



Development Charges Background Study

Regional Municipality of Niagara
Accessible Report

May 30, 2022

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Refinements to Report

Subsequent to the release of the background study on May 19, 2022, Watson & Associates Economists Ltd. (Watson) worked with Regional Municipality of Niagara (Region) staff to provide for a document with refined formatting to meet the Region's accessibility requirements.

Further to accessibility formatting, as the Regional Development Charges Policy Task Force directed refinements to the draft by-law to include an exemption for agriculture, the draft by-law has been updated in this report to reflect this change.

Additionally, in preparing this accessible report, an error in the D.C. calculations for industrial, commercial, and institutional development has been corrected. Tables 6-2 and 6-4 of the May 19, 2022 report have been revised in this report and the updated calculations are presented in Tables 6-2 and 6-6 through 6-13. Additionally, pages v and viii in the Executive Summary and Figure 1-1 have been updated, along with the draft by-law.

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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.P.A.	Community Improvement Project Areas
D.C.	Development charge
D.C.A.	Development Charges Act, 1997, as amended
ERASE	Environmental, Remediation, and Site Enhancement
F.I.R.	Financial Information Return
G.F.A.	Gross floor area
LPAT	Local Planning Appeal Tribunal
M.O.E.C.P.	Ministry of the Environment, Conservation and Parks
N.F.P.O.W.	No fixed place of work
OLT	Ontario Land Tribunal
O.M.B.	Ontario Municipal Board
O.P.A.	Official Plan Amendment
O. Reg.	Ontario Regulation
P.O.A.	Provincial Offences Act
P.P.U.	Persons per unit
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
S.W.M.	Stormwater management
sq.ft.	square foot
sq.m	square metre



Executive Summary



Executive Summary

1. The report provided herein represents the Development Charges (D.C.) Background Study for the Regional Municipality of Niagara required by the *Development Charges Act, 1997*, as amended (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;
 - 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.



- 6) Net costs divided by growth to provide the D.C.
3. A number of changes to the D.C.A. have occurred since the passage of the Region's 2017 D.C. By-law. These changes were introduced through four bills passed in the Ontario legislature: Bill 108, Bill 138, Bill 197, and Bill 213. The following provides a brief summary of the proposed changes.

Bill 108: More Homes, More Choice: Ontario's Housing Supply Action Plan

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 were to be implemented by Regulation, however, these changes were not implemented (subject to Bill 197 discussed later). 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 instalments, and any unpaid amounts inclusive of interest 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 D.C. by-law in effect on the day of Site Plan or Zoning By-law Amendment application.

Other key elements of the changes that were not proclaimed and were dealt with subsequently through Bill 197 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, and 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 138: Plan to Build Ontario Together Act, 2019

On November 6, 2019, the Province released Bill 138 which provided further amendments to the D.C.A. and Planning Act. This Bill received Royal Assent on December 10, 2019 and was proclaimed which resulted in sections related to the D.C.A. (schedule 10) becoming effective on January 1, 2020. With respect to the D.C.A., this Bill removed instalment payments for commercial and industrial developments that were originally identified in Bill 108.

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 Bill 197, 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. has now been expanded to include most services eligible under the D.C.A. prior to Bill 108. For the Regional Municipality of Niagara, this means that services currently provided in the D.C. by-law remain eligible.
- **Mandatory 10% Deduction:** The mandatory 10% deduction is 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.

Bill 213: Better for People, Smarter for Business Act, 2020

On December 8, 2020, Bill 213 received Royal Assent. One of the changes of the Bill that took effect upon Royal Assent included amending the Ministry of Training, Colleges and Universities Act by introducing a new section that would exempt the



payment of D.C.s for developments of land intended for use by a university that receives operating funds from the Government.

These changes to the D.C.A. were proclaimed on September 18, 2020 and are further discussed in Section 1.4 of this report.

- 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 (2022 to 2031), 20-year (2022 to 2041), and longer-term (2022 to 2051) periods.

Table ES-1
Summary of Growth Forecast by Planing Period

Measure	10-year 2022 to 2031	20-year 2022 to 2041	Urban 30-year (2022 to 2051) Water	Urban 30-year (2022 to 2051) Wastewater
(Net) Population Increase	60,041	121,889	189,299	190,771
Residential Unit Increase	37,224	70,882	102,217	102,117
Non-Residential Gross Floor Area Increase (sq.ft.)	10,247,500	21,900,400	32,050,500	32,050,500

Source Watson & Associates Economists Ltd. Forecast 2022

- On November 16, 2017, the Regional Municipality of Niagara passed By-law 2017-98 under the D.C.A. The by-law imposes D.C.s on residential and non-residential uses. This by-law will expire on August 31, 2022. The Region is undertaking a D.C. public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for June 30, 2022 with adoption of the by-law on July 21, 2022.
- The Region's D.C.s currently in effect total \$22,449 for single detached dwelling units for full services. Non-residential charges are provided for four categories; \$14.20 per sq.ft. of gross floor area for commercial, \$5.89 per sq.ft. of gross floor area for industrial, \$10.14 per sq.ft. of gross floor area for institutional developments, and \$9,012 per wind turbine. This report has undertaken a



recalculation of the charges based on future identified needs (presented in Schedule ES-3 for residential and non-residential development). Charges have been provided on a Region-wide basis for all services except for water and wastewater services. Water and wastewater services have been provided on an urban area basis. The corresponding single detached unit charge for full services (i.e. including water and wastewater) is \$25,785. The non-residential charges are provided as follows:

- \$16.35 per sq.ft. for commercial;
- \$6.13 per sq.ft. for industrial;
- \$12.07 per sq.ft. for institutional; and
- \$10,816 per wind turbine.

These rates are submitted to Council for its consideration.

7. 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 6-6. A summary of these costs is provided below:

Table ES-2
Summary of Expenditures Anticipated Over the Life of the By-law

Summary of Expenditures Anticipated Over the Life of the By-law	Expenditure Amount
Total gross expenditures planned over the next five years	\$1,543,146,339
Less: Benefit to existing development	\$635,823,402
Less: Post planning period benefit	\$117,387,803
Less: Ineligible re: Level of Service	\$1,283,333
Less: Grants, subsidies and other contributions	\$19,055,950
Net costs to be recovered from development charges	\$769,595,851

This suggests that for the non-D.C. cost over the five-year D.C. by-law (benefit to existing development, ineligible services, and grants, subsidies and other contributions), \$656.16 million (or an annual amount of \$131.23 million) will need to be contributed from taxes and rates, or other sources. With respect to the post period benefit amount of \$117.39 million, it 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 \$1.54 billion over the next five years, of which \$769.60 million (50%) is recoverable from D.C.s. Of this net amount, \$641.35 million is recoverable from residential development and \$128.24 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

8. 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 an urban 30-year forecast:

- Wastewater Services; and
- Water Services.

The following services are calculated based on a 20-year forecast:

- Services Related to a Highway; and
- Policing.

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

- Long-term Care;
- Child Care and Early Years Programs;
- Services Related to Public Health;
- Housing;
- Provincial Offences Act including by-law Enforcement Services;
- Ambulance; and
- Waste Diversion.

In addition, classes of services have been established for Growth Studies (which is calculated based on a Region-wide 10-year forecast) and Public Works (which is calculated based on a Region-wide 20-year forecast).

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 appended in Appendix I. 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).



Table ES-3
Schedule of Development Charges

Service/Class of Service	Single and Semi-Detached Dwelling	Other Multiples	Apartments 2+ Bedrooms	Apartments 1 Bedroom	Special Care/Special Dwelling Units & Dwelling Rooms	Commercial (per sq.ft.)	Industrial (per sq.ft.)	Institutional (per sq.ft.)	Wind Turbines
Services Related to a Highway	9,883	7,062	6,718	4,096	3,712	6.78	2.23	5.08	9,883
Public Works (Facilities and Fleet)	286	204	194	119	107	0.26	0.09	0.21	286
Policing Services	297	212	202	123	112	0.28	0.09	0.21	297
Growth Studies	84	60	57	35	32	0.06	0.02	0.04	84
Long-term Care Services	1,241	887	844	514	466	0.60	0.20	0.38	0
Provincial Offences Act	0	0	0	0	0	0.00	0.00	0.00	0
Public Health Services	0	0	0	0	0	0.00	0.00	0.00	0
Ambulance Services	266	190	181	110	100	0.14	0.04	0.08	266
Housing Services	2,039	1,457	1,386	845	766	0.00	0.00	0.00	0
Waste Diversion	176	126	120	73	66	0.04	0.01	0.03	0
Sub-total Region-wide Services/Class of Services	14,272	10,198	9,702	5,915	5,361	8.16	2.68	6.03	10,816
Wastewater Services	7,486	5,349	5,089	3,103	2,811	5.24	2.21	3.87	0
Water Services	4,027	2,878	2,737	1,669	1,512	2.95	1.24	2.17	0
Sub-total Urban Services	11,513	8,227	7,826	4,772	4,323	8.19	3.45	6.04	0
Total Rural Area	14,272	10,198	9,702	5,915	5,361	8.16	2.68	6.03	10,816
Total Urban Area	25,785	18,425	17,528	10,687	9,684	16.35	6.13	12.07	10,816



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, 1997*, as amended, (D.C.A.) (section 10) and, accordingly, recommends new development charges (D.C.s) and policies for the Regional Municipality of Niagara.

The Region retained Watson & Associates Economists Ltd. (Watson), to undertake the D.C. study process throughout 2021 and 2022. Watson worked with Region staff as well as engineering consultants (GM BluePlan Engineering Limited and HDR Corporation) 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 (included as Appendix I).

In addition, the report is designed to set out sufficient background on the legislation (Chapter 4), Niagara'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 public meeting required under section 12 of the D.C.A. has been scheduled for June 30, 2022. 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 May 19, 2022.

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;
- refinements to the report, if required; 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 Regional Municipality of Niagara

Schedule of Study Milestone	Dates
1. Data collection, staff review, engineering work, D.C. calculations and policy work	Summer 2021 to Spring 2022
2. Engagement Sessions with Partners/Interested Parties and Local Area Municipalities	1. June 22, 2021 2. September 28, 2021 3. March 8, 2022 4. May 4, 2022
3. Regional Development Charges Task Force Meetings	1. March 25, 2021 2. June 17, 2021 3. July 29, 2021 4. October 21, 2021 5. February 24, 2022 6. April 7, 2022 7. May 19, 2022
4. Public release of final D.C. Background study and proposed by-law	May 19, 2022



Schedule of Study Milestone	Dates
5. Updated D.C. Background Study and proposed draft by-law	May 30, 2022
6. Public meeting advertisement placed in newspaper(s)	No later than June 9, 2022
7. Public meeting of Council	June 30, 2022
8. Council considers adoption of background study and passage of by-law	July 21, 2022
9. Newspaper notice given of by-law passage	By 20 days after passage
10. Last day for by-law appeal	40 days after passage
11. 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 108, 138, 197, and 213

1.3.1 *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 was 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 (many of these changes were revised through Bill 197). At the time of writing, the following provisions have been proclaimed:

- Effective January 1, 2020, rental housing and institutional developments will pay D.C.s in six equal annual payments commencing at occupancy. Non-profit housing developments will 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 and collected 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 submitted after this section is proclaimed), shall be determined based on the D.C. in effect on the day of Site Plan or Zoning By-law Amendment application. If the development is not proceeding via these planning approvals, then the amount is determined the earlier of the date of issuance of a building permit.

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. 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 the next section this list of services has been amended through Bill 197.

Mandatory 10% deduction - The amending legislation would have removed 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. was proposed to include formerly eligible D.C. services that are not included in the above listing, in addition to parkland dedication and bonus zoning contributions.

