1,657	1,663	1,668	$6,106,030
Total	**1,551**	**1,588**	**1,590**	**1,602**	**1,629**	**1,646**	**1,657**	**1,657**	**1,663**	**1,668**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0011	0.0011	0.0011

10 Year Average	2010-2019
Quantity Standard	0.0012
Quality Standard	$5,883,167
Service Standard	$7,060

D.C. Amount (before deductions)	2041
Forecast Population	434,700
$ per Capita	$7,060
Eligible Amount	$3,068,895,060

Region of Peel
Service Standard Calculation Sheet

Service: Bridges & Culverts
Unit Measure: No. of Bridges, Culverts & Structures

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/item)
Bridges	95	95	95	95	95	97	99	100	100	100	$4,654,000
Major Culverts	74	74	74	74	74	75	76	76	81	81	$1,659,000
Total	**169**	**169**	**169**	**169**	**169**	**172**	**175**	**176**	**181**	**181**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

10 Year Average	2010-2019
Quantity Standard	0.0001
Quality Standard	$4,111,000
Service Standard	$411

D.C. Amount (before deductions)	2041
Forecast Population	434,700
$ per Capita	$411
Eligible Amount	$178,705,170

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value/sq.m. with land, site works, etc.
Operations Support/Transhelp											
Victoria	2,973	2,973	2,973	2,973	2,973	2,973	2,973	2,973	2,973	2,973	$4,123
Copper Yard/Advance	11,422	11,422	11,422	15,398	15,398	15,398	15,398	15,398	15,398	15,398	$4,525
Wolfedale	5,949	5,949	5,949	5,949	5,949	5,949	5,949	8,138	8,138	8,138	$4,262
Mavis Rd., Mississauga	1,800	1,800	1,800	1,800	-	-	-	-	2,852	2,852	$4,174
Total	**22,144**	**22,144**	**22,144**	**26,120**	**24,320**	**24,320**	**24,320**	**26,509**	**29,361**	**29,361**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0169	0.0165	0.0163	0.0190	0.0174	0.0172	0.0170	0.0182	0.0198	0.0195

10 Year Average	2010-2019
Quantity Standard	0.0178
Quality Standard	$4,387
Service Standard	$78

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$78
Eligible Amount	$16,513,920