1.3.2 Bill 138: Plan to Build Ontario Together Act, 2019

On November 6, 2019, the Province release Bill 138 which provided further amendments to the D.C.A. and Planning Act. This Bill received Royal Assent on December 10, 2019 and was proclaimed which resulted in sections related to the D.C.A. (schedule 10) becoming effective on January 1, 2020. The amendments to the D.C.A. included removal of instalment payments for commercial and industrial developments that were originally included in Bill 108.



1.3.3 Bill 197: COVID-19 Economic Recovery Act, 2020

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, received Royal Assent on July 21, 2020, and was proclaimed on September 18, 2020. The following provides a summary of the changes:

1.3.3.1 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. Bill 197, however, 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.
 - Transit services.
 - 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.

Pre-Bill 108/197 legislation (i.e., D.C.A., 1997) allowed for categories of services to be grouped together into a minimum of two categories (90% and 100% services).

The Act (as amended) repeals and replaces 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.

Note: An initial consideration of “class” appears to mean any group of services.

Mandatory 10% Deduction

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

1.3.3.2 C.B.C. Related Changes

C.B.C. Eligibility

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



1.3.3.3 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. (eligible services), “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, and subsequent proclamation on September 18, 2020, this report has provided the D.C. calculations without the 10% mandatory deduction.

1.3.4 Bill 213: Better for People, Smarter for Business Act, 2020

On December 8, 2020, Bill 213 received Royal Assent. One of the changes of the Bill that took effect upon Royal Assent included amending the Ministry of Training, Colleges and Universities Act by introducing a new section that would exempt the payment of D.C.s for developments of land intended for use by a university that receives operating funds from the Government. As a result, this mandatory exemption will be included in the D.C. by-law.



Chapter 2

Current Regional Municipality of Niagara Policy



2. Current Regional Municipality of Niagara Policy

2.1 Schedule of Charges

On November 16, 2017, the Regional Municipality of Niagara passed By-law 2017-98 under the D.C.A. This by-law imposes D.C.s for residential and non-residential uses. Table 2-1 below provides the rates currently in effect.

2.2 Services Covered

The following services are covered under By-law 2017-98:

- Services Related to a Highway;
- Policing Services;
- Growth Studies (General Government);
- Long-term Care Services;
- Provincial Offences Act;
- Public Health Services;
- Ambulance Services (Emergency Medical Services);
- Housing Services;
- Waste Diversion Services;
- Water Services; and
- Wastewater Services.

2.3 Timing of D.C. Calculation and Payment

D.C.s are calculated and payable on the issuance of the first building permit with respect to the structure.

The Region may, in the case of a development located outside the existing service area, require payment of an appropriate share of the costs of the required infrastructure within the existing service area, in addition to the costs external to the service area.



Table 2-1
Regional Municipality of Niagara
Current D.C. Rates
(January 1, 2022 to August 31, 2022)

Services	Single & Semi Detached	Other Multiples	Apartments 2+ Bedrooms	Apartments 1 Bedroom	Special Care/Special Dwelling Units	Commercial (per sq.ft.)	Industrial (per sq.ft.)	Institutional (per sq.ft.)	Wind Turbines
Services Related to a Highway	8,046	5,861	5,585	3,317	3,041	5.68	2.39	4.06	8,046
Policing Services	482	352	335	199	183	0.35	0.15	0.27	482
Growth Studies ¹	271	198	188	111	103	0.26	0.09	0.16	271
Long-term Care Services	1,548	1,130	1,075	640	585	0.44	0.17	0.32	0
Provincial Offences Act	61	45	42	27	23	0.06	0.02	0.03	0
Public Health Services	189	138	133	78	71	0.04	0.02	0.03	0
Ambulance Services ²	212	154	147	87	80	0.04	0.02	0.03	212
Housing Services ³	1,533	1,115	1,063	632	579	0.00	0.00	0.00	0
Waste Diversion	462	336	320	190	175	0.40	0.15	0.29	0
Sub-total - Region-wide Services	12,804	9,329	8,888	5,281	4,840	7.27	3.01	5.19	9,011
Wastewater Services	5,647	4,114	3,921	2,330	2,135	4.05	1.69	2.90	0
Water Services	3,998	2,913	2,776	1,649	1,511	2.88	1.19	2.05	0
Sub-total Urban Services	9,645	7,027	6,697	3,979	3,646	6.93	2.88	4.95	0
Total	22,449	16,356	15,585	9,260	8,486	14.20	5.89	10.14	9,011



2.4 Indexing

Rates shall be adjusted, without amendment to the By-law, annually on January 1, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0135-01)¹.

2.5 Redevelopment Allowance

As a result of the redevelopment of land, a building or structure existing on the same land within five years prior to the date of payment of D.C.s in regard to such redevelopment was or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land in order to facilitate the redevelopment, 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. 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;

provided that such amounts shall not exceed, in total, the amount of the D.C.s otherwise payable with respect to the redevelopment.

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.



Where demolition takes place on a brownfield site, the above conditions apply however, an application may be made to the Regional Treasurer for an extension of time for the redevelopment credit of up to three additional years if the redevelopment has not been able to proceed due to delays in completing the remediation works. This application must be received prior to the expiry of the initial five-year period as provided in the by-law.

2.6 Exemptions

The following non-statutory exemptions are provided under By-law 2017-98.

- Granny flats;
- Parking structures;
- Non-residential lands and buildings used for agricultural use;
- Place of worship (only the portions used exclusively for religious services, receptions, and meeting areas in connection with, or integral to the worship space);
- Municipal housing facilities, as set out in Section 110 of the *Municipal Act, 2001*, S.O 2001 c. 25, O.Reg.603/06 under *the Municipal Act 2001*, and the Region's Municipal Housing Facility By-law, as amended;
- Lands and buildings used for affordable housing that receive funding through an agreement with the Niagara Region, provided that:
 - The exemption shall only apply to the proportion or number of units in a development which are designated or identified as affordable housing, and
 - The owner of the lands continues to use the lands and buildings for affordable housing.
- Canopies including gas stations and those intended for the parking and loading or unloading of vehicles;

Partial Exemptions

- Long-term care homes shall be reduced by 50%.



2.7 D.C. Policy Document

Throughout the D.C. study process, the Region has engaged with the Local Area Municipalities, as well as other members of the community (e.g., developing landowners, Chamber of Commerce, etc.) through four sessions from June 2021 to May 2022. To guide discussions with respect to policy matters, a draft Policy Report was prepared to outline the Region's current policies and circulated to the engaged parties. This Report was finalized with the recommended approach for the 2022 D.C. By-law. This report can be found on the Region's D.C. webpage.



Chapter 3

Anticipated Development in the Regional Municipality of Niagara



3. Anticipated Development in the Regional Municipality of Niagara

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 subsection 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 the Regional Municipality of Niagara will be required to provide services over a 10-year (2022 to 2032), 2022 to 2041 and 2022 to 2051 time horizon.

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

The D.C. growth forecast has been derived by Watson. In preparing the growth forecast, the following information sources were consulted to assess the residential and non-residential development potential for the Region over the forecast period, including:

- Niagara Region Official Plan, Appendix 3 – PDS 41-2021, 2051 Land Needs Assessment. Niagara Region, December 2021;
- Niagara Region Municipal Comprehensive Review – Growth Allocation Update to 2051, Appendix 3.3 – PDS 17-2021. Hemson Consulting, April 5, 2021;
- Regional Municipality of Niagara Development Charge Background Study, Watson & Associates Economists Ltd. in association with IBI Group and GM BluePlan Engineering Consultants Limited, April 28, 2017;
- 2006, 2011, 2016 and 2021 population and household Census data;
- 2006, 2011 and 2016 employment Census data;
- Historical residential building permit data over the 2012 to 2021 period;



- Residential and non-residential supply opportunities as identified by Regional Municipality of Niagara staff; and
- Discussions with Regional staff regarding anticipated residential and non-residential development in the Regional Municipality of Niagara.

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 3-1a and 3-1b and Appendix A, *Schedule 1*, population in the Regional Municipality of Niagara is anticipated to reach approximately 546,360 by mid-2032, 608,200 by mid-2041 and 676,800 by mid-2041, resulting in an increase of approximately 60,040, 121,890 and 190,500 persons, respectively.¹

¹ The population figures used in the calculation of the 2022 D.C. exclude the net Census undercount, which is estimated at approximately 2.5%.



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

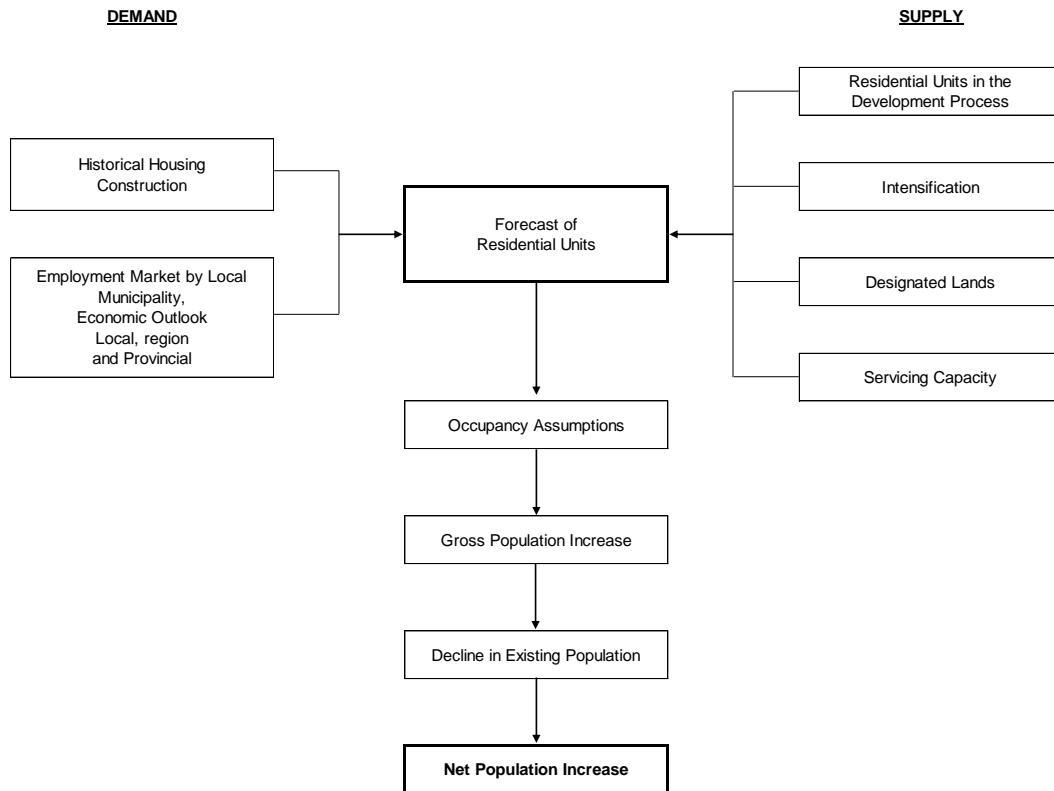




Table 3-1a
Regional Municipality of Niagara
Residential Growth Forecast Summary

Year	Population (Including Census Undercount) ^[1]	Population (Excluding Census Undercount)	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached Housing Units	Multiple Dwellings Housing Units ^[2]	Apartment Housing Units ^[3]	Other Housing Units	Total Households	Equivalent Institutional Households	Person Per Unit (P.P.U.): Total Population/ Total Households
Mid-2006	438,280	427,421	7,996	419,425	123,945	16,030	28,325	1,130	169,430	7,269	2.523
Mid-2011	442,300	431,346	8,536	422,810	128,789	16,692	28,289	915	174,685	7,760	2.469
Mid-2016	459,260	447,888	9,728	438,160	133,300	19,460	30,095	970	183,825	8,844	2.436
Mid-2022	498,660	486,314	10,529	475,785	141,829	24,017	32,613	970	199,429	9,572	2.439
Mid-2032	560,230	546,355	11,845	534,510	157,407	34,100	42,980	970	235,457	10,768	2.320
Mid-2041	623,650	608,203	13,210	594,993	171,423	43,172	52,309	970	267,874	12,009	2.270
Mid-2051	694,000	676,813	14,787	662,026	184,748	51,816	61,111	970	298,645	13,443	2.266

^[1] Census undercount estimated at approximately 2.5%.