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
TRANSPORTATION											
TRAILER, RADAR SPEED ADVISORY	-	1	1	1	1	1	1	1	1	1	$8,000
TRAILER, RADAR SPEED ADVISORY (NO STICKER)	-	-	-	-	-	1	1	1	1	1	$20,000
VAN, MINI PASSENGER	1	1	1	1	1	1	1	1	1	1	$34,000
VIBRATORY ROLLER	1	1	1	1	1	1	1	1	1	1	$23,000
TRAILER, FLATBED	1	1	1	1	1	1	1	1	1	1	$24,000
TRAILER, UTILITY	1	1	1	1	1	1	1	1	1	1	$3,000
STEAM JENNY,	1	1	1	1	1	1	1	1	1	1	$15,000
PACKER/ROLLER, PNEUMATIC GRADER MOUNTED (HANDY HITCH)	1	1	1	1	1	1	1	1	1	1	$32,000
GRADALL EXCAVATOR,	1	1	1	1	1	1	1	1	1	1	$353,000
WOOD CHIPPER	1	1	1	1	1	1	1	1	1	1	$49,000
TRAILER, DROP DECK	1	1	1	1	1	1	1	1	1	1	$8,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	-	1	1	1	1	1	1	1	1	1	$124,000
LOADER, FRONT END	1	1	1	1	1	1	1	1	1	1	$213,000
DUMP, TRIAXLE 1 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$337,000
GRADER,	1	1	1	1	1	1	1	1	1	1	$359,000
GRADER,	1	1	1	1	1	1	1	1	1	1	$358,000
FLUSHER	-	-	1	1	1	1	1	1	1	1	$102,000
DUMP, TANDEM 2 WAY PLOW	1	1	1	1	1	1	1	1	1	1	$310,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
DUMP, TRIAXLE 1 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$347,000
CONCRETE SAW	1	1	1	1	1	1	1	1	1	1	$11,000
ATTENUATOR, CRASH	1	1	1	1	1	1	1	1	1	1	$39,000
POST POUNDER	1	1	1	1	1	1	1	1	1	1	$23,000
ARROW BOARD,	1	1	1	1	1	1	1	1	1	1	$7,000
STEAM JENNY	1	1	1	1	1	1	1	1	1	1	$17,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$308,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$308,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$304,000
DUMP, TRIAXLE 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$336,000
DUMP, TRIAXLE 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$336,000
SNOW BLOWER,	1	1	1	1	1	1	1	1	1	1	$29,000
TRACTOR, TRACKLESS ARTICULATED	-	-	-	-	-	1	1	1	1	1	$202,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$21,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$21,000
HOT MIX TRANSPORTER - NO STICKER	1	1	1	1	1	1	1	1	1	1	$46,000
TRUCK, SIGN	1	1	1	1	1	1	1	1	1	1	$349,000
LOADER, ARTICULATED WHEEL 4WD	1	1	1	1	1	1	1	1	1	1	$256,000
TRACTOR, FARM	1	1	1	1	1	1	1	1	1	1	$59,000
VACUUM, LEAF/LITTER TOW BEHIND	1	1	1	1	1	1	1	1	1	1	$14,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
PICKUP, 3/4 TON EXT CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$46,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$44,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$44,000
TRACTOR, AGRICULTURAL WITH ENCLOSED CAB	1	1	1	1	1	1	1	1	1	1	$200,000
PICKUP, 3/4 TON CREW CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$36,000
PICKUP, 3/4 TON CREW CAB LONG BOX 2WD	-	-	-	-	-	-	-	-	1	1	$36,000
PICKUP, 3/4 TON CREW CAB LONG BOX 2WD	-	-	-	-	-	-	-	-	1	1	$36,000
PLOW, REVERSIBLE	1	1	1	1	1	1	1	1	1	1	$6,000
ONE WAY WING	1	1	1	1	1	1	1	1	1	1	$18,000
SOIL SEPERATOR	1	1	1	1	1	1	1	1	1	1	$131,000
TRACTOR, FARM	1	1	1	1	1	1	1	1	1	1	$26,000
RIDING V-ROLLER	1	1	1	1	1	1	1	1	1	1	$18,000
TRUCK, CATCH BASIN REPAIR	1	1	1	1	1	1	1	1	1	1	$217,000
ATTENUATOR, TRAILER MOUNTED	1	1	1	1	1	1	1	1	1	1	$52,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$277,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$276,000
TRACTOR, MOWER	1	1	1	1	1	1	1	1	1	1	$141,000
ATTENUATOR, TRAILER MOUNTED	1	1	1	1	1	1	1	1	1	1	$35,000
PICKUP, 1/2 TON EXTENDED CAB	1	1	1	1	1	1	1	1	1	1	$39,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$127,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$127,000
TRAILER, UTILITY	1	1	1	1	1	1	1	1	1	1	$8,000
TRAILER, UTILITY	1	1	1	1	1	1	1	1	1	1	$8,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$126,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$303,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$303,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$303,000
TRACTOR, TRACKLESS ARTICULATED	1	1	1	1	1	1	1	1	1	1	$150,000
TRACTOR, TRACKLESS MT V MUNICIPAL	1	1	1	1	1	1	1	1	1	1	$149,000
TRAILER, FLATBED	1	1	1	1	1	1	1	1	1	1	$9,000
LOADER, ARTICULATED WHEEL 4WD	1	1	1	1	1	1	1	1	1	1	$256,000
TRAILER, ENCLOSED	-	-	-	-	1	1	1	1	1	1	$26,000
WOOD CHIPPER	-	-	-	-	1	1	1	1	1	1	$39,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$303,000
DUMP, TANDEM 2 WAY PLOW & WING	1	1	1	1	1	1	1	1	1	1	$304,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$21,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$21,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$21,000
HOT MIX TRANSPORTER - NO STICKER	1	1	1	1	1	1	1	1	1	1	$46,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
LOADER, ARTICULATED WHEEL 4WD	1	1	1	1	1	1	1	1	1	1	$256,000
PICKUP, 3/4 TON CREW CAB LONG BOX 2WD	-	-	-	-	-	-	-	1	1	1	$56,000
TRUCK, SIGN	1	1	1	1	1	1	1	1	1	1	$154,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	-	-	-	-	-	-	-	1	1	1	$154,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	-	-	-	-	-	-	-	1	1	1	$155,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$42,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$42,000
ANTI-ICE SYSTEM	1	1	1	1	1	1	1	1	1	1	$42,000
SPORT UTILITY, COMPACT HYBRID 4X4	-	-	-	-	-	-	-	-	1	1	$38,000
TRACTOR, FARM	1	1	1	1	1	1	1	1	1	1	$177,000
PLOW, REVERSIBLE	1	1	1	1	1	1	1	1	1	1	$18,000
VIBRATORY ROLLER	1	1	1	1	1	1	1	1	1	1	$15,000
POST HOLE AUGER,	1	1	1	1	1	1	1	1	1	1	$6,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	-	1	$48,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	-	1	$50,000
OPERATIONS SUPPORT											
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$48,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$48,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$48,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$26,000
SPORT UTILITY, ESCAPE 4X2	1	1	1	1	1	1	1	1	1	1	$33,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$47,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$47,000
VAN, MINI PASSENGER	1	1	1	1	1	1	1	1	1	1	$24,000
VAN, MINI CARGO	1	1	1	1	1	1	1	1	1	1	$33,000
VAN, MINI CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, MINI PASSENGER	1	1	1	1	1	1	1	1	1	1	$26,000
VAN, MINI WINDOW CARGO (TRANSIT)	1	1	1	1	1	1	1	1	1	1	$42,000
SPORT UTILITY, COMPACT JEEP 4X2	-	-	-	-	1	1	1	1	1	1	$28,000
VAN, 1/2 TON PASSENGER WINDOW	1	1	1	1	1	1	1	1	1	1	$50,000
VAN, 1/2 TON PASSENGER WINDOW	1	1	1	1	1	1	1	1	1	1	$43,000
PICKUP, 1/2 TON CREW CAB 4WD SHORT BOX	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT HYBRID 4X2	-	1	1	1	1	1	1	1	1	1	$45,000
SPORT UTILITY, COMPACT HYBRID 4X2	-	1	1	1	1	1	1	1	1	1	$45,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
VAN, 3/4 TON PASSENGER WINDOW	1	1	1	1	1	1	1	1	1	1	$52,000
SPORT UTILITY, COMPACT JEEP 4X2	-	-	-	-	1	1	1	1	1	1	$28,000
SPORT UTILITY, COMPACT JEEP 4X2	-	-	-	-	1	1	1	1	1	1	$28,000
VAN, 1 TON CARGO	-	-	-	-	-	-	1	1	1	1	$67,000
SPORT UTILITY, COMPACT 4X4	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT 4X4	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT 4X4	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT 4X4	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT 4X4	1	1	1	1	1	1	1	1	1	1	$36,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$42,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$42,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$39,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$39,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$39,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$43,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$38,000
VAN, 1/2 TON PASSENGER	1	1	1	1	1	1	1	1	1	1	$36,000
TRAILER, FLATBED STEPDECK	1	1	1	1	1	1	1	1	1	1	$29,000
VAN, RV MOBILE LEARNING CENTRE	1	1	1	1	1	1	1	1	1	1	$117,000
TRAILER, FLATBED FLOAT	-	-	-	-	1	1	1	1	1	1	$28,000
TRACTOR, TRAILER	1	1	1	1	1	1	1	1	1	1	$65,000
PICKUP, 1/2 TON CREW CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$38,000
CAR, COMPACT HYBRID	1	1	1	1	1	1	1	1	1	1	$34,000
FORKLIFT,	1	1	1	1	1	1	1	1	1	1	$26,000
FORKLIFT, 7000LBS	1	1	1	1	1	1	1	1	1	1	$47,000
FORK REACH TRUCK, NARROW AISLE 3000 LBS	1	1	1	1	1	1	1	1	1	1	$41,000
FORKLIFT, 7000 LBS	1	1	1	1	1	1	1	1	1	1	$58,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
PICKUP, 3/4 TON EXT CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$44,000
FORKLIFT - BATTERY WALK BEHIND PALLETT TRUCK	1	1	1	1	1	1	1	1	1	1	$6,000
FORK REACH TRUCK, NARROW AISLE	-	-	-	-	-	-	-	1	1	1	$46,000
MOWER, WALKER	1	1	1	1	1	1	1	1	1	1	$15,000
PICKUP, 3/4 TON REG CAB 4X4	1	1	1	1	1	1	1	1	1	1	$39,000
PICKUP, 1/2 TON EXT CAB SHORT BOX	1	1	1	1	1	1	1	1	1	1	$36,000
SWEEPER, 275	1	1	1	1	1	1	1	1	1	1	$62,000
SCISSOR LIFT, SKY JACK	-	1	1	1	1	1	1	1	1	1	$18,000
TRACTOR, COMPACT	1	1	1	1	1	1	1	1	1	1	$27,000
TRAILER, TILT BED SCISSOR LIFT - NO STICKER	-	1	1	1	1	1	1	1	1	1	$9,000
SCISSOR LIFT, SKY JACK	1	1	1	1	1	1	1	1	1	1	$23,000
SCISSOR LIFT, SKY JACK	-	-	-	-	-	-	-	-	1	1	$15,000
SCISSOR LIFT, SKY JACK (ELECTRIC)	-	-	-	-	-	-	-	-	1	1	$16,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 4WD	-	-	-	-	-	-	-	-	1	1	$40,000
FORKLIFT, 8000LBS	-	-	-	-	-	-	-	-	-	1	$84,000
MOWER	1	1	1	1	1	1	1	1	1	1	$56,000
TRAILER, LANDSCAPE 7000 LBS	1	1	1	1	1	1	1	1	1	1	$11,000
TRAILER, UTILITY	1	1	1	1	1	1	1	1	1	1	$8,000
TRAILER, UTILITY GRASS	-	-	1	1	1	1	1	1	1	1	$4,000
SPORT UTILITY, ESCAPE 4X2	-	-	-	1	1	1	1	1	1	1	$35,000
TRACTOR, GARDEN	1	1	1	1	1	1	1	1	1	1	$12,000
WATER											
PICKUP, 3/4 TON EXT CAB MECH BOX 2WD	1	1	1	1	1	1	1	1	1	1	$89,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
CAR, COMPACT HYBRID	1	1	1	1	1	1	1	1	1	1	$34,000
VAN, MINI PASSENGER	1	1	1	1	1	1	1	1	1	1	$32,000
PICKUP, 3/4 TON EXT CAB, SHORT BOX, 2WD	-	-	-	-	-	-	-	1	1	1	$48,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	-	1	$48,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	-	1	$48,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$3,000
TRAILER, UTILITY	1	1	1	1	1	1	1	1	1	1	$14,000
TRAILER, SWABBING 10000 LBS TANDEM	1	1	1	1	1	1	1	1	1	1	$11,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$5,000
TRAILER, TANDEM FLATBED	1	1	1	1	1	1	1	1	1	1	$10,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000
TRAILER, WATER TANK	-	-	1	1	1	1	1	1	1	1	$12,000
PICKUP, 3/4 TON EXTENDED CAB MECHANIC BOX 2WD	1	1	1	1	1	1	1	1	1	1	$63,000
ATTENUATOR, TRAILER MOUNTED	-	-	-	-	-	1	1	1	1	1	$38,000
PICKUP, 3/4 TON EXTENDED CAB MECHANIC BOX 2WD	1	1	1	1	1	1	1	1	1	1	$66,000
PICKUP, 1 TON EXTENDED CAB MECHANIC BOX 2WD	1	1	1	1	1	1	1	1	1	1	$121,000
ARROW BOARD,	1	1	1	1	1	1	1	1	1	1	$8,000
TRAILER, MOUNTED VACUUM EXCAVATOR	1	1	1	1	1	1	1	1	1	1	$123,000
VAN, SINGLE AXLE CUBE	1	1	1	1	1	1	1	1	1	1	$213,000
STEAM JENNY,	-	-	-	-	-	-	-	-	-	1	$18,000
VAN, 1 TON CCTV	-	-	1	1	1	1	1	1	1	1	$326,000
VAN, 1 TON CCTV	-	-	-	1	1	1	1	1	1	1	$308,000
VAN, 1 TON CCTV	-	-	-	-	-	-	-	-	-	1	$461,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
SPORT UTILITY, COMPACT HYBRID 4X4	1	1	1	1	1	1	1	1	1	1	$40,000
VAN, COMMAND CENTRE (RETIRED POLICE UNIT)	-	-	-	-	-	-	1	1	1	1	$8,000
AIR COMPRESSOR WITH JACK HAMMER & CHIPPER	1	1	1	1	1	1	1	1	1	1	$29,000
VALVE OPERATOR	1	1	1	1	1	1	1	1	1	1	$41,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$5,000
VALVE OPERATOR, HAND HELD PORTABLE	1	1	1	1	1	1	1	1	1	1	$11,000
TRAILER, 12000 LBS WITH PRESSURE TANK & 2.5" CENT PUMP	1	1	1	1	1	1	1	1	1	1	$19,000
TRAILER, MOUNTED VACUUM EXCAVATOR	1	1	1	1	1	1	1	1	1	1	$86,000
HYDRAULIC HAMMER, (BACKHOE)	1	1	1	1	1	1	1	1	1	1	$20,000
TRAILER, TOWER LIGHT	1	1	1	1	1	1	1	1	1	1	$14,000
PICKUP, 3/4 TON EXTENDED CAB MECHANIC BOX 2WD	1	1	1	1	1	1	1	1	1	1	$69,000
VALVE OPERATOR	1	1	1	1	1	1	1	1	1	1	$42,000
TRAILER, FLATBED FLOAT	1	1	1	1	1	1	1	1	1	1	$26,000
TRAILER, TANDEM AXLE	1	1	1	1	1	1	1	1	1	1	$26,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$5,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$127,000
TRUCK, VACTOR HYDRO EXCAVATOR	-	1	1	1	1	1	1	1	1	1	$509,000
TRAILER, SHORING	-	1	1	1	1	1	1	1	1	1	$5,000
TRAILER, SHORING	-	1	1	1	1	1	1	1	1	1	$5,000
VAN, LOW PROFILE REG CAB	1	1	1	1	1	1	1	1	1	1	$156,000
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$164,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$164,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$45,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$33,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$46,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$33,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$47,000
CUT OFF SAW, DIAMOND WIRE	-	-	-	1	1	1	1	1	1	1	$16,000
ARROW BOARD,	1	1	1	1	1	1	1	1	1	1	$7,000
COMPACTOR TAMPER,(BACKHOE ATTACHMENT)	1	1	1	1	1	1	1	1	1	1	$10,000
COMPACTOR TAMPER,(BACKHOE ATTACHMENT)	1	1	1	1	1	1	1	1	1	1	$10,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$6,000
PICKUP, 1/2 TON EXTENDED CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$35,000
PICKUP, 1/2 TON EXT CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$35,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$61,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$61,000
STEAM JENNY,	1	1	1	1	1	1	1	1	1	1	$16,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$50,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$50,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$50,000
PICKUP, 1 TON EXT CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$120,000
DUMP, SINGLE AXLE LOW PROFILE REGULAR CAB	1	1	1	1	1	1	1	1	1	1	$149,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
DUMP, SINGLE AXLE LOW PROFILE SINGLE CAB	1	1	1	1	1	1	1	1	1	1	$145,000
LOADER, BACKHOE	1	1	1	1	1	1	1	1	1	1	$194,000
LOADER, BACKHOE	1	1	1	1	1	1	1	1	1	1	$194,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$6,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$49,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$32,000
DUMP, TRIAXLE	1	1	1	1	1	1	1	1	1	1	$233,000
TRUCK, VACTOR HYDRO EXCAVATOR	1	1	1	1	1	1	1	1	1	1	$638,000
PUMP, 4" CENTRIFUGAL TRAILER MOUNTED	-	-	-	-	-	-	-	-	1	1	$42,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$5,000
PICKUP, 1 TON QUAD CAB MECH BOX 4X4	1	1	1	1	1	1	1	1	1	1	$107,000
DUMP, TRIAXLE	1	1	1	1	1	1	1	1	1	1	$212,000
TRAILER, TANK	1	1	1	1	1	1	1	1	1	1	$16,000
MAGNUM PACKER	1	1	1	1	1	1	1	1	1	1	$15,000
HYDRAULIC HAMMER	1	1	1	1	1	1	1	1	1	1	$26,000
VALVE OPERATOR	1	1	1	1	1	1	1	1	1	1	$42,000
TRAILER, FLATBED 12000 LBS	1	1	1	1	1	1	1	1	1	1	$8,000
COMPRESSOR, 185 CFM PORTABLE AIR	1	1	1	1	1	1	1	1	1	1	$18,000
TRAILER, MOUNTED VACUUM EXCAVATOR & VALVE OPERATOR	1	1	1	1	1	1	1	1	1	1	$53,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
TRAILER, VALVE MAINTENANCE	1	1	1	1	1	1	1	1	1	1	$84,000
HYDRAULIC HAMMER	1	1	1	1	1	1	1	1	1	1	$19,000
TRAILER, FLATBED FLOAT	1	1	1	1	1	1	1	1	1	1	$25,000
PICKUP, 1 TON VAN BODY	1	1	1	1	1	1	1	1	1	1	$64,000
TRUCK, VACTOR HYDRO EXCAVATOR	1	1	1	1	1	1	1	1	1	1	$518,000
TRAILER, SINGLE AXLE FLAT DECK	1	1	1	1	1	1	1	1	1	1	$3,000
TRAILER, WATER TANK	1	1	1	1	1	1	1	1	1	1	$7,000
TRAILER, ENCLOSED	1	1	1	1	1	1	1	1	1	1	$12,000
TRAILER, TOWER LIGHT	1	1	1	1	1	1	1	1	1	1	$13,000
LOADER, BACKHOE	1	1	1	1	1	1	1	1	1	1	$177,000
TAPPING MACHINE (TRAILER)WITH POWER PACK	1	1	1	1	1	1	1	1	1	1	$25,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$6,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$124,000
VAN, LOW PROFILE REG CAB	1	1	1	1	1	1	1	1	1	1	$135,000
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$172,000
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$171,000
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$172,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$49,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$45,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$45,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$45,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$45,000
CUT OFF SAW, DIAMOND WIRE	1	1	1	1	1	1	1	1	1	1	$14,000
ARROW BOARD,	1	1	1	1	1	1	1	1	1	1	$7,000
ARROW BOARD,	1	1	1	1	1	1	1	1	1	1	$7,000
COMPACTOR TAMPER,(BACKHOE ATTACHMENT)	1	1	1	1	1	1	1	1	1	1	$10,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
HYDRAULIC HAMMER,	1	1	1	1	1	1	1	1	1	1	$14,000
TRAILER, TANK	1	1	1	1	1	1	1	1	1	1	$15,000
PICKUP, 1/2 TON EXT CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$34,000
PICKUP, 1/2 TON EXT CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$35,000
DUMP, TRIAXLE	1	1	1	1	1	1	1	1	1	1	$199,000
DUMP, TRIAXLE	1	1	1	1	1	1	1	1	1	1	$199,000
DRILLING MACHINE	-	-	-	-	1	1	1	1	1	1	$41,000
PICKUP, ONE TON DUMP TRUCK	-	-	-	-	-	1	1	1	1	1	$73,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$48,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$48,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$48,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$48,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$48,000
VAN, 1 TON CARGO	-	-	-	-	-	1	1	1	1	1	$51,000
PUMP, 4" CENTRIFUGAL TRAILER MOUNTED	1	1	1	1	1	1	1	1	1	1	$39,000
SALT SPREADER	-	-	-	-	-	-	1	1	1	1	$12,000
PICKUP, 1 TON EXT CAB 2X4 LONG BOX	-	-	-	-	-	-	-	1	1	1	$120,000
DUMP, SINGLE ANXLE LOW PROFILE EXT CAB	1	1	1	1	1	1	1	1	1	1	$153,000
DUMP, SINGLE ANXLE LOW PROFILE EXT CAB	1	1	1	1	1	1	1	1	1	1	$153,000
LOADER, BACKHOE	1	1	1	1	1	1	1	1	1	1	$194,000
TRAILER, FLATBED	1	1	1	1	1	1	1	1	1	1	$32,000
PICKUP, 1/2 TON EXTENDED CAB SHORT BOX	1	1	1	1	1	1	1	1	1	1	$39,000
PICKUP, 1/2 TON EXTENDED CAB SHORT BOX	1	1	1	1	1	1	1	1	1	1	$39,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
PICKUP, 1/2 TON EXTENDED CAB SHORT BOX	1	1	1	1	1	1	1	1	1	1	$30,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$63,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$32,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$49,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$49,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$49,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$49,000
VAN, 1 TON CARGO	-	-	-	-	-	-	-	-	1	1	$32,000
TRUCK, VACTOR HYDRO EXCAVATOR	1	1	1	1	1	1	1	1	1	1	$638,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$6,000
TRAILER, ENCLOSED	1	1	1	1	1	1	1	1	1	1	$11,000
TRAILER, SHORING TANDEM AXLE 14'	-	-	-	-	-	-	-	-	1	1	$13,000
PUMP, 6" - CENTRIFUGAL	1	1	1	1	1	1	1	1	1	1	$28,000
HO-PAC PLATE WACKER, (BACKHOE)	1	1	1	1	1	1	1	1	1	1	$8,000
WASTEWATER											
TRAILER, ENCLOSED	1	1	1	1	1	1	1	1	1	1	$4,000
PUMP, 4" DSL TRASH TRAILER MOUNTED	1	1	1	1	1	1	1	1	1	1	$22,000
FORKLIFT, 6000LBS	1	1	1	1	1	1	1	1	1	1	$33,000
PUMP, 6" TRAILER MOUNTED DIESEL PUMP	-	1	1	1	1	1	1	1	1	1	$65,000
PICKUP, 3/4 TON EXT CAB MECH BOX 2WD	-	-	1	1	1	1	1	1	1	1	$62,000
PICKUP, 1/2 TON EXT CAB SHORT BOX 2WD	1	1	1	1	1	1	1	1	1	1	$35,000
PICKUP, 1 TON VAN BODY	1	1	1	1	1	1	1	1	1	1	$75,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$25,000
PICKUP, 3/4 TON EXTENDED CAB MECHANIC BOX 2WD	1	1	1	1	1	1	1	1	1	1	$66,000
TRUCK, UTILITY BOOM	1	1	1	1	1	1	1	1	1	1	$222,000
TRAILER, ENCLOSED	-	-	-	-	-	-	-	1	1	1	$6,000
TRAILER, ENCLOSED	-	-	-	-	-	-	-	1	1	1	$6,000
PICKUP, 1 TON EXTENDED CAB MECH BOX 2WD	1	1	1	1	1	1	1	1	1	1	$39,000
PICKUP, 1 TON EXTENDED CAB MECH BOX 2WD	1	1	1	1	1	1	1	1	1	1	$39,000
SEWER RODDING MACHINE, GAS PORTABLE	1	1	1	1	1	1	1	1	1	1	$7,000
FLUSHER, SEWER	1	1	1	1	1	1	1	1	1	1	$232,000
TRAILER, ENCLOSED CARGO	-	1	1	1	1	1	1	1	1	1	$7,000
PICKUP, 3/4 TON EXT CAB 2WD	-	-	1	1	1	1	1	1	1	1	$49,000
PICKUP, 3/4 TON EXT CAB 2WD	1	1	1	1	1	1	1	1	1	1	$49,000
FLUSHER, CHASSIS	-	-	-	1	1	1	1	1	1	1	$281,000
ARROW BOARD	1	1	1	1	1	1	1	1	1	1	$7,000
FLUSHER, SEWER HIGH PRESSURE	1	1	1	1	1	1	1	1	1	1	$493,000
VAN, 1 TON CARGO	-	-	-	-	-	-	1	1	1	1	$39,000
PUMP, 6" CENTRIFUGAL	1	1	1	1	1	1	1	1	1	1	$76,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$37,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$37,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$37,000
PICKUP, 3/4 TON EXTENDED CAB LONG BOX 2WD	1	1	1	1	1	1	1	1	1	1	$37,000
BUCKET MACHINE,	1	1	1	1	1	1	1	1	1	1	$49,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
BUCKET MACHINE,	1	1	1	1	1	1	1	1	1	1	$49,000
SEWER RODDING MACHINE, GAS PORTABLE	1	1	1	1	1	1	1	1	1	1	$7,000
FLUSHER, SEWER	1	1	1	1	1	1	1	1	1	1	$237,000
PUMP, 6" CENTRIFUGAL TRAILER MOUNTED	1	1	1	1	1	1	1	1	1	1	$33,000
TRAILER, ENCLOSED	1	1	1	1	1	1	1	1	1	1	$5,000
PICKUP, 1 TON VAN BODY	1	1	1	1	1	1	1	1	1	1	$94,000
TRAILER, TANDEM AXLE	1	1	1	1	1	1	1	1	1	1	$27,000
TRAILER, SHORING	1	1	1	1	1	1	1	1	1	1	$6,000
TRAILER, TANDEM AXLE DUMP	-	1	1	1	1	1	1	1	1	1	$11,000
DUMP, SINGLE AXLE LOW PROFILE CREW CAB	-	1	1	1	1	1	1	1	1	1	$124,000
VAN, LOW PROFILE CREW CAB	1	1	1	1	1	1	1	1	1	1	$171,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$46,000
VAN, 1 TON CARGO	1	1	1	1	1	1	1	1	1	1	$46,000
VAN, 1 TON CARGO VAN	1	1	1	1	1	1	1	1	1	1	$46,000
HYDRAULIC HAMMER,	1	1	1	1	1	1	1	1	1	1	$14,000
TRAILER, SHORING	-	-	-	1	1	1	1	1	1	1	$6,000
SPORT UTILITY, COMPACT JEEP 4X2	1	1	1	1	1	1	1	1	1	1	$28,000
ALL TERRAIN VEHICLE,	-	-	-	-	-	-	-	1	1	1	$24,000
PICKUP, 1/2 TON EXT CAB SHORT BOX	1	1	1	1	1	1	1	1	1	1	$29,000
DUMP, SINGLE AXLE LOW PROFILE EXT CAB	-	-	-	-	-	-	-	1	1	1	$148,000
LOADER, BACKHOE	1	1	1	1	1	1	1	1	1	1	$195,000
TRAILER, LANDSCAPE	-	-	-	-	-	-	-	1	1	1	$5,000
DUMP, TRIAXLE	1	1	1	1	1	1	1	1	1	1	$235,000
FLUSHER, SEWER COMB CLEANER	1	1	1	1	1	1	1	1	1	1	$591,000
EXCAVATOR, MINI HYDRAULIC	-	-	-	-	-	-	-	-	1	1	$56,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
TRAILER, SHORING TANDEM AXLE 14'	1	1	1	1	1	1	1	1	1	1	$13,000
TRAILER, ENCLOSED	-	-	-	-	-	-	-	1	1	1	$11,000
TRAILER, TILT BED	-	-	-	-	-	-	-	-	1	1	$12,000
DUMP, TRIAXLE	-	-	-	-	-	-	-	-	-	1	$213,000
SPORT UTILITY, COMPACT HYBRID 4X4	-	-	-	-	-	-	-	1	1	1	$38,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$49,000
VAN, 1 TON BUBBLE	1	1	1	1	1	1	1	1	1	1	$44,000
VAN, 3/4 TON CARGO	1	1	1	1	1	1	1	1	1	1	$39,000
VAN, 1 TON CUBE BUBBLE VAN	-	-	-	-	1	1	1	1	1	1	$47,000
VAN, 1 TON CUBE BUBBLE VAN	1	1	1	1	1	1	1	1	1	1	$52,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	1	1	$41,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	1	1	$41,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	1	1	$41,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	1	1	$41,000
CAR, COMPACT ELECTRIC	-	-	-	-	-	-	-	-	1	1	$41,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$48,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$49,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$49,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$50,000
CAR, COMPACT ELECTRIC	1	1	1	1	1	1	1	1	1	1	$49,000

Region of Peel
Service Standard Calculation Sheet

Service: Public Works Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
TRANSHELP VEHICLES											
VEHICLES	73	81	78	85	81	63	63	63	62	62	$105,000
OUTSOURCED VEHICLES	73	69	77	75	83	106	112	135	160	163	$105,000
Total	**473**	**490**	**501**	**511**	**523**	**533**	**543**	**579**	**624**	**635**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

10 Year Average	2010-2019
Quantity Standard	0.0004
Quality Standard	$83,875
Service Standard	$34

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$34
Eligible Amount	$7,095,825

Region of Peel
Service Standard Calculation Sheet

Service: Peel Regional Police Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with furniture, site works, etc.
sq.m. of building area	**64,435**	**71,634**	**71,513**	**71,048**	**70,704**	**79,504**	**78,892**	**78,748**	**80,103**	**80,103**	**$3,751**	**$4,332**

Population	1,251,100	1,279,000	1,295,360	1,311,720	1,328,080	1,344,440	1,359,300	1,384,500	1,409,700	1,434,900
Per Capita Standard	0.0515	0.0560	0.0552	0.0542	0.0532	0.0591	0.0580	0.0569	0.0568	0.0558

10 Year Average	2010-2019
Quantity Standard	0.0557
Quality Standard	3,750
Service Standard	$209

D.C. Amount (before deductions)	10 Year (Mississauga & Brampton)
Forecast Population	175,750
$ per Capita	$209
Eligible Amount	$36,707,145

Region of Peel
Service Standard Calculation Sheet

Service: Peel Regional Police Land
Unit Measure: Hectares of Land

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Land Value ($/ha)
Hectares of Land	**23.972**	**25.712**	**24.370**	**24.323**	**23.407**	**26.323**	**26.262**	**26.248**	**26.223**	**26.223**	**$3,690,000**