^[2] Includes townhouses and apartments in duplexes.

^[3] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Note: Population including the Census undercount has been rounded.

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd. by Watson & Associates Economists Ltd.



Table 3-1b
Regional Municipality of Niagara
Residential Growth Forecast Summary

Year	Population (Including Census Undercount) ^[1]	Population (Excluding Census Undercount)	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached Housing Units	Multiple Dwellings Housing Units ^[2]	Apartment Housing Units ^[3]	Other Housing Units	Total Households	Equivalent Institutional Households
Mid-2006 to Mid-2011	4,020	3,925	540	3,385	4,844	662	-36	-215	5,255	491
Mid-2011 to Mid-2016	16,960	16,542	1,192	15,350	4,511	2,768	1,806	55	9,140	1,084
Mid-2016 to Mid-2022	39,400	38,426	801	37,625	8,529	4,557	2,518	0	15,604	728
Mid-2022 to Mid-2032	61,570	60,041	1,316	58,725	15,578	10,083	10,367	0	36,028	1,196
Mid-2022 to Mid-2041	124,990	121,889	2,681	119,208	29,594	19,155	19,696	0	68,445	2,437
Mid-2022 to Mid-2051	195,340	190,499	4,258	186,241	42,919	27,799	28,498	0	99,216	3,871

^[1] Census undercount estimated at approximately 2.5%.

^[2] Includes townhouses and apartments in duplexes.

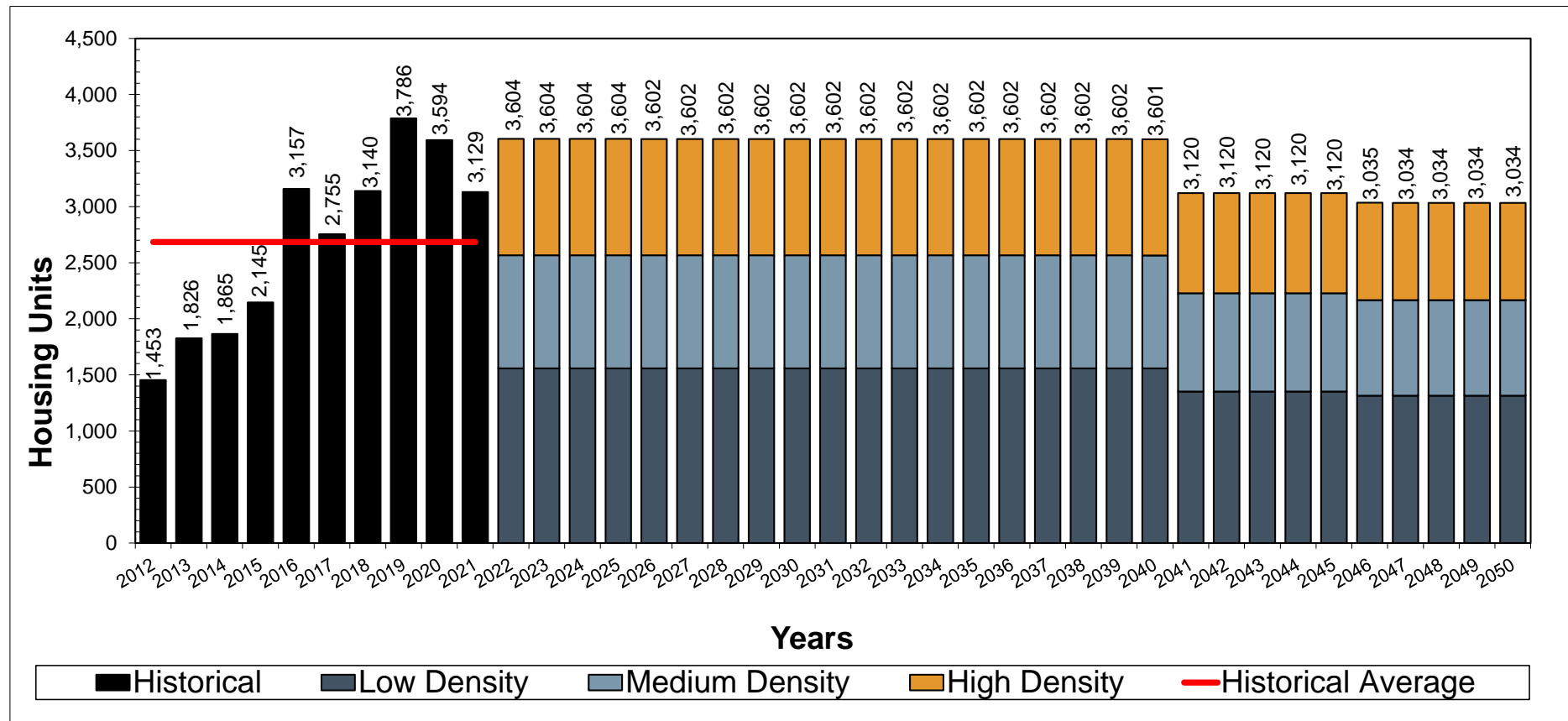
^[3] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Note: Population including the Census undercount has been rounded.

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd. by Watson & Associates Economists Ltd.



Figure 3 2
Regional Municipality of Niagara
Annual Housing Forecast^[1]



[1] Growth forecast represents calendar year.

Source: Historical housing activity derived from Statistics Canada building permit data for the Regional Municipality of Niagara, 2012-2015, from Niagara Region building permit data from 2016 to 2020, and 2021 estimated based on Statistics Canada October 2021 year-to-date data, by Watson & Associates Economists Ltd.



Provided below is a summary of the key assumptions and findings regarding the Regional Municipality of Niagara D.C. growth forecast:

1. Unit Mix (Appendix A – Schedules 1 and 6)

- The housing unit mix for the Region was derived from the Niagara Region 2051 Land Needs Assessment^[1], in addition to a detailed review of historical development activity (as per Schedule 6), as well as active residential development applications and discussions with Regional staff regarding anticipated development trends for the Regional Municipality of Niagara.
- Based on the above indicators, the 2022 to 2051 household growth forecast for the Region is comprised of a unit mix of 43% low density units (single detached and semi-detached), 28% medium density (multiples except apartments) and 29% high density (bachelor, 1-bedroom and 2-bedroom apartments).

2. Geographic Location of Residential Development (Appendix A – Schedule 2)

- Schedule 2 summarizes the anticipated amount, type, and location of development by servicing area for the Regional Municipality of Niagara.
- In accordance with forecast demand and available land supply, the amount and percentage of forecast housing growth between 2022 and 2051 by development location is summarized below.

Development Location	Amount of Housing Growth, 2022 to 2051	Percentage of Housing Growth, 2022 to 2051
Water Servicing	98,350	99%
Wastewater Servicing	98,250	99%
Unserviced	870	1%

^[1] Niagara Region Official Plan, Appendix 3 – PDS 41-2021, 2051 Land Needs Assessment. Niagara Region, December 2021.



Development Location	Amount of Housing Growth, 2022 to 2051	Percentage of Housing Growth, 2022 to 2051
Regional Municipality of Niagara Total^[1]	99,220	100%

^[1] Regional Municipality of Niagara total reflects the water servicing area plus unserviced area.

Note: Figures may not sum precisely due to rounding.

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 transit services to a 10-year planning horizon. All other services can utilize a longer planning period if the municipality has identified the growth-related capital infrastructure needs associated with the longer-term growth planning period.

4. Population in New Units (Appendix A – Schedules 3, 4 and 5)

- The number of housing units to be constructed by 2051 in the Regional Municipality of Niagara over the forecast period is presented in Table 3-1. Over the 2022 to 2051 forecast period, the Region is anticipated to average 3,421 new housing units per year.
- Institutional population^[1] is anticipated to increase by approximately 4,260 people between 2022 to 2051.
- Population in new units is derived from Schedules 3, 4, and 5, 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 7 summarizes the average P.P.U. assumed for new housing units by age and type of dwelling based on Statistics Canada 2016 custom Census data for the Regional Municipality of Niagara. The total calculated P.P.U. for all density types has been adjusted accordingly to account for

^[1] Institutional population largely 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 collective households.



the P.P.U. trends which has been recently experienced in both new and older units. Forecasted 25-year average P.P.U.s by dwelling type are as follows:

- Low density: 2.929
- Medium density: 2.093
- High density^[1]: 1.690
 - Apartments – 2 or more bedrooms: 1.991
 - Apartments – 1 bedroom or less: 1.214

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

- Existing households for mid-2022 are based on the 2016 Census households, plus estimated residential units constructed between mid-2016 and end of year 2021, assuming a 6-month lag between construction and occupancy (see Schedule 3).
- The decline in average occupancy levels for existing housing units is calculated in Schedules 3 through 5, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2022 to 2051 forecast period is approximately 45,820.

6. Employment (Appendix A – Schedules 9a, 9b and 9c)

- The employment projections provided herein are largely based on the activity rate method, which is defined as the number of jobs in the Region divided by the number of residents. Key employment sectors include primary, industrial, commercial/ population-related, institutional, and work at home, which are considered individually below.
- 2016 employment data^[2] (place of work) for the Regional Municipality of Niagara is outlined in Schedule 9a. The 2016 employment base is comprised of the following sectors:
 - 3,875 primary (2%);

^[1] Includes bachelor, 1-bedroom and 2- or more bedroom apartments.

^[2] 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset by Watson & Associates Economists Ltd.



- 13,965 work at home employment (8%);
 - 33,143 industrial (20%);
 - 76,358 commercial/population-related (46%); and
 - 40,670 institutional (24%).
- The 2016 employment by usual place of work, including work at home, is 168,010. An additional 22,940 employees have been identified for the Region in 2016 that have no fixed place of work (N.F.P.O.W.).^[1]
 - Total employment, including work at home and N.F.P.O.W. for the Region is anticipated to reach approximately 221,350 by mid-2032, 242,820 by mid-2041 and 272,000 by mid-2051. This represents an employment increase of approximately 20,120 for the 10-year forecast period, 41,590 for the 2022 to 2041 forecast period and 70,770 for the 2022 to 2051 forecast period.
 - Schedule 9b, Appendix A, 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 the Region (excluding work at home and N.F.P.O.W. employment) is anticipated to reach approximately 175,860 by mid-2032, 192,030 by mid-2041 and 215,350 by mid-2051. This represents an employment increase of approximately 14,840 for the 10-year forecast

^[1] 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.



period, 31,010 for the 2022 to 2041 forecast period and 54,340 for the 2022 to 2051 forecast period.^[1]

7. Non-Residential Sq.ft. Estimates (G.F.A., Appendix A - Schedule 9b)

- Square footage estimates were calculated in Schedule 9b based on the following employee density assumptions:
 - 4,000 sq.ft. per employee for primary;
 - 1,200 sq.ft. per employee for industrial;
 - 500 sq.ft. per employee for commercial/population-related; and
 - 680 sq.ft. per employee for institutional employment.
- The Region-wide incremental Gross Floor Area (G.F.A.) is anticipated to increase by 10.2 million sq.ft. over the 10-year forecast period, 21.9 million sq.ft. over the 2022 to 2041 forecast period and 40.2 million sq.ft. over the 2022 to 2051 forecast period.
- In terms of percentage growth, the 2022 to 2051 incremental G.F.A. forecast by sector is broken down as follows:
 - Primary – 12%
 - industrial – 33%;
 - commercial/population-related – 36%; and
 - institutional – 19%.