Population	1,251,100	1,279,000	1,295,360	1,311,720	1,328,080	1,344,440	1,359,300	1,384,500	1,409,700	1,434,900
Per Capita Standard	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002

10 Year Average	2010-2019
Quantity Standard	0.00002
Quality Standard	3,678,175
Service Standard	$70

D.C. Amount (before deductions)	10 Year (Mississauga & Brampton)
Forecast Population	175,750
$ per Capita	$70
Eligible Amount	$12,216,383

Region of Peel
Service Standard Calculation Sheet

Service: Peel Regional Police Vehicles
Unit Measure: No. of vehicles

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
Vehicles	**685**	**694**	**728**	**734**	**740**	**748**	**753**	**754**	**788**	**840**	**$27,000**

Population	1,251,100	1,279,000	1,295,360	1,311,720	1,328,080	1,344,440	1,359,300	1,384,500	1,409,700	1,434,900
Per Capita Standard	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0006	0.0006

10 Year Average	2010-2019
Quantity Standard	0.0006
Quality Standard	$24,167
Service Standard	$15

D.C. Amount (before deductions)	10 Year (Mississauga & Brampton)
Forecast Population	175,750
$ per Capita	$15
Eligible Amount	$2,548,375

Region of Peel
Service Standard Calculation Sheet

Service: Police - O.P.P. Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with equipment, site works, etc.
Caledon Village	417	417	417	-	-	-	-	-	-	-	$4,118	$4,756
Caledon East	682	682	682	2,225	2,225	2,225	2,225	2,225	2,225	2,225	$4,118	$4,756
Bolton	788	788	788	23	23	23	23	23	23	23	$4,118	$4,756
Orangeville (Caledon OPP Office)	122	122	122	50	50	50	50	50	50	50	$4,118	$4,756
Belfountain	-	-	-	-	-	-	-	26	26	26	$4,118	$4,756
Total	**2,009**	**2,009**	**2,009**	**2,298**	**2,298**	**2,298**	**2,298**	**2,324**	**2,324**	**2,324**		

Population	61,000	61,500	63,000	64,500	66,000	67,500	69,000	70,600	72,200	73,800
Per Capita Standard	0.0329	0.0327	0.0319	0.0356	0.0348	0.0340	0.0333	0.0329	0.0322	0.0315

10 Year Average	2010-2019
Quantity Standard	0.0332
Quality Standard	4,755
Service Standard	$158

D.C. Amount (before deductions)	10 Year (Caledon)
Forecast Population	35,750
$ per Capita	$158
Eligible Amount	$5,643,138

Region of Peel
Service Standard Calculation Sheet

Service: Police - O.P.P. Land
Unit Measure: hectares of land

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Land Value ($/ha)
Caledon Village	0.380	0.380	0.380	-	-	-	-	-	-	-	$2,890,000
Caledon East	0.400	0.400	0.400	1.950	1.950	1.950	1.950	1.950	1.950	1.950	$2,890,000
Bolton	0.060	0.060	0.060	0.002	0.002	0.002	0.002	0.002	0.002	0.002	$2,890,000
Orangeville	0.038	0.038	0.038	0.005	0.005	0.005	0.005	0.005	0.005	0.005	$2,890,000
Belfountain	-	-	-	-	-	-	0.003	0.003	0.003	0.003	$2,890,000
Total	**0.878**	**0.878**	**0.878**	**1.957**	**1.957**	**1.957**	**1.960**	**1.960**	**1.960**	**1.960**	

Population	61,000	61,500	63,000	64,500	66,000	67,500	69,000	70,600	72,200	73,800
Per Capita Standard	0.00001	0.00001	0.00001	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003

10 Year Average	2010-2019
Quantity Standard	0.00002
Quality Standard	3,489,500
Service Standard	$70

D.C. Amount (before deductions)	10 Year (Caledon)
Forecast Population	35,750
$ per Capita	$70
Eligible Amount	$2,494,993

Region of Peel
Service Standard Calculation Sheet

Service: Paramedics Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
52 Bramalea Road South	367	367	367	367	367	367	-	-	-	-	$7,062	$8,438
75-B Hale Road	557	557	557	557	557	557	557	557	557	-	$7,062	$8,438
91 Sandalwood Parkway	-	-	-	-	251	251	251	251	251	251	$7,062	$8,438
28 Ann Street - 3113	279	279	279	279	279	279	279	279	279	-	$7,062	$8,594
3611 Charleston Sideroad - 3114	232	232	232	232	232	232	232	232	232	232	$7,062	$8,282
2 Snelcrest Drive	208	208	208	208	208	208	208	208	208	208	$7,062	$8,282
5299 Maingate Drive	910	910	910	910	910	910	910	910	910	910	$7,062	$8,594
2355 Tedlo Street - 2042 & 5020	502	502	502	502	502	502	502	502	502	502	$7,062	$8,594
6660 Kennedy Road	306	306	306	-	-	-	-	-	-	-	$7,062	$8,594
1578 Finfar Court - 2041	181	181	181	181	181	181	181	181	181	-	$7,062	$8,594
6810 Kitimat Road	489	489	489	489	489	489	489	489	489	489	$7,062	$8,594
1980 Boylen Road	297	297	297	297	297	297	-	-	-	-	$7,062	$8,594
1165 Fewster Drive	936	936	936	936	936	936	936	-	-	-	$7,062	$8,594
1197b Fewster Drive - 3115	557	557	557	557	557	557	-	-	-	-	$7,062	$8,594
7101 Goreway Drive	-	160	160	160	160	160	160	160	160	160	$7,062	$8,594
6825 Tomken Road	-	2,723	2,723	2,723	2,723	2,723	2,723	2,723	2,723	2,723	$4,523	$5,928
1355 Winding Trail	-	-	-	275	275	275	275	275	275	275	$7,062	$9,024
71 Rosedale	-	-	-	149	149	149	-	-	-	-	$7,062	$8,860
40 Victoria Cresent	-	-	-	248	248	248	248	248	248	248	$7,062	$8,438
10775 The Gore Road	-	-	-	-	250	250	250	250	250	250	$7,062	$8,438
25 Rising Hill Ridge	-	-	-	-	-	-	3,861	3,861	3,861	3,861	$4,523	$5,772
25 Rising Hill Ridge	-	-	-	-	-	-	253	253	253	253	$7,062	$8,438
1600 Bovaird Drive East	-	-	-	-	-	5,478	5,478	5,478	5,478	5,478	$4,523	$5,772
1600 Bovaird Drive East	-	-	-	-	-	155	155	155	155	155	$7,062	$8,438
75 Exchange Drive	-	-	-	-	-	273	273	273	273	273	$7,062	$8,438
6375 Airport Road	-	-	-	-	-	-	270	270	270	270	$7,062	$8,594
6097 Old Church Road	-	-	-	-	-	-	-	279	279	279	$7,062	$8,282
7120 Hurontario Street	-	-	-	-	-	-	-	279	279	279	$7,062	$8,594
5845 Falbourne Street	-	-	-	-	-	-	-	-	273	273	$7,062	$8,594
55 Trueman Street	-	-	-	-	-	-	-	-	275	275	$7,062	$8,438
3190 Mavis Road	-	-	-	-	-	-	-	-	-	270	$7,062	$8,594
938 East Avenue	-	-	-	-	-	-	-	-	-	274	$7,062	$8,594
2200 Sheridan Park Drive	-	-	-	-	-	-	-	-	-	274	$7,062	$8,594
1188 Lakeshore Road	-	-	-	-	-	-	-	-	-	274	$7,062	$8,594

Region of Peel
Service Standard Calculation Sheet

Service: Paramedics Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
Hwy 50 and Cross Country Blvd	-	-	-	-	-	-	-	-	-	274	$7,062	$8,282
2492 Thomas Street	-	-	-	-	-	-	-	-	4,417	4,417	$4,523	$5,928
2492 Thomas Street	-	-	-	-	-	-	-	-	275	275	$7,062	$8,594
Total	**5,821**	**8,704**	**8,704**	**9,070**	**9,571**	**15,477**	**18,491**	**18,113**	**23,353**	**23,702**		

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0044	0.0065	0.0064	0.0066	0.0069	0.0110	0.0129	0.0124	0.0158	0.0157

10 Year Average	2010-2019
Quantity Standard	0.0099
Quality Standard	$7,077
Service Standard	$70

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$70
Eligible Amount	$14,817,690

Region of Peel
Service Standard Calculation Sheet

Service: Paramedics Vehicles
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
Ambulances	70	69	83	86	95	94	105	115	126	132	$227,800
Non-patient transport vehicles	20	35	33	34	35	39	50	43	58	47	$89,600
Defibrillators	96	103	100	110	110	114	130	143	158	164	$35,600
Total	**186**	**207**	**216**	**230**	**240**	**247**	**285**	**301**	**342**	**343**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

10 Year Average	2010-2019
Quantity Standard	0.0002
Quality Standard	$106,300
Service Standard	$21

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$21
Eligible Amount	$4,496,490

Region of Peel
Service Standard Calculation Sheet

Service: Long Term Care Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
Peel Manor	11,033	11,033	11,033	11,033	11,033	11,033	11,033	11,033	11,033	11,033	$5,840	$6,132
Sheridan Villa	12,777	12,777	12,777	12,777	12,777	12,777	12,777	12,777	12,777	12,777	$4,558	$4,786
Malton Village	13,552	13,552	13,552	13,552	13,552	13,552	13,552	13,552	13,552	13,552	$4,400	$4,620
Tall Pines	13,430	13,430	13,430	13,430	13,430	13,430	13,430	13,430	13,430	13,430	$4,425	$4,646
VM Davis	3,831	3,831	3,831	3,831	3,831	3,831	3,831	3,831	3,831	3,831	$4,603	$4,833
Total	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**	**54,623**		

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0416	0.0407	0.0402	0.0397	0.0392	0.0387	0.0382	0.0375	0.0369	0.0362

10 Year Average	2010-2019
Quantity Standard	0.0389
Quality Standard	$4,986
Service Standard	$194

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$194
Eligible Amount	$41,018,310

Region of Peel
Service Standard Calculation Sheet

Service: Long Term Care Land
Unit Measure: sq.m. of land

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Land Value ($/sq.m.)
Peel Manor	36,031	36,031	36,031	36,031	36,031	35,936	35,936	35,936	35,936	35,936	$620
Sheridan Villa	17,560	17,560	17,560	17,560	17,560	17,504	17,504	17,504	17,504	17,504	$860
Malton Village	21,150	21,150	21,150	21,150	21,150	21,052	21,036	21,036	21,036	21,036	$860
Tall Pines	17,630	17,630	17,630	17,630	17,630	17,588	18,353	18,353	18,353	18,353	$620
VM Davis	8,164	8,164	8,164	8,164	8,164	8,145	8,145	8,145	8,145	8,145	$520
Total	**100,535**	**100,535**	**100,535**	**100,535**	**100,535**	**100,225**	**100,974**	**100,974**	**100,974**	**100,974**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0766	0.0750	0.0740	0.0731	0.0721	0.0710	0.0707	0.0694	0.0681	0.0669

10 Year Average	2010-2019
Quantity Standard	0.0717
Quality Standard	$704
Service Standard	$50

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$50
Eligible Amount	$10,674,405