8. Geographic Location of Residential Development (Appendix A – Schedule 9c)

- Schedule 10c summarizes the anticipated amount, type and location of non-residential development by servicing area for the Regional Municipality of Niagara by servicing area.

^[1] G.F.A. and employment associated within special care institutional dwellings treated as residential, resulting in an institutional employment difference between Schedules 9a and 9b. Total employment growth in Schedule 9b (excluding work at home and N.F.P.O.W. employment) has been downwardly adjusted to account for institutional employment associated with special care facilities. Total employment in Schedule 9b is anticipated to reach approximately 174,870 by mid-2032, 190,400 by mid-2041 and 213,000 by mid-2051.



- The amount and percentage of forecast total non-residential growth between 2022 and 2051 by development location is summarized below.

Development Location	Amount of Non-Residential G.F.A. (sq.ft.), 2022 to 2036	Percentage of Non-Residential G.F.A., 2022 to 2036
Municipally Serviced (Water and Wastewater)	32.1 million	80%
Unserviced	8.1 million	20%
Regional Municipality of Niagara Total	40.2 million	100%

Note: Figures may not sum precisely due to rounding.



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.

4.2 Services Potentially Involved

Table 4-1 lists the full range of municipal services that are provided within the Region.

A number of these services are not listed as eligible services for inclusion in the D.C. by-law as per subsection 2 (4) of the D.C.A. 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 that 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

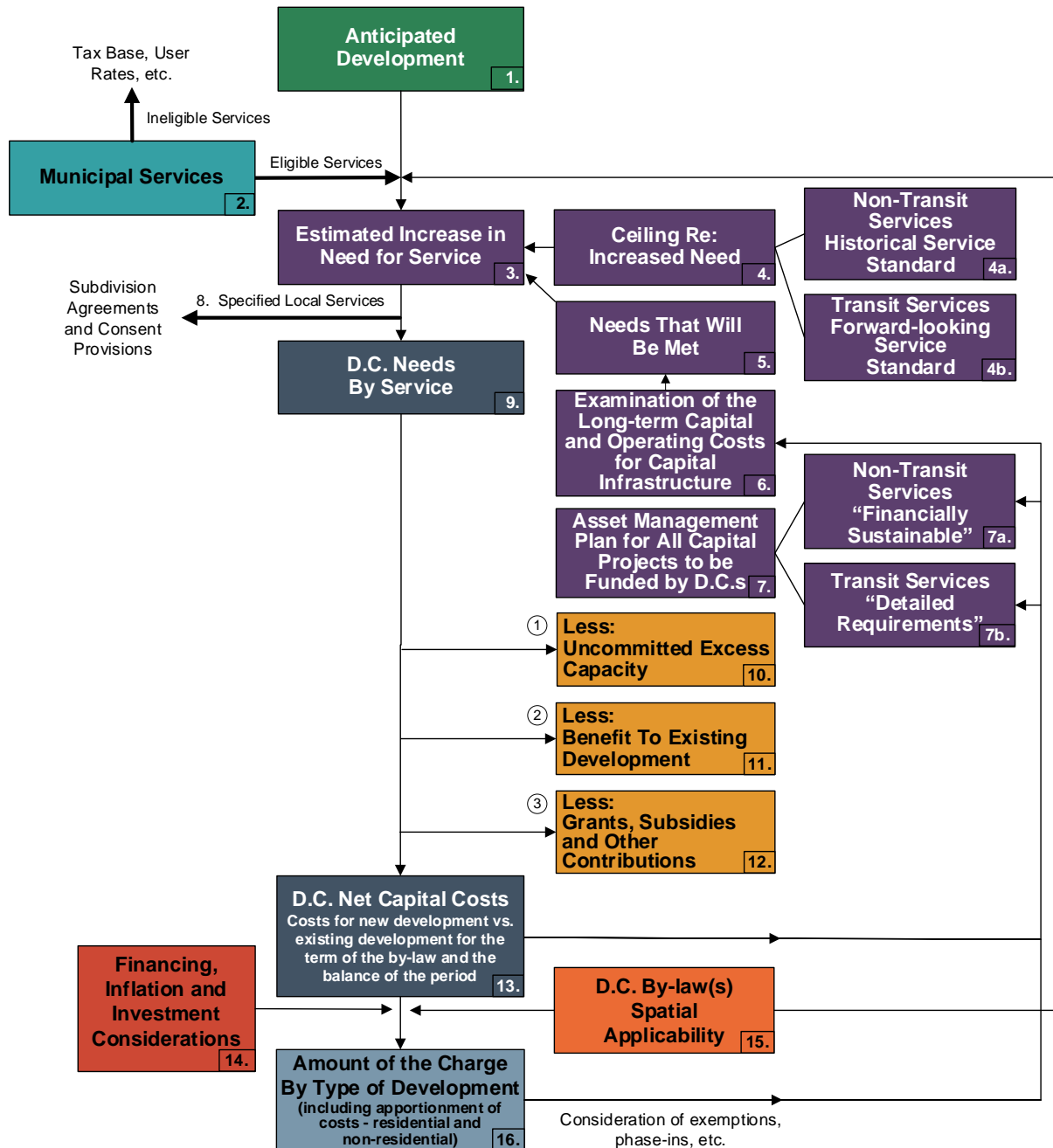




Table 4-1
Categories of Municipal Services to be Addressed as Part of the Calculation

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. Services Related to a Highway	Yes	1.1 Arterial roads	100
	No	1.2 Collector roads	100
	Yes	1.3 Bridges, culverts and roundabouts	100
	No	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
2. Other Transportation Services	No	2.1 Transit vehicles ¹ & facilities	100
	No	2.2 Other transit infrastructure	100
	n/a	2.3 Municipal parking spaces – indoor ²	100
	n/a	2.4 Municipal parking spaces – outdoor ²	100
	Yes	2.5 Works yards	100
	Yes	2.6 Rolling stock ¹	100
	n/a	2.7 Ferries	100
	n/a	2.8 Airport ³	100

¹ With 7+ year life-time

² Ineligible as of September 18, 2022

³ Only eligible for the Region of Waterloo



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
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 ¹	100
	n/a	4.3 Small equipment and gear	100
5. Parks 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	100
	n/a	5.3 Development of district parks	100
	n/a	5.4 Development of municipal-wide parks	100
	n/a	5.5 Development of special purpose parks	100
	n/a	5.6 Parks rolling stock ¹ and yards	100
6. Recreation Services	n/a	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	100
	n/a	6.2 Recreation vehicles and equipment ¹	100
7. Library Services	n/a	7.1 Public library space (incl. furniture and equipment)	100
	n/a	7.2 Library vehicles ¹	100
	n/a	7.3 Library materials	100
8. Emergency Preparedness Services	No	8.1 Facility space (incl. furniture and equipment)	100
	No	8.2 Vehicles ¹	100
	No	8.3 Equipment	100

¹with 7+ year life-time



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
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
	n/a	10.3 Local systems	0
	Yes	10.4 Vehicles and equipment ¹	100
11. Water Supply Services	Yes	11.1 Treatment plants	100
	Yes	11.2 Distribution systems	100
	n/a	11.3 Local systems	0
	Yes	11.4 Vehicles and equipment ¹	100
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	100
	Yes	12.4 Waste diversion vehicles and equipment ¹	100
13. Policing Services	Yes	13.1 Policing detachments	100
	Yes	13.2 Policing rolling stock ¹	100
	Yes	13.3 Small equipment and gear	100
14. Homes for the Aged	Yes	14.1 Homes for the aged space	100
	Yes	14.2 Vehicles ¹	100
15. Child Care	Yes	15.1 Child care space	100
	No	15.2 Vehicles ¹	100
16. Health	Yes	16.1 Health department space	100
	No	16.2 Health department vehicles ¹	100
17. Social Housing	Yes	17.1 Social housing space	100
18. Provincial Offences Act (P.O.A.)	Yes	18.1 P.O.A. space	100

¹with 7+ year life-time



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
19. Social Services	No	19.1 Social service space	0
20. Ambulance	Yes	20.1 Ambulance station space	100
	Yes	20.2 Vehicles ¹	100
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	22.1 Office space	0
	Ineligible	22.2 Office furniture	0
	Ineligible	22.3 Computer equipment	0
23. Other Services	Yes	23.1 Studies in connection with acquiring buildings, rolling stock, materials and equipment, and improving land ² 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

¹with a 7+ year life-time

²same 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. The Region's detailed Local Service Policy is provided in Appendix E.



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;
- 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 Classes of Services

Section 7 of the D.C.A. states that a D.C. by-law may provide for any D.C. eligible service or the capital costs with respect to those services. Further, a class may be composed of any number or combination of services and may include parts or portions of each D.C. eligible service. With respect to growth-related studies, Section 7(3) of the D.C.A. states that:

“For greater certainty, a development charge by-law may provide for a class consisting of studies in respect of any service listed in subsection 2 (4) whose capital costs are described in paragraphs 5 and 6 of subsection 5 (3).”

These provisions allow for services to be grouped together to create a class for the purposes of the D.C. by-law and D.C. reserve funds. The D.C. calculations and by-law provided herein include classes of services for growth studies and public works. These classes are comprised of the following services:

- Growth Studies:
 - Policing Services;
 - Services Related to a Highway;
 - Public Works;
 - Services Related to Public Health;
 - P.O.A. including by-law Enforcement Services;
 - Ambulance Services;
 - Long-term Care Services;
 - Housing Services;
 - Child Care and Early Years Programs and Services;
 - Waste Diversion Services;
 - Water Services; and
 - Wastewater Services.



- Public Works:
 - Services Related to a Highway;
 - Water Services; and
 - Wastewater Services.

4.8 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 7 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 that 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 that 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 Balance by service at December 31, 2021 (adjusted for commitments) are shown below:



Table 4-2
Summary of Development Charges Reserve Fund Balances
As of December 31, 2021

Service/Class of Service	Reserve Fund Balances at December 31, 2021	Adjustments	Adjusted Reserve Fund Balances
Growth Studies	1,905,387	0	1,905,387
Policing Services	5,274,290	(5,125,720)	148,570
Services Related to a Highway	80,957,173	(76,896,333)	4,060,839
Wastewater Services	72,806,463	(19,755,816)	53,050,647
Water Services	36,434,639	(17,338,055)	19,096,585
Ambulance Services	2,283,618	(46,333)	2,237,286
Long-term Care Services	9,228,074	(22,024,748)	(12,796,674)
Provincial Offences Act	145,836	0	145,836
Health Services	1,603,424	0	1,603,424
Social Housing	(2,308,417)	(5,852,858)	(8,161,275)
Waste Diversion Services	3,938,407	(241,569)	3,696,838
Total	\$212,268,894	(\$147,281,432)	\$64,987,463

Note: Amounts in brackets are deficit balances.

4.9 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.

The requirements behind each of these reductions are addressed below.



4.9.1 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” (D.C.A., subsection 5 (1) 4). 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 factors 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 service 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.

4.9.2 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.

4.9.3 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 (compare water as an example);
- the elimination of a chronic servicing problem not created by growth; and
- providing services where none previously existed (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 service cap in section 4.9.1 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 library 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, 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).



4.9.4 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).

4.10 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.

4.11 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.

4.12 Asset Management

The legislation requires that a D.C. background study must include an asset management plan (A.M.P.) (subsection 10 (2) c. 2). The 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 H.

4.13 Transit

In 2015, significant changes were made to the D.C.A. for transit services. 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 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 D.C. over the 10-year period immediately following the preparation of the background study, categorized by development types, and whether the forecast 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) requires the following:
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, a summary of how to achieve the proposed level of service, discussion on procurement measures and risk are required.

As Transit services have not been considered as part of this background study, this analysis is not required. Transit services are being reviewed separately and will be provided in the future under separate cover. The asset management requirements would be included in the subsequent analysis.



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 7 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, Regional projects and Council priorities change; accordingly, Council's intentions may alter and different capital projects (and timing) may be necessary 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 long-term care, public health, P.O.A., child care, ambulance, housing, waste diversion services and growth studies 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. For the growth studies class of service, the infrastructure cost calculation, which determines the potential D.C. recoverable cost is provided.



5.2.1 Growth Studies

The D.C.A. permits the inclusion of studies undertaken to facilitate the completion of the Region's capital works program. As discussed in Section 4.7, these studies have been allocated as a class of service based on each service to which the study relates.

For planning related studies (i.e. Secondary Plans, District Plans, Development Related Studies and Municipal Comprehensive Reviews), a deduction of 10% has been applied to recognize the extent to which the studies relate to non-D.C.-eligible services. All planning studies have been allocated to the class of services in the following manner:

- Policing Services – 5%;
- Services Related to a Highway – 15%;
- Public Works – 5%;
- Services Related to Public Health – 5%;
- P.O.A. including by-law Enforcement Services – 5%;
- Ambulance Services – 5%;
- Long-term Care Services – 5%;
- Housing Services – 5%;
- Child Care and Early Years Programs and Services – 5%;
- Waste Diversion Services – 5%;
- Water Services – 20%; and
- Wastewater Services – 20%.

In addition, the capital costs of D.C. Studies have been allocated across the different services based on the proportion of the total net growth-related capital costs. The following provides a breakdown of the allocation of D.C. study updates to each service:

- Policing Services – 1.11%;
- Services Related to a Highway – 35.15%;
- Public Works – 1.08%;
- Services Related to Public Health – 0.00%;
- P.O.A. including by-law Enforcement Services – 0.00%;
- Ambulance Services – 0.47%;
- Long-term Care Services – 2.18%;



- Housing Services – 3.22%;
- Child Care and Early Years Programs and Services – 0.00%;
- Waste Diversion Services – 0.29%;
- Water Services – 20.02%; and
- Wastewater Services – 36.49%.

The Employment Corridor Master Servicing Plan has been allocated 50% each to Water Services and Wastewater Services, while the other studies have been allocated 100% to the service to which they relate.

The total cost of these studies is approximately \$6.30 million, of which \$870,000 is attributable to existing benefit. A deduction of \$540,000 has been made to recognize the portion of planning studies related to D.C.-ineligible services. In addition, the existing reserve fund balance of approximately \$1.91 million has been deducted from the calculations. The resultant net growth-related capital cost of \$2.98 million has been included in the D.C. calculation.

These costs have been allocated 81% residential and 19% non-residential based on the incremental growth in population to employment for the 10-year forecast period.



Table 5-1
Infrastructure Cost Included in the Development Charges Calculation
Class of Service – Growth Studies

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2031	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
1	Development Related Studies	2022 to 2023	200,000	0	20,000	180,000	0	0	180,000	145,800	34,200
2	Development Charges Background Study	2022	249,800	0	0	249,800	0	0	249,800	202,338	47,462
3	Development Charges Background Study	2027	249,800	0	0	249,800	0	0	249,800	202,338	47,462
4	District Plan - South Niagara Falls	2022 to 2023	300,000	0	30,000	270,000	0	0	270,000	218,700	51,300
5	District Plan - Lincoln	2023 to 2024	300,000	0	30,000	270,000	75,000	0	195,000	157,950	37,050
6	District Plan - Grimsby	2024 to 2025	300,000	0	30,000	270,000	75,000	0	195,000	157,950	37,050
7	District Plans - Other Areas	2026 to 2031	900,000	0	90,000	810,000	225,000	0	585,000	473,850	111,150
8	Secondary Plans with Regional Interest - Glendale	2022	100,000	0	10,000	90,000	0	0	90,000	72,900	17,100
9	Secondary Plans with Regional Interest - Downtown St. Catharines	2022 to 2023	100,000	0	10,000	90,000	40,000	0	50,000	40,500	9,500
10	Secondary Plans with Regional Interest - Downtown Welland	2022 to 2023	100,000	0	10,000	90,000	40,000	0	50,000	40,500	9,500
11	Secondary Plans with Regional Interest - Brock	2022 to 2023	100,000	0	10,000	90,000	40,000	0	50,000	40,500	9,500
12	Secondary Plans with Regional Interest - additional Greenfield with sub watershed study	2023 to 2024	150,000	0	15,000	135,000	15,000	0	120,000	97,200	22,800
13	Secondary Plans with Regional Interest (2 greenfield with sub watershed study, 2 intensification)	2026 to 2031	500,000	0	50,000	450,000	125,000	0	325,000	263,250	61,750
14	Secondary Plans with Regional Interest (2 greenfield with sub watershed study, 2 intensification)	2022 to 2024	400,000	0	0	400,000	0	0	400,000	324,000	76,000
15	Development Portal	2022 to 2023	750,000	0	75,000	675,000	75,000	0	600,000	486,000	114,000
16	Municipal Comprehensive Review	2025 to 2026	800,000	0	80,000	720,000	80,000	0	640,000	518,400	121,600
17	Municipal Comprehensive Review	2030 to 2031	800,000	0	80,000	720,000	80,000	0	640,000	518,400	121,600
n/a	Reserve Fund Adjustment	n/a	0	0	0	0	1,905,387	0	-1,905,387	-1,543,363	-362,024
	Total		6,299,600	0	540,000	5,759,600	2,775,387	0	2,984,213	2,417,213	567,000



5.2.2 Long-Term Care Services

In 2021, the Regional Municipality of Niagara operated eight (8) Long-term Care facilities and two additional facilities from a total of 623,979 sq.ft. of facility space. The sq.ft. of facility space provided over the previous 10-year period results in an average level of service of 1.39 sq.ft. per capita. This level of service equates to an average level of investment of \$745 per capita and provides the Region with a maximum D.C.-eligible amount for recovery over the forecast period of approximately \$44.72 million.

In addition to facility space, the Region also has five (5) vehicles. Over the previous 10-year period, the level of service provided equates to 0.01 vehicle per 1,000 population or an average level of investment of \$0.42 per capita. This provides the Region with a maximum D.C.-eligible amount for recovery over the forecast period of \$25,217.

Based on these service standard calculations, the total D.C.-eligible amount over the 10-year forecast period related to Long-term Care Services is approximately \$44.74 million.

\$12.80 million has been included in the D.C. calculation to reflect the reserve fund deficit related to the recent funding for the Linhaven and Gilmore facilities. A provisional amount of \$27.50 million has also been included in the calculations to reflect an anticipated redevelopment occurring in 2028. This amount is the estimated growth cost related to the expansion portion of the redevelopment, after potential grants, and provides for a similar growth-related share of funding as the recent Linhaven and Gilmore facility works. This results in a net D.C.-eligible amount of \$40.30 million. As this is a provisional amount, no deductions have been made, however, when growth-related capital projects are funded, the appropriate benefit to existing and post-period benefit deductions will be made at that time.

An allocation of 90% residential and 10% non-residential has been attributed to long-term care services.



Table 5-2
 Infrastructure Cost Included in the Development Charges Calculation
 Long-term Care Services

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2031	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 90%	Non-Residential Share 10%
1	Provision for Future Long-term Care Home Redevelopment/Expansion	2028 to 2031	27,500,000	0	0	27,500,000	0	0	27,500,000	24,750,000	2,750,000
n/a	Reserve Fund Adjustment	n/a	12,796,674	0	0	12,796,674	0	0	12,796,674	11,517,007	1,279,667
	Total		40,296,674	0	0	40,296,674	0	0	40,296,674	36,267,007	4,029,667



5.2.3 Provincial Offences Act including By-law Enforcement Services (P.O.A.)

The Region recently consolidated facilities which provided P.O.A. services. Currently all P.O.A. services are provided at the Welland facility which has a total of 20,398 sq.ft. The sq.ft. of facility space provided over the previous 10-year period results in an average level of service of 48.80 sq.ft. of facility space per 1,000 population. This level of service equates to an average level of investment of \$38 per capita and provides the Region with a maximum D.C.-eligible amount for recovery over the forecast period of \$2.27 million.

A review of facility space requirements was undertaken by Region staff. Through this review and additional discussions, no capital needs have been identified at this time.



5.2.4 Public Health (Facilities)

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 7 facilities with a total of 109,026 sq.ft. 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 a level of service of 0.20 sq.ft. per capita or an average level of investment of \$95 per capita. This provides the Region with a maximum D.C.-eligible amount for recovery of approximately \$5.69 million over the forecast period.

A review of facility space requirements was undertaken by Region staff. Through this review and additional discussions, no capital needs have been identified at this time.



5.2.5 Ambulance Services

The Niagara Emergency Medical Services (E.M.S.) currently operates out of a combination of larger reporting stations and smaller satellite stations. These facilities provide a total of 110,832 sq.ft. of space. The sq.ft. of facility space provided over the previous 10-year period results in an average level of service of 0.20 sq.ft. per capita or an investment of \$92 per capita. Based on this service standard, the Region would be eligible to collect approximately \$5.55 million from D.C.s for ambulance facility space (over the 10-year forecast period).

In addition to facility space, the Region also has 46 ambulances, 17 supervisory vehicles, 3 command vehicles, and 14 other vehicles that are used in day-to-day operations. The number of vehicles provided over the previous 10-year period results in an average level of service of 0.20 vehicles per 1,000 population. This equates to an investment of approximately \$37 per capita. Based on this service standard, the Region would be eligible to collect approximately \$2.23 million from D.C.s for ambulance vehicles (over the 10-year forecast period).

Based on these service standard calculations, the total D.C.-eligible amount over the 10-year forecast period related to Ambulance services is \$7.77 million.

The Regional Municipality of Niagara has identified the need for 18 additional vehicles, such as ambulances and response units, over the forecast period. In addition, a provision has been made for an E.M.S. Central Hub and Training Facility. The financing costs of \$9.74 million, associated with the E.M.S. Central Hub and Training Facility, have also been included in the capital costs.

In total, the gross capital costs are estimated to be approximately \$104.25 million. Of this amount approximately \$54.65 million has been deducted to reflect the share of the costs attributable to growth outside of the forecast period. In addition, deductions totalling approximately \$38.71 million have been made to reflect the share of the costs that benefit existing development. A further deduction of \$2.24 million has been made to account for the balance in the reserve fund. After the deductions, the net growth-related costs included in the D.C. calculation total approximately \$8.65 million.

While ambulance services are predominately residential based, there is some use of the service by non-residential users. To acknowledge this use, the growth-related capital



costs have been allocated 90% to residential development and 10% to non-residential development.



Table 5-3
Infrastructure Cost Included in the Development Charges Calculation
Ambulance Services

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2031	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 90%	Non-Residential Share 10%
1	Provision for EMS Central Hub and Training Facility - N.O.T.L.	2023 to 2027	90,500,000	49,340,600	0	41,159,400	35,158,700	0	6,000,700	5,400,630	600,070
2	Financing Cost for EMS Central Hub and Training Facility - N.O.T.L.	2022 to 2051	9,744,413	5,312,700	0	4,431,713	3,547,800	0	883,913	795,522	88,391
3	Purchase of additional ambulances (10)	2022 to 2031	3,199,000	0	0	3,199,000	0	0	3,199,000	2,879,100	319,900
4	Purchase of additional response units (8)	2022 to 2031	801,600	0	0	801,600	0	0	801,600	721,440	80,160
n/a	Reserve Fund Adjustment	n/a	0	0	0	0	2,237,286	0	-2,237,286	-2,013,557	-223,729
	Total		104,245,013	54,653,300	0	49,591,713	40,943,786	0	8,647,927	7,783,135	864,793



5.2.6 Housing Services

The Regional Municipality of Niagara provides Social Housing services to its residents due to the rising difficulty for many to afford accommodations at market prices. As the Region grows, so does the demand for Housing services. The Region currently provides 2,908 housing units. These include a mix of single detached, townhouse, and apartment units. The number of units provided over the previous 10-year period results in an average level of service of 6.20 units per 1,000 population. This level of service equates to an average level of investment of \$2,008 per capita and provides the Region with a maximum D.C.-eligible amount for recovery \$120.55 million over the forecast period.