Region of Peel
Service Standard Calculation Sheet

Service: Housing Services - Shelters
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
Wilkinson	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	$3,402	$4,846
Peel Family	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	$3,205	$3,665
Cawthra	1,792	1,792	1,792	1,792	1,792	1,792	1,792	1,792	1,792	1,792	$3,343	$4,580
Peel Youth Village	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	$3,176	$3,602
Angela's Place	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	$2,907	$3,306
Brampton Leased Space	-	-	-	-	-	-	1,459	1,459	1,459	1,459	$3,165	$4,564
Total	**11,964**	**11,964**	**11,964**	**11,964**	**11,964**	**11,964**	**13,423**	**13,423**	**13,423**	**13,423**		

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0091	0.0089	0.0088	0.0087	0.0086	0.0085	0.0094	0.0092	0.0091	0.0089

10 Year Average	2010-2019
Quantity Standard	0.0089
Quality Standard	$3,844
Service Standard	$34

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$34
Eligible Amount	$7,235,415

Region of Peel
Service Standard Calculation Sheet

Service: Housing Services - Shelters Hotel Space
Unit Measure: No. of hotel rooms

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/room)
Hotel Rooms (Overflow)	-	-	-	-	-	-	4,920	5,040	9,576	20,686	$67
Total	**-**	**-**	**-**	**-**	**-**	**-**	**4,920**	**5,040**	**9,576**	**20,686**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	-	-	-	-	-	-	0.0034	0.0035	0.0065	0.0137

10 Year Average	2010-2019
Quantity Standard	0.0027
Quality Standard	$67
Service Standard	$0.18

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$0.18
Eligible Amount	$38,070

Region of Peel
Service Standard Calculation Sheet

Service: Housing Services - Social Housing
Unit Measure: No. of units

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/unit)
Units	7,173	7,199	7,252	7,590	7,590	7,590	7,713	7,750	7,750	7,780	$385,000
Total	**7,173**	**7,199**	**7,252**	**7,590**	**7,590**	**7,590**	**7,713**	**7,750**	**7,750**	**7,780**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0055	0.0054	0.0053	0.0055	0.0054	0.0054	0.0054	0.0053	0.0052	0.0052

10 Year Average	2010-2019
Quantity Standard	0.0054
Quality Standard	$382,311
Service Standard	$2,064

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$2,064
Eligible Amount	$436,637,520

Region of Peel
Service Standard Calculation Sheet

Service: Public Health Facilities
Unit Measure: sq.m. of building area

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
Meadowvale Clinic	525	525	525	525	525	525	525	525	525	525	$5,005	$6,756
2227 South Millway	142	142	142	142	-	-	-	-	-	-	$5,005	$6,756
325 Central Parkway W. Unit 21	613	613	613	613	613	613	613	613	613	613	$5,005	$6,756
Malton Clinic	57	57	57	57	181	184	184	184	184	184	$5,005	$6,756
150 Central Park Drive, Unit 1	499	499	499	499	499	499	499	499	499	499	$5,005	$6,592
44 Peel Centre Drive	4,076	-	-	-	-	-	-	-	-	-	$5,005	$6,592
150 Central Park Drive, 302, Unit 2	193	193	193	193	193	193	193	193	193	193	$5,005	$6,592
Bolton Clinic	16	16	16	16	57	72	72	72	67	67	$5,005	$6,428
10 Peel Centre Dr - Com. Office	46	46	46	46	46	-	-	-	-	-	$5,005	$6,592
Total	**6,167**	**2,091**	**2,091**	**2,091**	**2,114**	**2,086**	**2,086**	**2,086**	**2,081**	**2,081**		

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0047	0.0016	0.0015	0.0015	0.0015	0.0015	0.0015	0.0014	0.0014	0.0014

10 Year Average	2010-2019
Quantity Standard	0.0018
Quality Standard	$6,672
Service Standard	$12

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$12
Eligible Amount	$2,540,115

Region of Peel
Service Standard Calculation Sheet

Service: Waste Diversion - Facilities - Recycling/Reuse
Unit Measure: sq.m. of building area

Description	Percentage Attributable to Waste Diversion	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Bld'g Value ($/sq.m.)	Value/sq.m. with land, site works, etc.
Integrated Waste Management Facility (7795 Torbram, Bram.)	84%	12,931	12,931	12,931	12,931	12,931	12,931	12,931	12,931	12,931	12,931	$3,964	$11,187
Peel Curing Facility (4400 King St., Caledon)	100%	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	1,488	$6,860	$23,621
Bolton Community Recycling Centre-Platform Booth (109 Industrial Rd., Bolton)	53%	492	492	492	500	500	500	500	500	500	500	$4,397	$10,577
Brampton Community Recycling Centre-HHW (395 Chysler Dr., Bram)	53%	861	861	861	874	874	874	874	874	874	874	$5,878	$13,481
Battleford Community Recycling Centre (2255 Battleford., Miss.)	53%	659	659	659	659	659	659	659	659	659	659	$8,104	$16,739
Caledon Landfill CRC Office & Maint. Bldg (1795 Quarry Dr, Caledon)	53%	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	$10,037	$11,414
Fewster Offices (1126 Fewster, Miss.)	53%	670	670	670	670	670	670	670	670	670	670	$7,471	$38,809
Heart Lake Community Recycling Centre (420 Railside Dr., Brampton)	53%	-	-	-	-	-	816	816	816	816	816	$11,029	$32,496
Total		**18,528**	**18,528**	**18,528**	**18,550**	**18,550**	**19,366**	**19,366**	**19,366**	**19,366**	**19,366**		

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0141	0.0138	0.0136	0.0135	0.0133	0.0137	0.0136	0.0133	0.0131	0.0128

10 Year Average	2010-2019
Quantity Standard	0.0135
Quality Standard	$13,868
Service Standard	$187

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$187
Eligible Amount	$39,597,030

Region of Peel
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles (Collection)
Unit Measure: No. of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/Vehicle)
Recycling/Organics	89	89	89	89	89	89	-	-	-	-	$320,000
Yard Waste	31	31	31	31	31	31	-	-	-	-	$320,000
Emterra - Recycling (Curbside)	-	-	-	-	-	-	26	26	26	26	$370,000
Emterra - Organics (Curbside)	-	-	-	-	-	-	41	41	41	41	$370,000
Emterra - Yard Waste (Curbside)	-	-	-	-	-	-	12	12	12	12	$370,000
Waste Connections - Recycling (Curbside)	-	-	-	-	-	-	18	18	19	19	$370,000
Waste Connections - Organics (Curbside)	-	-	-	-	-	-	15	15	16	16	$370,000
Waste Connections - Yard Waste (Curbside)	-	-	-	-	-	-	8	8	9	9	$370,000
Miller - Recycling (Multi-Residential)	-	-	-	-	-	-	7	7	7	7	$250,000
Total	**120**	**120**	**120**	**120**	**120**	**120**	**127**	**127**	**130**	**130**	
Percentage attributable to Eligible Portion	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Eligible Portion of Facilities	**120**	**120**	**120**	**120**	**120**	**120**	**127**	**127**	**130**	**130**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

10 Year Average	2010-2019
Quantity Standard	0.0001
Quality Standard	$296,100
Service Standard	$30

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$30
Eligible Amount	$6,262,515

Region of Peel
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment (Non Collection)
Unit Measure: Value of vehicles and equipment

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Value of Eligible Vehicles & Equipment	6,673,606	7,184,050	7,189,207	7,189,569	7,502,260	7,567,545	7,844,737	7,901,171	9,222,012	9,247,958
Total	**6,673,606**	**7,184,050**	**7,189,207**	**7,189,569**	**7,502,260**	**7,567,545**	**7,844,737**	**7,901,171**	**9,222,012**	**9,247,958**

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	5.0862	5.3592	5.2926	5.2241	5.3815	5.3597	5.4924	5.4300	6.2231	6.1298

10 Year Average	2010-2019
Quantity Standard	5.4979
Quality Standard	$1
Service Standard	$6

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$6
Eligible Amount	$1,163,250

Region of Peel
Service Standard Calculation Sheet

Service: Waste Diversion - Other (Blue and Green Carts)
Unit Measure: Number of carts

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Value ($/item)
Blue and Green Carts	-	-	-	-	-	336,800	338,362	338,568	343,838	346,838	$145
Blue Boxes	308,000	322,800	325,500	329,600	333,250	-	-	-	-	-	$9
Multi-Residential Recycling Carts	83,683	86,683	88,683	91,683	93,683	97,483	96,339	98,441	99,795	100,845	$400
Total	**391,683**	**409,483**	**414,183**	**421,283**	**426,933**	**434,283**	**434,701**	**437,009**	**443,633**	**447,683**	
Percentage attributable to Eligible Portion	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Eligible Portion of Facilities	**391,683**	**409,483**	**414,183**	**421,283**	**426,933**	**434,283**	**434,701**	**437,009**	**443,633**	**447,683**	

Population	1,312,100	1,340,500	1,358,360	1,376,220	1,394,080	1,411,940	1,428,300	1,455,100	1,481,900	1,508,700
Per Capita Standard	0.30	0.31	0.30	0.31	0.31	0.31	0.30	0.30	0.30	0.30

10 Year Average	2010-2019
Quantity Standard	0.3030
Quality Standard	$147
Service Standard	$45

D.C. Amount (before deductions)	10 Year
Forecast Population	211,500
$ per Capita	$45
Eligible Amount	$9,447,705

Appendix C
Long-Term Capital and Operating Cost Examination

Appendix C: Long-Term Capital and Operating Cost Examination

Region of Peel
Annual Capital and Operating Cost Impact

As a requirement of the D.C.A. under subsection 10 (2) (c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the D.C. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost saving attributable to economies of scale or cost sharing where applicable and prorate the cost on a per unit basis (i.e. sq.m. of building space, per vehicle, etc.). This was undertaken through a review of the Region's approved 2019 Financial Information Return (F.I.R.).

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as life cycle cost. By definition, life cycle costs are all the costs which are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The method selected for life cycle costing is the sinking fund method which provides that money will be contributed annually and invested, so that those funds will grow over time to equal the amount required for future replacement. The following factors were utilized to calculate the annual replacement cost of the capital projects (annual contribution = factor X capital asset cost) and are based on an annual growth rate of 2% (net of inflation) over the average useful life of the asset:

Asset	Lifecycle Cost Factors	
	Average Useful Life	Factor
Wastewater Mains	80	0.00516071
Wastewater Forcemains	60	0.00876797
Wastewater Flow Monitoring	25	0.03122044
Water Pumping Stations	38	0.01782057
Water Transmission Mains	70	0.00666765
Water Elevated Tanks	100	0.00320274
Water Treatment Plants	100	0.00320274
Reservoir	100	0.00320274
Facilities	60	0.00876797
Services Related to a Highway - Roads	18	0.04670210
Public Works Vehicles	10	0.09132653
Police Vehicles	7	0.13451196
Police Small Equipment and Gear	7	0.13451196
Paramedics Vehicles	7	0.13451196
Paramedics Small Equipment and Gear	7	0.13451196
Waste Diversion Facilities	20	0.04115672
Waste Diversion Carts	11	0.08217794

Table C-1 depicts the annual operating impact resulting from the proposed gross capital projects at the time they are all in place. It is important to note that, while Region program expenditures will increase with growth in population, the costs associated with the new infrastructure (i.e. facilities) would be delayed until the time these works are in place.