The anticipated growth in the Region is approximately 60,000 net new residents over the 10-year forecast period. In order for the Region to maintain the current average level of service of 6.20 units per 1,000 population, an additional 372 units are required over the forecast period. The current number of units identified in the capital program is 83 units. The Region is currently undertaking a Consolidated Housing Master Plan which will identify the need for further units. As a result, a provision has been included for 110 additional units, bringing the total units in the capital program to 193. As the number of units required to meet the current average level of service is 372, this capital program represents approximately 50% of the units required. It is assumed that the additional units required would be funded with non-D.C. funds.

The gross capital cost for the 193 units is estimated to total \$61.94 million. Of this amount, a deduction, in the amount of \$10.50 million has been made to reflect the share of the apartments at the P.O.A. location that will be funded with federal grand funding. \$8.16 million has been added to the calculations to reflect the deficit in the reserve fund. After the adjustments, the net growth-related cost included in the D.C. calculations is approximately \$59.60 million.

Social housing is a residential-based service and, therefore, the growth-related capital costs have been allocated 100% residential and 0% non-residential.



Table 5-4
Infrastructure Cost Included in the Development Charges Calculation
Housing Services

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2031	Number of Units	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 100%	Non-Residential Share 0%
1	Provision for Additional Units	110	2022 to 2031	36,000,000	0	0	36,000,000	0	0	36,000,000	36,000,000	0
2	12 St. Davids & 52 Ormond	3	2022 to 2025	1,326,000	0	0	1,326,000	0	0	1,326,000	1,326,000	0
3	Niagara Falls Library Location (20 new bridge units)	20	2022	3,609,200	0	0	3,609,200	0	0	3,609,200	3,609,200	0
4	Apartments at POA Location (42 apartment units)	42	2022 to 2023	14,500,000	0	0	14,500,000	0	10,500,000	4,000,000	4,000,000	0
5	745 Crest Rd. Fort Erie	18	2022	6,500,000	0	0	6,500,000	0	0	6,500,000	6,500,000	0
n/a	Reserve Fund Adjustment	n/a	n/a	8,161,275	0	0	8,161,275	0	0	8,161,275	8,161,275	0
	Total	193		70,096,475	0	0	70,096,475	0	10,500,000	59,596,475	59,596,475	0



5.2.7 Waste Diversion Services

With respect to Waste Diversion, the Region provides a total of 249,736 sq.ft. of eligible waste diversion space at two facilities (excluding land). The sq.ft. of facility space provided over the previous 10-year period results in an average level of service of 0.55 sq.ft. per capita which equates to an investment of \$187 per capita. Based on this service standard, the Region would be eligible to collect approximately \$11.20 million. Further, the Region provides approximately 61.40 acres of land for waste diversion services. This land includes the facilities, as well as drop-off depots and other waste diversion lands. The average service level over the past 10 years was 0.10 acres per 1,000 population or an average investment of \$19 per capita. Based on this, the Region would be eligible to collect an additional \$1.16 million from D.C.s.

The Region has an inventory of solid waste vehicles and equipment, some of which are used for landfill and waste diversion activities. Based on the eligible portions of the vehicles and equipment (i.e. the share that relates to waste diversion), there are a total of approximately 123 equivalent vehicles and equipment. These vehicles include loaders, forklifts, tractors, and contracted vehicles. The vehicles and equipment provided over the previous 10-year period results in an average level of service of 0.20 items per 1,000 population or an investment of \$33 per capita. Based on this service standard, the Region would be eligible to collect approximately \$2.00 million from D.C.s for waste diversion vehicles and equipment (over the 10-year period).

The Region provides waste diversion related containers to residents and businesses. These containers include blue and grey boxes, green bins, kitchen catchers, and backyard composters. Currently the Region provides a total inventory that equates to a value of \$9.37 million. The containers provided over the previous 10-year period results in an average level of service of 1.28 containers per capita or an investment of \$17 per capita. Based on the anticipated 10-year growth, the Region is eligible to collect approximately \$1.04 million for waste diversion containers.

Additional Waste Diversion equipment is utilized by the Region at the Materials Recovery Facility. In total, there are currently 128 pieces of equipment with a total value of approximately \$17.15 million. The equipment provided over the previous 10-year period results in an average level of service of 0.30 items per 1,000 population or



an average level of investment of \$33 per capita. Based on the anticipated growth over the 10-year forecast period the Region is eligible to collect approximately \$2.00 million.

Based on these service standard calculations, the total D.C.-eligible amount over the 10-year forecast period related to Waste Diversion is approximately \$17.42 million.

The Region has identified the need for improvements at three drop off depots. The total gross capital cost of these works is approximately \$2.39 million. Also identified is the need to undertake a waste management long-term strategic plan, expand the Walker Organics Facility, and build a new organics transfer station. The estimated gross capital cost for these projects total \$6.00 million. Additionally, a provision has been included for additional vehicles, equipment, and containers. The total of this provisional item is \$2.7 million. Deductions totalling approximately \$1.03 million have been made to reflect the share of the drop-off depot improvements that benefit existing development. Other deductions of \$950,000 have been made to reflect the share of the drop-off dept improvements that relate to landfill. Additionally, \$3,696,838 has been deducted from the calculations to reflect the balance in the reserve fund. The resulting net growth-related capital cost of \$5.41 million has been included in the D.C. calculation.

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.



Table 5-5
Infrastructure Cost Included in the Development Charges Calculation
Waste Diversion Services

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2031	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 95%	Non-Residential Share 5%
1	Bridge Street Public Drop Off Depot Improvement	2023 to 2026	1,600,000	0	0	1,600,000	480,000	0	1,120,000	1,064,000	56,000
2	NR-12 - Drop-Off Depot Improvements (dump pad, access improvements and one rehab of one bunker currently out of service)	2023 to 2026	400,000	0	200,000	200,000	60,000	0	140,000	133,000	7,000
3	Humberstone - Drop-Off Depot Improvements (incl. grading and functional improvements to the Depot)	2023	385,000	0	0	385,000	115,500	0	269,500	256,025	13,475
4	Waste Management Long-term Strategic Plan	2023 to 2025	1,500,000	0	750,000	750,000	375,000	0	375,000	356,250	18,750
5	Walker Organics Facility Expansion	2022 to 2029	3,500,000	0	0	3,500,000	0	0	3,500,000	3,325,000	175,000
6	Organics Transfer Station	2022 to 2031	1,000,000	0	0	1,000,000	0	0	1,000,000	950,000	50,000
7	Provision for Additional Vehicles, Equipment, and Containers	2022 to 2031	2,700,000	0	0	2,700,000	0	0	2,700,000	2,565,000	135,000
n/a	Reserve Fund Adjustment	n/a	0	0	0	0	3,696,838	0	-3,696,838	-3,511,996	-184,842
	Total		11,085,000	0	950,000	10,135,000	4,727,338	0	5,407,662	5,137,279	270,383



5.2.8 Child Care and Early Years Programs and Services - Facilities

Child Care and Early Years Programs and Services are currently provided in a combination of owned and leased spaces totalling 37,392 sq.ft. The facility space provided over the previous 10-year period provides for an average level of service of 0.08 sq.ft. per capita, or an investment of \$34 per capita. This level of service provides the Region with \$2.03 million for eligible future D.C. funding over the 10-year forecast period.

Through discussions with Region staff, no capital needs have been identified at this time.



5.3 Service Levels and 20-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with 20-year capital costs.

5.3.1 Services Related to a Highway

As provided in Appendix C of the Transportation Background Report for the 2022 D.C. background study, Niagara currently owns and maintains:

- 755 centreline km of roads;
- 283 signalized intersections;
- 219 bridges and culverts;
- 755 km of streetlights;
- 3.34 km of multi-use paths;
- 5 roundabouts; and
- Property for the above noted infrastructure.

The total estimated value of the infrastructure is \$8.92 billion. Over the historical 10-year period, the infrastructure provided for services related to a highway provides for an average level of investment of \$13,707 per capita (population and employment). Based on this service standard, the Region would be eligible to collect approximately \$2.24 billion for services related to a highway over the forecast period.

With respect to future needs, the identified services related to highways program was developed as part of the Transportation Master Plan Confirmation Exercise currently being undertaken by WSP and HDR. The total gross capital cost estimate totals approximately \$1.85 billion. The capital projects include various works related to unfunded works previously constructed, adding capacity to the highway system including road improvements and expansions, intersection improvements, and other annual programs administered by the Region. Of the total gross cost, \$13.21 million has been previously funded for various projects, resulting in an adjusted gross total of \$1.84 billion. From this adjusted gross total cost, a deduction for the share of the projects that benefit development post-2041 has been made in the amount of \$35.32 million. Deductions have also been made in the amounts of \$1.09 billion and \$3.83



million to reflect the share of the projects that benefit existing development and anticipated grant funding, respectively. The balance in the reserve fund (\$4.06 million) was deducted from the D.C. calculations. Additional deductions have been made in the amount of \$21.29 million for residential development and \$32.94 million for non-residential development to reflect variations in the growth forecast between the D.C. study and the Transportation Master Plan confirmation exercise. The resulting D.C. eligible amount of \$650.00 million which has been included in the D.C. calculations to be recovered over the forecast period (2022 to 2041).

The residential/non-residential allocation for all services related to a highway is 81% residential and 19% non-residential based on the adjusted forecast population to employment anticipated over the forecast period. The population and employment figures have been adjusted for Work at Home and No Fixed Place of Work figures (discussed in detail in Appendix G).