Table C-1
Region of Peel
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Water Supply Services				
1.1 Regional Water	942,644,245	28,523,719	17,015,729	45,539,448
1.2 South Peel Water	2,889,967,055	57,202,064	52,166,973	109,369,037
2. Wastewater Services				
2.1 Regional Wastewater	369,027,954	14,266,907	4,290,845	18,557,752
2.2 South Peel Wastewater	3,982,139,490	152,975,101	46,302,027	199,277,128
3. Peel Regional Police Services				
3.1 Police facilities, vehicles and equipment	126,916,623	434,754	53,352,593	53,787,347
4. Police - O.P.P.				
4.1 O.P.P. facilities	1,379,496	59,406	397,009	456,415
5. Services Related to a Highway - Transportation				
5.1 Services Related to a Highway - Transportation	1,651,485,289	84,902,301	29,352,856	114,255,157
6. Public Works				
6.1 Facilities and Vehicles	49,503,784	2,548,744	428,090	2,976,834
7. Growth Studies				
7.1 Growth Studies	19,819,744		-	-
8. Long Term Care				
8.1 Long term care facilities	60,315,755	3,677,283	14,229,151	17,906,434
9. Public Health				
9.1 Public Health department space	432,000	223,161	10,478,249	10,701,410
10. Paramedics				
10.1 Paramedics facilities, vehicles and equipment	62,602,454	-	15,227,418	15,227,418
11. Housing Services				
11.1 Housing facilities	583,794,673	29,553,716	21,658,181	51,211,897
12. Waste Diversion				
12.1 Waste diversion facilites, vehicles, equipment and other	27,357,000	1,909,542	12,744,116	14,653,658
Total	**10,767,385,562**	**376,276,698**	**277,643,235**	**653,919,933**

Appendix D
D.C. Reserve Fund Policy

Appendix D: D.C. Reserve Fund Policy

D.1 Legislative Requirements

The Development Charges Act, 1997 (D.C.A.) requires development charge collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the Act provide the following regarding reserve fund establishment and use:

- A municipality shall establish a reserve fund for each service to which the D.C. by-law relates; subsection 7 (1), however, allows services to be grouped into categories of services for reserve fund (and credit) purposes, although only 100% eligible and 90% eligible services may be combined (minimum of two reserve funds).
- The municipality shall pay each development charge it collects into a reserve fund or funds to which the charge relates.
- The money in a reserve fund shall be spent only for the "capital costs" determined through the legislated calculation process (as per subsection 5 (1) 2-8).
- Money may be borrowed from the fund but must be paid back with interest (O. Reg. 82/98, subsection 11 (1) defines this as Bank of Canada rate either on the day the by-law comes into force or, if specified in the by-law, the first business day of each quarter).
- D.C. reserve funds may not be consolidated with other municipal reserve funds for investment purposes and may only be as an interim financing source for capital undertakings for which development charges may be spent (section 37).

Annually, the Treasurer of the municipality is required to provide Council with a financial statement related to the D.C. by-law(s) and reserve funds. This statement must be made available to the public and may be requested to be forwarded to the Minister of Municipal Affairs and Housing. The D.C.A. does not prescribe how the statement is to be made available to the public. We would recommend that a resolution of Council make the statement available on the municipality's website or upon request.

Subsection 43 (2) and O. Reg. 82/98 prescribes the information that must be included in the Treasurer's statement, as follows:

- opening balance;
- closing balance;
- description of each service and/or service category for which the reserve fund was established (including a list of services within a service category);
- transactions for the year (e.g. collections, draws) including each assets capital costs to be funded from the D.C. reserve fund and the manner for funding the capital costs not funded under the D.C. by-law (i.e. non-D.C. recoverable cost share and post-period D.C. recoverable cost share);
- for projects financed by development charges, the amount spent on the project from the D.C. reserve fund and the amount and source of any other monies spent on the project.
- amounts borrowed, purpose of the borrowing and interest accrued during previous year;
- amount and source of money used by the municipality to repay municipal obligations to the D.C. reserve fund;
- list of credits by service or service category (outstanding at beginning of the year, given in the year and outstanding at the end of the year by holder);
- for credits granted under section 14 of the previous D.C.A., a schedule identifying the value of credits recognized by the municipality, the service to which it applies and the source of funding used to finance the credit; and
- a statement as to compliance with subsection 59 (1) of the D.C.A., whereby the municipality shall not impose, directly or indirectly, a charge related to a development or a requirement to construct a service related to development, except as permitted by the D.C.A. or another Act.

Based upon the above, Figure 1, and Attachments 1 and 2, set out the format for which annual reporting to Council should be provided.

D.2 D.C. Reserve Fund Application

Section 35 of the D.C.A. states that:

> "The money in a reserve fund established for a service may be spent only for capital costs determined under paragraphs 2 to 8 of subsection 5(1)."

This provision clearly establishes that reserve funds collected for a specific service are only to be used for that service, or to be used as a source of interim financing of capital undertakings for which a development charge may be spent.

Table D-1
Region of Peel
Annual Treasurer's Statement of D.C. Reserve Funds

Description	Services to which the Development Charge Relates												Total
	Non-Discounted Services						Discounted Services						
	Services Related to a Highway - Transportation	Public Works	Water Supply Services	Wastewater Services	Peel Regional Police Services	Police - O.P.P.	Growth Studies	Long Term Care	Public Health	Paramedics	Housing Services	Waste Diversion	
Opening Balance, January 1, _____													**0**
Plus:													
Development Charge Collections													0
Accrued Interest													0
Repayment of Monies Borrowed from Fund and Associated Interest[1]													0
Sub-Total	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Less:													
Amount Transferred to Capital (or Other) Funds[2]													0
Amounts Refunded													0
Amounts Loaned to Other D.C. Service Category for Interim Financing													0
Credits[3]													0
Sub-Total	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Closing Balance, December 31, _____	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

[1] Source of funds used to repay the D.C. reserve fund

[2] See Attachment 1 for details

[3] See Attachment 2 for details

The Municipality is compliant with s.s. 59.1 (1) of the *Development Charges Act* , whereby charges are not directly or indirectly imposed on development nor has a requirement to construct a service related to development been imposed, except as permitted by the *Development Charges Act* or another Act.

Attachment 1
Region of Peel
Amount Transferred to Capital (or Other) Funds – Capital Fund Transactions

Capital Fund Transactions	Gross Capital Cost	D.C. Recoverable Cost Share					Non-D.C. Recoverable Cost Share				
		D.C. Forecast Period			Post D.C. Forecast Period						
		D.C. Reserve Fund Draw	D.C. Debt Financing	Grants, Subsidies Other Contributions	Post-Period Benefit/ Capacity Interim Financing	Grants, Subsidies Other Contributions	Other Reserve/Reserve Fund Draws	Tax Supported Operating Fund Contributions	Rate Supported Operating Fund Contributions	Debt Financing	Grants, Subsidies Other Contributions
Services Related to a Highway - Transportation											
Capital Cost A											
Capital Cost B											
Capital Cost C											
Sub-Total - Services Related to a Highway - Transportation	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Water Supply Services											
Capital Cost D											
Capita Cost E											
Capital Cost F											
Sub-Total - Water	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Wastewater Services											
Capital Cost G											
Capita Cost H											
Capital Cost I											
Sub-Total - Wastewater	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Attachment 2
Region of Peel
Statement of Credit Holder Transactions

Credit Holder	Applicable D.C. Reserve Fund	Credit Balance Outstanding Beginning of Year _____	Additional Credits Granted During Year	Credits Used by Holder During Year	Credit Balance Outstanding End of Year _____
Credit Holder A					
Credit Holder B					
Credit Holder C					
Credit Holder D					
Credit Holder E					
Credit Holder F					

Appendix E
Local Service Policy

Appendix E: Local Service Policy

E.1 Local Service Policy for Services Related to a Highway

A highway and services related to a highway ensure the needs of all road users are considered and appropriately accommodated through associated land and infrastructure. The highway and services related to a highway support the movement of goods and people via different modes including, but not limited to passenger vehicles, commercial vehicles, transit vehicles, bicycles and pedestrians. By focusing on the design, reconstruction, or refurbishment of a highway or services related to a highway, the Regional Municipality of Peel can implement a complete street network that ensures the safe and efficient movement of both persons and goods. The complete streets approach supports the increase in travel choices for pedestrians, cyclists, public transit users, and motorists.

The associated infrastructure to achieve this concept shall include, but is not limited to: road pavement structure and curbs; grade separation/bridge structures (for any vehicles, railways and/or pedestrians); grading, drainage and retaining wall features; culvert structures; storm water drainage systems; utilities (fiber, phone, hydro, etc.); traffic control systems; signage; roundabouts; gateway features; street furniture; active transportation facilities (e.g. sidewalks and pedestrian facilities, cycling facilities, bike lanes, multi-use trails which interconnect the transportation network, etc.); transit lanes, stops, lay-bys and amenities; roadway illumination systems; boulevard and median surfaces (e.g. sod & topsoil, paving, etc.); street trees and landscaping; parking lanes & lay-bys; and driveway entrances; noise walls; railings and safety barriers.

The following guideline sets out, in general, the range of infrastructure for Services Related to a Highway that constitutes development charge projects.

E.1.1 Regional Roads and Other Roads

New or upgraded Regional roads necessitated by increased traffic volumes and unrelated (and not abutting) to a specific development are considered to be development charge projects, including but not limited to urbanization, road widening, and new roads.

E.1.2 Traffic Signals and Intersection Improvements

E.1.2.1 Related to a specific development

Intersection improvements to all roads, private entrances or entrances to specific developments necessitated by abutting or nearby development(s) and relating to Regional roads are considered to be the developer's responsibility through an agreement with the Region, including but not limited to urbanization, road widening, new roads, and intersection improvements.

E.1.2.2 Unrelated to a specific development

Intersection improvements to Regional roads, necessitated by increased traffic volumes, are considered to be development charge projects.

E.1.3 Streetlights

E.1.3.1 Related to a specific development

a. Streetlights on all new roads within a specific development are considered to be the developer's responsibility through an agreement.

b. Streetlights at new or existing intersections of Regional roads necessitated by a specific development (with or without intersection improvements) are considered to be the developer's responsibility through an agreement.

E.1.3.2 Unrelated to a specific development

a. Streetlights on Regional roads are considered to be the mandated responsibility of the applicable area municipality.

b. Streetlights at intersections along Regional roads, necessitated by increased traffic volumes, safety concerns, and unrelated to new development(s), are considered to be development charge projects.

E.1.4 Sidewalks

E.1.4.1 Related to a specific development

a. Sidewalks on all internal roads and abutting road frontages, whether on local or Regional roads, are considered to be the developer's responsibility through an agreement with the area municipality.

b. Sidewalks external to a development, whether on local or Regional roads, which are needed to connect the development to public spaces and/or existing sidewalks, are considered to be the developer's responsibility through an agreement with the area municipality.

E.1.5 Cycling Facilities

E.1.5.1 Related to a specific development

a. Cycling facilities within and outside road allowances within a specific development are considered to be the developer's responsibility through an agreement.

b. Cycling facilities external to a development, which are needed to connect the development to public spaces and/or other bike infrastructure, are considered to be the developer's responsibility through an agreement.

E.1.5.2 Unrelated to a specific development

Bike paths/lanes within Regional road allowances located separate from or combined with the road pavement are considered to be development charge projects.

E.1.6 Noise Abatement Measures

E.1.6.1 Related to a specific development

New or improved noise abatement measures internal to a development, related or unrelated to Regional roads, are considered to be the developer's responsibility through an agreement with the applicable area municipality.