**Table 5-6
Infrastructure Cost Included in the Development Charges Calculation
Services Related to a Highway**

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
1	Capacity Improvement-Widening - Casablanca Blvd - Main St to North Svc Rd w/ Livingston to Region Parcel	2022 to 2031	23,608,000	1,602,000	22,006,000	0	0	22,006,000	3,136,200	2,700,000	16,169,800	13,097,538	3,072,262
2	Engineering Study for New Road - Hwy 20 Smithville Bypass - to be confirmed (EA will be initiated to confirm the preferred alignment)	2022 to 2031	2,000,000	0	2,000,000	0	0	2,000,000	0	0	2,000,000	1,620,000	380,000
3	Engineering Study for Widening - Netherby Rd - Hwy 140 to QEW	2022 to 2031	2,500,000	0	2,500,000	0	0	2,500,000	250,000	0	2,250,000	1,822,500	427,500
4	Capacity Improvement-Widening - East Main St - Hwy 140 to Moyer Rd	2022 to 2031	9,128,000	0	9,128,000	0	0	9,128,000	1,369,200	0	7,758,800	6,284,628	1,474,172
5	Capacity Improvement-Widening - Merritt Rd - Hwy 406 to Cataract Rd	2022 to 2031	20,621,000	255,800	20,365,200	0	0	20,365,200	3,093,200	0	17,272,000	13,990,320	3,281,680
6	Capacity Improvement-New Road - Merritt Rd - Cataract Rd to Rice Road	2022 to 2031	7,962,000	0	7,962,000	0	0	7,962,000	0	0	7,962,000	6,449,220	1,512,780
7	Capacity Improvement-Widening - Ontario St - QEW to Linwell Rd	2022 to 2031	6,302,000	0	6,302,000	0	0	6,302,000	945,300	0	5,356,700	4,338,927	1,017,773
8	Capacity Improvement-Widening - Lyons Creek Rd - Stanley Ave to Sodom Rd	2022 to 2031	10,645,000	0	10,645,000	0	0	10,645,000	1,596,800	0	9,048,200	7,329,042	1,719,158
9	Capacity Improvement-Widening - McLeod Road - Phase 2-Canal (HEPC) to Wilson Crescent	2022 to 2031	10,735,000	234,600	10,500,400	0	0	10,500,400	1,610,300	0	8,890,100	7,200,981	1,689,119
10	Capacity Improvement-Widening - McLeod Road - Phase 3-Wilson to Stanley Ave	2022 to 2031	13,408,000	0	13,408,000	0	0	13,408,000	2,011,200	0	11,396,800	9,231,408	2,165,392
11	Capacity Improvement-Widening - Rice Road - Merritt Rd to Quaker Rd	2022 to 2031	8,893,000	0	8,893,000	0	0	8,893,000	1,334,000	0	7,559,000	6,122,790	1,436,210



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
12	Capacity Improvement-Widening - Rice Road - Quaker Rd to Thorold Rd	2022 to 2031	20,138,000	0	20,138,000	0	0	20,138,000	3,020,700	0	17,117,300	13,865,013	3,252,287
13	Capacity Improvement-Widening - Niagara Stone Rd - East West Line to Concession 6	2022 to 2031	28,858,000	1,723,900	27,134,100	0	0	27,134,100	4,328,700	0	22,805,400	18,472,374	4,333,026
14	Capacity Improvement-Widening - Niagara Stone Rd - Airport Road to Concession 6	2022 to 2031	15,679,000	0	15,679,000	0	0	15,679,000	2,351,900	0	13,327,100	10,794,951	2,532,149
15	Capacity Improvement-Widening - Collier Road - Hwy 58 to Beaverdams Road	2022 to 2031	7,328,000	0	7,328,000	0	0	7,328,000	1,099,200	0	6,228,800	5,045,328	1,183,472
16	Capacity Improvement-New Road - Thorold Stone Road - Extension east of Stanley Ave	2022 to 2031	8,052,000	7,056,200	995,800	0	0	995,800	0	0	995,800	806,598	189,202
17	Capacity Improvements-AT - Lakeshore Rd - MUP Townline Rd to Four Mile Creek Rd	2022 to 2031	1,875,000	0	1,875,000	0	0	1,875,000	1,406,300	0	468,700	379,647	89,053
18	Capacity Improvement-Widening - Airport Rd - Niagara Stone Road to York Road	2022 to 2031	8,439,000	0	8,439,000	0	0	8,439,000	1,265,900	0	7,173,100	5,810,211	1,362,889
19	Capacity Improvement-Widening - Montrose Road - Lyon's Creek Rd to Canadian Dr (Phase 1 Lyon's to Grassy Brook)	2022 to 2031	31,030,000	817,600	30,212,400	0	0	30,212,400	4,654,500	0	25,557,900	20,701,899	4,856,001
20	Capacity Improvement-Widening - Montrose Road - McLeod Rd to Canadian Dr	2022 to 2031	7,975,000	0	7,975,000	0	0	7,975,000	1,196,300	0	6,778,700	5,490,747	1,287,953
21	Capacity Improvement-Widening - Stanley Ave - Marineland Pkwy to Lyons Creek Rd	2022 to 2031	23,223,000	0	23,223,000	0	0	23,223,000	3,483,500	0	19,739,500	15,988,995	3,750,505
22	Capacity Improvement-Widening - Stanley Ave - Murray St to Peer Lane	2022 to 2031	5,310,000	0	5,310,000	0	0	5,310,000	796,500	0	4,513,500	3,655,935	857,565
23	Capacity Improvement-Widening - Sodom Rd - Willick Rd to Netherby Rd	2022 to 2031	34,173,000	0	34,173,000	0	0	34,173,000	5,126,000	0	29,047,000	23,528,070	5,518,930



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
24	Capacity Improvement-New Road - Livingston Ave - Livingston Extension	2022 to 2031	9,836,000	0	9,836,000	0	0	9,836,000	0	0	9,836,000	7,967,160	1,868,840
25	Capacity Improvement-New Road - Niagara Escarpment Crossing - Bartlett Ave Extension (Preferred corridor will be determined through the IEA)	2022 to 2031	45,367,000	468,800	44,898,200	11,459,000	0	33,439,200	0	0	33,439,200	27,085,752	6,353,448
26	Engineering Study - Municipal TMP - Regional Updates - Municipal TMP - Regional Updates	2022 to 2031	2,200,000	0	2,200,000	0	0	2,200,000	220,000	0	1,980,000	1,603,800	376,200
27	Capacity Improvement-New Road - South Niagara East West Arterial - Between Niagara Region West Limit and Highway 58	2022 to 2031	25,000,000	30,500	24,969,500	0	0	24,969,500	0	0	24,969,500	20,225,295	4,744,205
28	Capacity Improvement-New Interchange - Hwy 406 - Interchange at Third Street Louth	2022 to 2031	20,000,000	548,000	19,452,000	0	0	19,452,000	0	0	19,452,000	15,756,120	3,695,880
29	New Grade Separation - New West St. Catharines Grade Separation - Grade Separation at Louth/Vansickle/First/Third	2022 to 2031	25,000,000	0	25,000,000	0	0	25,000,000	2,500,000	0	22,500,000	18,225,000	4,275,000
n/a	Subtotal – Projects in Capital Budget	2022 to 2031	435,285,000	12,737,400	422,547,600	11,459,000	0	411,088,600	46,795,700	2,700,000	361,592,900	292,890,249	68,702,651
30	Capacity Improvement-Widening - Hwy 20 - Kottmeier Rd to Davis Rd/Allanport Rd (1/3 contribution)	2036 to 2041	13,999,000	0	13,999,000	5,949,600	0	8,049,400	2,099,900	0	5,949,500	4,819,095	1,130,405
31	Capacity Improvement-Widening - Schisler Rd - Moyer Rd to Montrose Rd	2036 to 2041	18,881,000	0	18,881,000	8,024,400	0	10,856,600	2,832,200	0	8,024,400	6,499,764	1,524,636
32	Capacity Improvement-Widening - Lyons Creek Rd - Montrose Rd to Stanley Ave	2031 to 2035	13,170,000	0	13,170,000	2,798,600	0	10,371,400	1,975,500	0	8,395,900	6,800,679	1,595,221
33	Capacity Improvement-Widening - Carlton Street - Martindale Rd to Ontario St	2031 to 2035	2,585,000	0	2,585,000	549,300	0	2,035,700	387,800	0	1,647,900	1,334,799	313,101



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
34	Capacity Improvement-New Road - Glendale Ave - York Rd to Queenston Rd	2031 to 2035	3,939,000	0	3,939,000	984,800	0	2,954,200	0	0	2,954,200	2,392,902	561,298
35	Capacity Improvement-Widening - Montrose Rd - Lyons Creek Rd to Schisler Rd	2036 to 2041	10,534,000	0	10,534,000	4,477,000	0	6,057,000	1,580,100	0	4,476,900	3,626,289	850,611
36	Highway Improvement - Hwy 405 interchange - Concession 6 Rd (1/3 contribution)	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
37	Highway Improvement - Hwy 406 Extension - E Main St to NGTA corridor	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
38	Highway Improvement - QEW - Garden City Skyway - Bunting Road to York Rd	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
39	Highway Improvement - QEW - York Rd to Hwy 405	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
40	Highway Improvement - QEW - Hwy 405 to Mountain Rd	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
41	Highway Improvement - QEW - Hamilton to Hwy 406 (HOV Lanes)	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
42	Highway Improvement - NGTA (Mid-Peninsula) - Hwy 403 to Hwy 406 extension	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
43	Highway Improvement - NGTA East Area corridor - Hwy 406 extension to QEW	2032 to 2041	0	0	0	0	0	0	0	0	0	0	0
44	Capacity Improvement-Widening - Concession 6 Rd - York Rd to Warner Rd	2022 to 2031	2,960,000	0	2,960,000	0	0	2,960,000	444,000	0	2,516,000	2,037,960	478,040
45	Capacity Improvement-Widening - Mewburn Rd - Warner Rd to Mountain Rd	2022 to 2031	5,758,000	0	5,758,000	0	0	5,758,000	863,700	0	4,894,300	3,964,383	929,917
46	Capacity Improvement-New Road - Morrison St - New Crossing of QEW	2031 to 2035	2,764,000	0	2,764,000	691,000	0	2,073,000	0	0	2,073,000	1,679,130	393,870



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
47	Capacity Improvement-New Road - Queenston Road realignment - Queenston Rd to York Rd	2022 to 2031	5,063,000	0	5,063,000	0	0	5,063,000	0	0	5,063,000	4,101,030	961,970
48	AT Strategic Network Grant Program	2022 to 2031	11,713,000	0	11,713,000	0	0	11,713,000	8,784,800	0	2,928,200	2,371,842	556,358
49	AT Infill Projects	2022 to 2026	12,240,000	0	12,240,000	0	0	12,240,000	9,180,000	0	3,060,000	2,478,600	581,400
50	AT Infill Projects	2027 to 2031	6,120,000	0	6,120,000	0	0	6,120,000	4,590,000	0	1,530,000	1,239,300	290,700
51	AT Infill Projects	2032 to 2036	6,120,000	0	6,120,000	382,500	0	5,737,500	4,590,000	0	1,147,500	929,475	218,025
n/a	Subtotal – Additional Projects Identified in the TMP	n/a	115,846,000	0	115,846,000	23,857,200	0	91,988,800	37,328,000	0	54,660,800	44,275,248	10,385,552
n/a	Subtotal – Capacity Improvements	n/a	551,131,000	12,737,400	538,393,600	35,316,200	0	503,077,400	84,123,700	2,700,000	416,253,700	337,165,497	79,088,203
52	Intersection Improvements-Other - Thirty Rd - at Young St	2022 to 2026	4,843,000	0	4,843,000	0	0	4,843,000	2,421,500	0	2,421,500	1,961,415	460,085
53	Intersection Improvements-Additional Capacity - Victoria Ave - at RR63 Canboro Rd	2022 to 2026	1,688,000	0	1,688,000	0	0	1,688,000	0	0	1,688,000	1,367,280	320,720
54	Intersection Improvements-Additional Capacity - McLeod Rd - at Drummond Rd	2022 to 2026	2,938,000	300	2,937,700	0	0	2,937,700	0	0	2,937,700	2,379,537	558,163
55	Intersection Improvements-Additional Capacity - Niagara Stone Rd - at Airport Rd and Line 4	2022 to 2026	4,000,000	0	4,000,000	0	0	4,000,000	0	0	4,000,000	3,240,000	760,000
56	Intersection Improvements-Additional Capacity - Thorold Stone Rd - at Cardinal Dr	2022 to 2026	1,875,000	100	1,874,900	0	0	1,874,900	0	0	1,874,900	1,518,669	356,231
57	Intersection Improvements-Additional Capacity - Thorold Stone Rd - at Dorchester Rd	2022 to 2026	9,838,000	0	9,838,000	0	0	9,838,000	0	0	9,838,000	7,968,780	1,869,220
58	Intersection Improvements-Additional Capacity - Thorold Stone Rd - at Montrose Rd	2022 to 2026	5,138,000	0	5,138,000	0	0	5,138,000	0	0	5,138,000	4,161,780	976,220