E.1.6.2 Unrelated to a specific development

New or improved noise abatement measures unrelated to a specific development(s) on Regional roads are considered to be development charge projects in accordance the Region's Noise Policy.

E.1.7 Traffic Control Systems

E.1.7.1 Related to a specific development

New or upgraded traffic control systems, intended to service a specific and/or several development(s) are considered to be the developer's responsibility through an agreement.

E.1.7.2 Unrelated to a specific development

On Regional roads, new and upgraded traffic control systems necessitated by increased traffic volumes and unrelated to a specific development(s), are considered to be development charge projects.

E.1.8 Transportation Studies (traffic studies, master plans, secondary corridor studies)

E.1.8.1 Related to a specific development

Transportation impact studies undertaken for the benefit of a specific development(s) are considered to be the responsibility of the developer.

E.1.8.2 Unrelated to a specific development

Master plans and secondary transportation corridor studies, are considered to be development charge projects.

E.1.9 Land Acquisition (including right-of-ways and utility easements)

E.1.9.1 Related to a specific development

a. Land acquisition to upgrade Regional roads and/or provide utility corridors to the widths required by approved engineering design standards, is considered to be the developer's responsibility and primarily provided by dedications under the Planning Act.

b. Land acquisition for grade separations, new Regional roads or other excessive needs beyond normal dedication requirements are considered to be development charge projects (normally included as part of the capital project).

E.1.9.2 Unrelated to a specific development

In areas where limited or no development is anticipated and direct dedication is unlikely within the time constraints of the proposed capital works project, such land acquisitions are considered to be development charge projects (normally included as part of the capital project).

E.1.10 Stormwater

Stormwater infrastructure within the Regional Road Right of Way is for the sole and express purpose to collect and convey runoff from Regional Roads.

In exceptional circumstances and with the Region's express written permission the Region may allow local connections under the following conditions, including but not limited to:

- Applicant provides necessary documentation and evidence to clearly illustrate that there are no other feasible stormwater discharge locations.
- Provision of a detailed stormwater management report, signed by a professional engineer, that fully details the hydraulic and hydrologic impacts of the proposed connection to Regional stormwater collection infrastructure and receiving water. Report must clearly outline both quantitative and qualitative impacts to the collection system and receiving water.
- Provision of receiving water assimilative capacity assessment.
- Treated stormwater not to be conveyed through the Regional right-of-way or deposited into a Regional stormwater collection infrastructure without prior review and approval by the Region.

E.2 Water, Wastewater, and Stormwater Servicing

Underground services (linear infrastructure for Regional storm, water, and sanitary sewer systems) within the road allowance are not included in the cost of road infrastructure and are treated separately. The responsibility for such linear infrastructure as well as stormwater management ponds, pumping stations and storage facilities, which are undertaken as part of new developments or redevelopments, will be determined based on the following principles:

The costs of the following items shall be the direct responsibility of the developer, as it is considered a local service:

a. providing all underground services internal to the development, including storm, water and sanitary services;

b. providing service connections from existing underground services to the development;

c. providing new underground services or upgrading existing underground services external to the development if the services are required to service the development, and if the pipe sizes are less than 400mm for water services and 375mm for sanitary services. If external services are required by two or more developments, the developer for the first development will be responsible for the cost of the external services and may opt to enter into front-ending/cost-sharing agreements with other developers independent of the Municipality;

d. providing stormwater management ponds and other facilities required by the development including all associated features such as landscaping and fencing; and

e. water and wastewater facilities (including; water booster pumping stations, reservoir pumping stations and/or sanitary pumping stations) serving individual developments.

The costs of the following items shall be paid through development charges:

a. external underground services involving trunk infrastructure and pipe sizes 400mm and greater for water services and 375 mm and greater for sanitary services;

b. water storage facilities, water pumping stations and/or sanitary pumping stations sized/required for a service area beyond the individual development;

c. water treatment, storage facilities, transmission mains, re-chlorination/sampling stations and municipal drinking water wells associated with municipal service areas; and

d. wastewater treatment plants and sanitary trunk sewers associated with municipal service areas.

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Appendix F
Asset Management Plan

Appendix F: Asset Management Plan

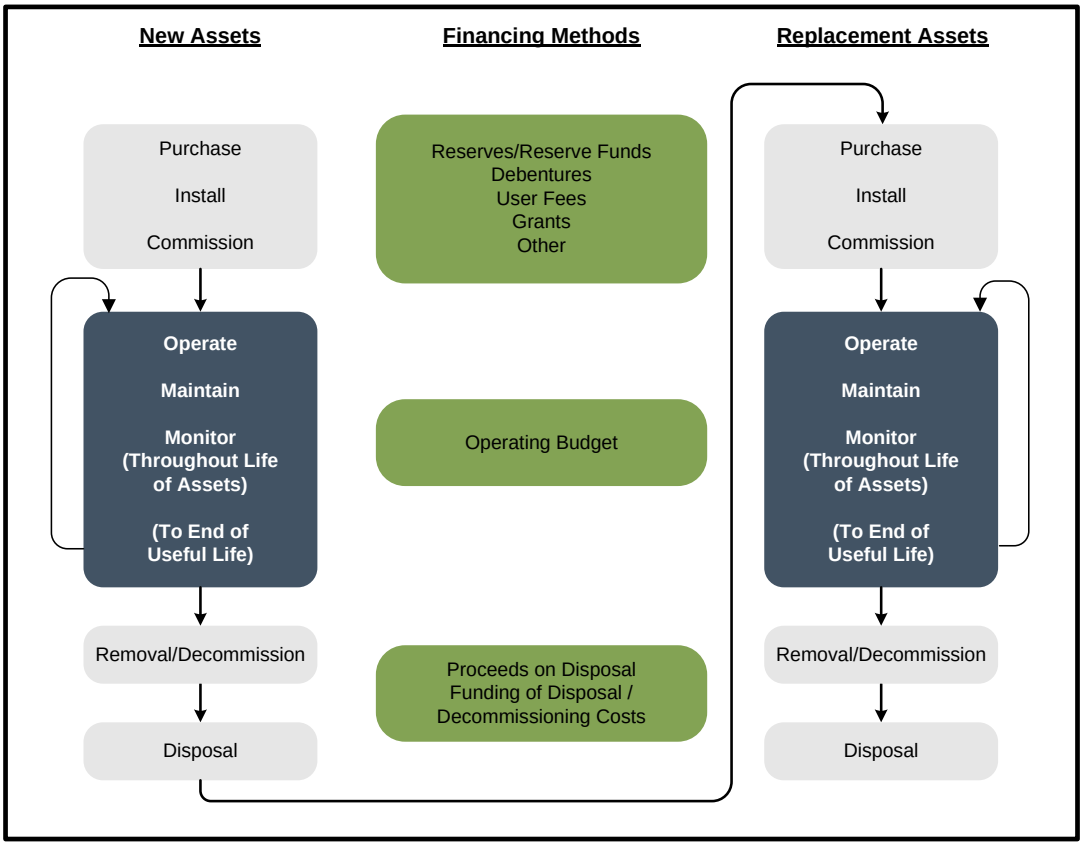
The recent changes to the D.C.A. (new subsection 10 (2) (c.2)) require that the background study must include an asset management plan (A.M.P.) related to new infrastructure. Section 10 (3) of the D.C.A. provides:

> "The asset management plan shall,
>
> (a) deal with all assets whose capital costs are proposed to be funded under the development charge by-law;
>
> (b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full life cycle;
>
> (c) contain any other information that is prescribed; and
>
> (d) be prepared in the prescribed manner."

In regard to the above, section 8 of the Regulations was amended to include subsections (2), (3) and (4) which set out for specific detailed requirements for transit (only). For all services except transit, there are no prescribed requirements at this time thus requiring the municipality to define the approach to include within the background study.

At a broad level, the A.M.P. provides for the long-term investment in an asset over its entire useful life along with the funding. The schematic below identifies the costs for an asset through its entire lifecycle. For growth-related works, the majority of capital costs will be funded by the D.C. Non-growth-related expenditures will then be funded from non-D.C. revenues as noted below. During the useful life of the asset, there will be minor maintenance costs to extend the life of the asset along with additional program related expenditures to provide the full services to the residents. At the end of the life of the asset, it will be replaced by non-D.C. financing sources.

It should be noted that with the recent passing of the Infrastructure for Jobs and Prosperity Act (I.J.P.A.) municipalities are now required to complete A.M.P.s, based on certain criteria, which are to be completed by 2021 for core municipal services and 2023 for all other services. The amendments to the D.C.A. do not require municipalities to complete these A.M.P.s (required under I.J.P.A.) for the D.C. background study, rather the D.C.A. requires that the D.C. background study include information to show the assets to be funded by the D.C. are sustainable over their full lifecycle.



In 2012, the Province developed Building Together: Guide for municipal asset management plans which outlines the key elements for an A.M.P., as follows:

State of local infrastructure: asset types, quantities, age, condition, financial accounting valuation and replacement cost valuation.

Desired levels of service: defines levels of service through performance measures and discusses any external trends or issues that may affect expected levels of service or the municipality's ability to meet them (for example, new accessibility standards, climate change impacts).

Asset management strategy: the asset management strategy is the set of planned actions that will seek to generate the desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

Financing strategy: having a financial plan is critical for putting an A.M.P. into action. By having a strong financial plan, municipalities can also demonstrate that they have

made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting and are making full use of all available infrastructure financing tools.

Commensurate with the above, the Region prepared an A.M.P. in 2019 for its existing assets however, did not take into account future growth-related assets. As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information.

In recognition to the schematic above, the following table (presented in 2020 $) has been developed to provide the annualized expenditures and revenues associated with new growth. Note that the D.C.A. does not require an analysis of the non-D.C. capital needs or their associated operating costs so these are omitted from the table below. As well, as all capital costs included in the D.C.-eligible capital costs are not included in the Region's A.M.P., the present infrastructure gap and associated funding plan have not been considered at this time. Hence the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects which will require financing from municipal financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing.

2. Lifecycle costs for the 2020 D.C. capital works have been presented based on a sinking fund basis. The assets have been considered over their estimated useful lives.

3. Incremental operating costs for the D.C. services (only) have been included.

4. The resultant total annualized expenditures are $807.84 million.

5. Consideration was given to the potential new taxation and user fee revenues which will be generated as a result of new growth. These revenues will be available to finance the expenditures above. The new operating revenues are $437.44 million. This amount, totalled with the existing operating revenues of $2.90 billion, provide annual revenues of $3.34 billion by the end of the period.

6. In consideration of the above, the capital plan is deemed to be financially sustainable.

Region of Peel
Asset Management – Future Expenditures and Associated Revenues
2020$

	2041 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth Related Capital[1]	90,231,508
Annual Debt Payment on Post Period Capital[2]	63,686,859
Lifecycle:	
Annual Lifecycle	
Total - Annual Lifecycle	$376,276,698
Incremental Operating Costs (for D.C. Services)	$277,643,235
Total Expenditures	**$807,838,301**
Revenue (Annualized)	
Total Existing Revenue[3]	$2,901,735,686
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	$437,436,709
Total Revenues	**$3,339,172,395**

[1] Non-Growth Related component of Projects including 10% mandatory deduction on soft services
[2] Interim Debt Financing for Post Period Benefit
[3] As per Sch. 10 of FIR

Appendix G
Alternative D.C. Calculations for Refinements as per Bill 197

Appendix G: Alternative D.C. Calculations for Refinements as per Bill 197

G.1 Introduction

As noted in Section 1.4 of this report, Bill 197 prepared in response to the global pandemic. The Province released Bill 197 which provided amendments to a number of Acts, including the D.C.A. and Planning Act. Bill 197 was tabled on July 8, 2020 and received Royal Assent on July 21, 2020, however, the changes with respect to D.C.s and C.B.C.s do not come into effect until proclamation, which is yet to be determined. One of the major changes with respect to D.C.s is the removal of the mandatory 10% deduction for "soft services". As proclamation may occur prior to or shortly after the anticipated by-law passage date, this appendix provides the alternative D.C. calcualtions with the 10% deduction removed. The by-law is proposed to include two versions of the D.C rate schedules. The rates schedules that correspond to table ES-2 are proposed to take effect on January 1, 2021 provided that the legislative amendments have not been proclaimed into force by that date. The Contingency D.C. rates schedules provided in tables G-6 to G-8 will either take effect on January 1, 2021 if the legislative amendments have been proclaimed into force before that date, or, in the event that proclamation does not occur until sometime after January 1, 2021, the Contingency D.C. rates schedules will take effect on the actual date that the provisions of the D.C. Act amended through legislative changes are proclaimed into force by the Lieutenant Governor.

G.2 Revised D.C. Eligible Costs

The following table provides a summary of the growth-related costs included in the D.C. calculations. The table includes the growth-related costs as provided in Chapter 5 of this report (i.e. with the 10% mandatory deduction) along with the revised growth-related costs. Only those services that are impacted by the 10% mandatory deducation have been presented in the table below (i.e. Growth Studies, Long-term Care, Public Health, Paramedics, Housing, and Waste Diversion). In total, the D.C. eligible costs included in the calculations would increase by $29.81 million for residential development and $1.11 million for non-residential development.

Table G-1
Region of Peel
D.C. Eligible Capital Cost Comparison
With and Without Mandatory 10% Deduction

Service	Growth-related Costs Included in the Calculations					
	With 10% Mandatory Deduction			Without 10% Mandatory Deduction		
	Total	Residential	Non-residential	Total	Residential	Non-residential
Growth Studies	18,213,744	12,931,758	5,281,986	19,819,744	14,072,018	5,747,726
Long Term Care	45,262,144	45,262,144	-	51,499,076	51,499,076	-
Public Health	-	-	-	-	-	-
Paramedics	17,474,174	12,406,664	5,067,510	19,294,454	13,699,062	5,595,392
Housing Services	181,633,443	181,633,443	-	200,516,673	200,516,673	-
Waste Diversion	21,361,500	20,293,425	1,068,075	23,735,000	22,548,250	1,186,750
Total Impacted Services	**283,945,004**	**272,527,433**	**11,417,571**	**314,864,946**	**302,335,079**	**12,529,867**
Total All D.C. Services	**9,083,383,907**	**6,664,516,237**	**2,418,867,671**	**9,114,303,849**	**6,694,323,882**	**2,419,979,967**

G.3 Revised D.C. Calulations

Based on the increase in growth-related capital costs included in the D.C. calculations, the following tables provide revised D.C. calculations, from those presented in Chapter 6 of this report. Note, revised calculations have been provided only for those services affected by the 10% mandatory deduction (i.e. Growth Studies, Long-term Care, Health, Paramedics, Housing, and Waste Diversion).

Table G-2
Region of Peel
D.C. Calculation (Revised) – Removal of 10% Mandatory Deduction
Region-Wide Services
2020-2029

SERVICE	2020$ D.C.-Eligible Cost		2020$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.m.
	$	$	$	$
6. Public Works				
6.1 Facilities and Vehicles	16,760,107	6,845,677	272.88	1.10
7. Growth Studies				
7.1 Growth Studies	14,072,018	5,747,726	229.12	0.93
8. Long Term Care				
8.1 Long term care facilities	51,499,076	-	838.50	-
9. Public Health				
9.1 Public Health department space	-	-	-	-
10. Paramedics				
10.1 Paramedics facilities, vehicles and equipment	13,699,062	5,595,392	223.05	0.90
11. Housing Services				
11.1 Housing facilities	200,516,673	-	3,264.77	-
12. Waste Diversion				
12.1 Waste diversion facilites, vehicles, equipment and other	22,548,250	1,186,750	367.13	0.19
TOTAL	**319,095,186**	**19,375,545**	**5,195.46**	**$3.12**
D.C.-Eligible Capital Cost	319,095,186	$19,375,545		
10-Year Gross Population/GFA Growth (sq.m.)	258,080	6,213,200		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$1,236.42**	**$3.12**		
By Residential Unit Type **P.P.U.**				
Single and Semi-Detached Dwelling 4.202	$5,195.44			
Other Residential 3.328	$4,114.80			
Apartments (>750 sq.ft.) 3.048	$3,768.61			
Small Unit (<=750 sq.ft.) 1.612	$1,993.11			

Table G-3
Region of Peel
D.C. Calculation
Total All Services

	2020$ D.C.-Eligible Cost			2020$ D.C.-Eligible Cost		
	Residential	Non-Residential		Residential	Non-Industrial, Non-Residential	Industrial
		Non-Industrial	Industrial	S.D.U.	per sq.m.	
	$	$	$	$	$	$
Urban area-specific Services (Water) 21 Year	2,586,119,298	956,509,877	956,509,877	22,392.53	76.19	76.19
Urban area-specific Services (Wastewater) 21 Year	2,681,998,789	991,972,155	991,972,155	23,371.54	79.01	79.01
Area-specific Services (Mississauga & Brampton) 10 Year	39,293,050	16,049,274	16,049,274	762.21	3.19	3.19
Area-specific Services (Caledon) 10 Year	1,034,622	344,874	344,874	104.86	0.29	0.29
Municipal-wide Transportation Services 21 Year	1,066,782,938	297,493,110	138,235,132	9,190.79	69.42	16.72
Municipal-wide Services 10 Year	319,095,186	19,375,545	19,375,545	5,195.46	3.12	3.12
TOTAL (BRAMPTON AND MISSISSAUGA)	**6,693,289,260**	**2,281,399,961**	**2,122,141,983**	**60,912.53**	**230.93**	**178.23**
TOTAL (CALEDON)	**6,655,030,833**	**2,265,695,561**	**2,106,437,583**	**60,255.18**	**228.03**	**175.33**

G.4 Comparison of D.C. Rates

Based on the above, the following tables present comparisons of the rates with and without the mandatory 10% deduction for residential, industrial, and non-industrial charges. For residential development, the D.C. would increase by $485 per single or semi-detached dwelling. For non-residential development (both industrial and non-industrial), the D.C. would increase by $0.18 per sq.m. of G.F.A.

Table G-4
Region of Peel
Residential D.C. Rate Comparison

Service	Residential - Single and Semi-Detached Dwelling	
	With 10% Mandatory Deduction	Without 10% Mandatory Deduction
Total Region of Peel	60,427	60,913
Total Caledon	59,770	60,255

Table G-5
Region of Peel
Non-residential D.C. Rate Comparison

Service	With 10% Mandatory Deduction		Without 10% Mandatory Deduction	
	Industrial	Non-Industrial	Industrial	Non-Industrial
	Per sq.m of G.F.A.	Per sq.m of G.F.A.	Per sq.m of G.F.A.	Per sq.m of G.F.A.
Total Region of Peel	178.05	230.75	178.23	230.93
Total Caledon	175.15	227.85	175.33	228.03

G.5 Revised Tables for By-law

As per the revised calculations above, the following provides the schedules of charges to be included in the by-law, should the changes to the Act be proclaimed prior to anticipated passage of the D.C. by-law. Additionally, the by-law may be amended subsequent to passage with the schedules below, should the legislation be proclaimed after the D.C. by-law is passed.

Table G-6
Schedule A-2 to By-law XX-2020
Development Charge Rates – Residential
SCHEDULE A-2

Program	RESIDENTIAL			
	Single and Semi-Detached Dwelling	Apartments (>750 sq.ft.)	Small Unit (<=750 sq.ft.)	Other Residential
Region of Peel				
Water Supply Services	22,392.53	16,242.84	8,590.38	17,734.97
Wastewater Services	23,371.54	16,952.99	8,965.95	18,510.35
Services Related to a Highway - Transportation	9,190.79	6,666.71	3,525.83	7,279.14
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**
Public Works	272.88	197.94	104.68	216.12
Peel Regional Police Services	762.21	552.88	292.40	603.67
Growth Studies	229.12	166.20	87.90	181.46
Long Term Care	838.50	608.22	321.67	664.10
Public Health	-	-	-	-
Paramedics	223.05	161.79	85.57	176.66
Housing Services	3,264.77	2,368.17	1,252.45	2,585.71
Waste Diversion	367.13	266.31	140.84	290.77
Sub-total Soft Services:	**5,957.67**	**4,321.51**	**2,285.51**	**4,718.49**
TOTAL REGION OF PEEL	**60,912.53**	**44,184.05**	**23,367.67**	**48,242.95**
Town of Caledon				
Sub-total Hard Services:	**54,954.86**	**39,862.54**	**21,082.16**	**43,524.46**
Soft Service Rate Without Peel Regional Police	5,195.46	3,768.63	1,993.11	4,114.82
Police - O.P.P.	104.86	76.06	40.23	83.05
TOTAL CALEDON	**60,255.18**	**43,707.23**	**23,115.50**	**47,722.33**

Table G-7
Schedule B-2 to By-law XX-2020
Development Charge Rates – Industrial
SCHEDULE B-2

Program	NON-RESIDENTIAL Industrial (per sq.m. of Gross Floor Area)
Region of Peel	
Water Supply Services	76.19
Wastewater Services	79.01
Services Related to a Highway - Transportation	16.72
Sub-total Hard Services:	**171.92**
Public Works	1.10
Peel Regional Police Services	3.19
Growth Studies	0.93
Long Term Care	-
Public Health	-
Paramedics	0.90
Housing Services	-
Waste Diversion	0.19
Sub-total Soft Services:	**6.31**
TOTAL REGION OF PEEL	**178.23**
Town of Caledon	
Sub-total Hard Services:	**171.92**
Soft Service Rate Without Peel Regional Police	3.12
Police - O.P.P.	0.29
TOTAL CALEDON	**175.33**

Table G-8
Schedule C-2 to By-law XX-2020
Development Charge Rates – Non-Residential – Non-Industrial
SCHEDULE C-2

Program	NON-RESIDENTIAL Non-Industrial (per sq.m. of Gross Floor Area)
Region of Peel	
Water Supply Services	76.19
Wastewater Services	79.01
Services Related to a Highway - Transportation	69.42
Sub-total Hard Services:	**224.62**
Public Works	1.10
Peel Regional Police Services	3.19
Growth Studies	0.93
Long Term Care	-
Public Health	-
Paramedics	0.90
Housing Services	-
Waste Diversion	0.19
Sub-total Soft Services:	**6.31**
TOTAL REGION OF PEEL	**230.93**
Town of Caledon	
Sub-total Hard Services:	**224.62**
Soft Service Rate Without Peel Regional Police	3.12
Police - O.P.P.	0.29
TOTAL CALEDON	**228.03**

Appendix H
Proposed D.C. By-law (Provided Under Separate Cover)

Appendix H: Proposed By-law (Provided Under Separate Cover)