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59	Intersection Improvements-Additional Capacity - Fourth Ave - at First St Louth	2022 to 2026	2,313,000	0	2,313,000	0	0	2,313,000	0	0	2,313,000	1,873,530	439,470
60	Intersection Improvements-Additional Capacity - St. Paul St W - at Vansickle Rd	2022 to 2026	5,213,000	0	5,213,000	0	0	5,213,000	0	0	5,213,000	4,222,530	990,470
61	Intersection Improvements-Additional Capacity - Carlton St - at Geneva St	2022 to 2026	1,250,000	0	1,250,000	0	0	1,250,000	0	0	1,250,000	1,012,500	237,500
62	Intersection Improvements-Additional Capacity - Four Mile Creek Rd - at York Rd	2022 to 2026	4,875,000	74,800	4,800,200	0	0	4,800,200	0	0	4,800,200	3,888,162	912,038
63	Intersection Improvement Program - 2027 to 2041	2027 to 2041	31,500,000	0	31,500,000	0	0	31,500,000	15,750,000	0	15,750,000	12,757,500	2,992,500
n/a	Subtotal – Intersection Improvement Program	n/a	75,471,000	75,200	75,395,800	0	0	75,395,800	18,171,500	0	57,224,300	46,351,683	10,872,617
64	Road Reconstruction-Significant Capacity Improvement - Dominion Rd - Helena to Lakeshore Rd	2022 to 2031	9,588,000	50,500	9,537,500	0	0	9,537,500	5,375,600	628,600	3,533,300	2,861,973	671,327
65	Road Reconstruction-Moderate Capacity Improvement - Caistorville Rd - Regional Boundary to Concession 1	2022 to 2031	6,823,000	0	6,823,000	0	0	6,823,000	5,117,300	0	1,705,700	1,381,617	324,083
66	Road Reconstruction-Significant Capacity Improvement - Main St E - Barber Dr to Hwy 140 Access	2022 to 2031	6,876,000	0	6,876,000	0	0	6,876,000	4,125,600	0	2,750,400	2,227,824	522,576
67	Road Reconstruction-Significant Capacity Improvement - Ontario St - King St to QEW	2022 to 2031	22,913,000	0	22,913,000	0	0	22,913,000	13,747,800	0	9,165,200	7,423,812	1,741,388
68	Road Reconstruction-Minor Capacity Improvement - Lundy's Lane - Highland Ave to Montrose Rd	2022 to 2031	20,644,000	7,900	20,636,100	0	0	20,636,100	18,579,600	0	2,056,500	1,665,765	390,735
69	Road Reconstruction-Minor Capacity Improvement - Lundy's Lane - Kalar Rd to Montrose Rd	2022 to 2031	9,016,000	0	9,016,000	0	0	9,016,000	8,114,400	0	901,600	730,296	171,304



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70	Road Reconstruction-Significant Capacity Improvement - RR20 West St - Phase 4 - South Grimsby Rd 5 to Wade Rd; Wade Rd to the South Limit	2022 to 2031	6,032,000	30,400	6,001,600	0	0	6,001,600	3,619,200	0	2,382,400	1,929,744	452,656
71	Road Reconstruction-Minor Capacity Improvement - RR20 Hwy 20 - Canborough Rd to Station St	2022 to 2031	3,273,000	0	3,273,000	0	0	3,273,000	2,945,700	0	327,300	265,113	62,187
72	Road Reconstruction-Significant Capacity Improvement - RR20 St. Catharines St - Phase 5 - Griffin St S to Industrial Park	2022 to 2031	5,227,000	30,400	5,196,600	0	0	5,196,600	3,136,200	0	2,060,400	1,668,924	391,476
73	Road Reconstruction-Significant Capacity Improvement - Bowen Rd - Ridgemount Rd to QEW	2022 to 2031	4,023,000	0	4,023,000	0	0	4,023,000	2,413,800	0	1,609,200	1,303,452	305,748
74	Road Reconstruction-Significant Capacity Improvement - Bowen Rd - QEW to Thompson Rd	2022 to 2031	8,207,000	0	8,207,000	0	0	8,207,000	4,924,200	0	3,282,800	2,659,068	623,732
75	Road Reconstruction-Moderate Capacity Improvement - Main St West - Prince Charles Dr to Niagara St	2022 to 2031	3,883,000	0	3,883,000	0	0	3,883,000	2,912,300	0	970,700	786,267	184,433
76	Road Reconstruction-Moderate Capacity Improvement - Seventh St - North Service Rd to 87 Lakeshore Rd	2022 to 2031	662,000	0	662,000	0	0	662,000	496,500	0	165,500	134,055	31,445
77	Road Reconstruction-Significant Capacity Improvement - Woodlawn Rd - RR54 Rice Rd to RR36 South Pelham Rd	2022 to 2031	8,679,000	0	8,679,000	0	0	8,679,000	5,207,400	0	3,471,600	2,811,996	659,604
78	Road Reconstruction-Significant Capacity Improvement - Ontario St - Lakeshore Rd to Linwell Rd	2022 to 2031	10,997,000	50,500	10,946,500	0	0	10,946,500	6,598,200	0	4,348,300	3,522,123	826,177
79	Road Reconstruction-Moderate Capacity Improvement - Ontario St - 83 Carlton St to QEW	2022 to 2031	13,355,000	0	13,355,000	0	0	13,355,000	10,016,300	0	3,338,700	2,704,347	634,353



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80	Road Reconstruction-Moderate Capacity Improvement - Bridge St - Victoria Ave to Erie Ave	2022 to 2031	6,040,000	0	6,040,000	0	0	6,040,000	4,530,000	0	1,510,000	1,223,100	286,900
81	Road Reconstruction-Moderate Capacity Improvement - Creek Rd - RR 4 (Wellandport Rd) to RR 63 Canborough Rd	2022 to 2031	23,468,000	35,800	23,432,200	0	0	23,432,200	17,601,000	0	5,831,200	4,723,272	1,107,928
82	Road Reconstruction-Significant Capacity Improvement - Niagara St - Scott St to Linwell Rd	2022 to 2031	8,789,000	0	8,789,000	0	0	8,789,000	5,273,400	0	3,515,600	2,847,636	667,964
83	Road Reconstruction-Significant Capacity Improvement - Niagara St - Carlton St to Scott St	2022 to 2031	9,366,000	14,900	9,351,100	0	0	9,351,100	5,619,600	0	3,731,500	3,022,515	708,985
84	Road Reconstruction-Significant Capacity Improvement - Burleigh Hill - Warkdale to St. David's Rd	2022 to 2031	4,760,000	0	4,760,000	0	0	4,760,000	2,856,000	0	1,904,000	1,542,240	361,760
85	Road Reconstruction-Moderate Capacity Improvement - Townline Road - Stanley Ave to Four Mile Creek Road	2022 to 2031	11,099,000	0	11,099,000	0	0	11,099,000	8,324,300	0	2,774,700	2,247,507	527,193
86	Road Reconstruction-Moderate Capacity Improvement - Canborough Road - RR27 Wellandport Rd to Community Centre	2022 to 2031	5,772,000	1,100	5,770,900	0	0	5,770,900	4,329,000	0	1,441,900	1,167,939	273,961
87	Road Reconstruction-Moderate Capacity Improvement - Pine St - Beaverdams to Hwy 58	2022 to 2031	2,026,000	0	2,026,000	0	0	2,026,000	1,519,500	0	506,500	410,265	96,235
88	Road Reconstruction-Moderate Capacity Improvement - Beaverdams Road - RR50 Merrittville Hwy to Hwy 406 Bridge	2022 to 2031	796,000	0	796,000	0	0	796,000	597,000	0	199,000	161,190	37,810
89	Road Reconstruction-Moderate Capacity Improvement - Pelham Road Phase 3 - Wessell Dr to 8th St	2022 to 2031	5,971,000	21,400	5,949,600	0	0	5,949,600	4,478,300	0	1,471,300	1,191,753	279,547



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90	Road Reconstruction-Moderate Capacity Improvement - Twenty Mile Road - RR24 Victoria Ave to Mountain Rd	2022 to 2031	23,869,000	0	23,869,000	0	0	23,869,000	17,901,800	0	5,967,200	4,833,432	1,133,768
91	Road Reconstruction-Moderate Capacity Improvement - Townline Road - McLeod Road to Lundy's Lane	2022 to 2031	3,891,000	0	3,891,000	0	0	3,891,000	2,918,300	0	972,700	787,887	184,813
92	Road Reconstruction-Significant Capacity Improvement - Louth St - RR 81 St. Paul W and Crestcomb	2022 to 2031	7,022,000	2,800	7,019,200	0	0	7,019,200	4,213,200	0	2,806,000	2,272,860	533,140
93	Road Reconstruction-Moderate Capacity Improvement - Main Street Old Hwy 8 - Oakes Road North to Casablanca Blvd	2022 to 2031	6,029,000	5,200	6,023,800	0	0	6,023,800	4,521,800	0	1,502,000	1,216,620	285,380
94	Road Reconstruction-Moderate Capacity Improvement - Main Street - DSBN HS to Park Rd N, Park Rd N to Baker Rd & Nelles Rd to Orchard Pkwy	2022 to 2031	17,610,000	0	17,610,000	0	0	17,610,000	13,207,500	0	4,402,500	3,566,025	836,475
95	Road Reconstruction-Significant Capacity Improvement - King Street - Nineteenth St to St. John's Dr	2022 to 2031	2,636,000	0	2,636,000	0	0	2,636,000	1,581,600	0	1,054,400	854,064	200,336
96	Road Reconstruction-Moderate Capacity Improvement - King Street - Durham Rd to Lincoln Avenue	2022 to 2031	6,136,000	15,300	6,120,700	0	0	6,120,700	4,602,000	0	1,518,700	1,230,147	288,553
97	Road Reconstruction-Moderate Capacity Improvement - King St/Old Hwy. 8 - Vinehaven Trail to 23rd Street	2022 to 2031	8,456,000	0	8,456,000	0	0	8,456,000	6,342,000	0	2,114,000	1,712,340	401,660
98	Road Reconstruction-Significant Capacity Improvement - York Rd - Reg Rd 55 to DDI (Glendale)	2022 to 2031	13,364,000	0	13,364,000	0	0	13,364,000	8,018,400	0	5,345,600	4,329,936	1,015,664
99	Road Reconstruction-Significant Capacity Improvement - York Rd - DDI (Glendale) to Dorr Rd	2022 to 2031	16,738,000	0	16,738,000	0	0	16,738,000	10,042,800	0	6,695,200	5,423,112	1,272,088



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100	Road Reconstruction-Significant Capacity Improvement - St. Paul Street West - Burgoyne Bridge to CNR Tracks	2022 to 2031	6,225,000	200	6,224,800	0	0	6,224,800	3,735,000	0	2,489,800	2,016,738	473,062
101	Road Reconstruction-Minor Capacity Improvement - Main Street - Verdun Ave to Ontario St	2022 to 2031	16,816,000	32,600	16,783,400	0	0	16,783,400	15,134,400	0	1,649,000	1,335,690	313,310
102	Road Reconstruction-Moderate Capacity Improvement - Lakeshore Rd West - Third Street to Seventh Street	2022 to 2031	10,017,000	0	10,017,000	0	0	10,017,000	7,512,800	0	2,504,200	2,028,402	475,798
103	Road Reconstruction-Moderate Capacity Improvement - Glendale Ave - Welland Canal to Homer Road	2022 to 2031	10,554,000	400	10,553,600	0	0	10,553,600	7,915,500	0	2,638,100	2,136,861	501,239
104	Road Reconstruction-No Capacity Improvement - Niagara Square Dr - 98 Montrose Rd to McLeod Rd	2022 to 2031	1,904,000	0	1,904,000	0	0	1,904,000	1,904,000	0	0	0	0
105	Road Reconstruction-Moderate Capacity Improvement - Stanley Avenue - Hwy 420 to Peer Lane	2022 to 2031	8,866,000	0	8,866,000	0	0	8,866,000	6,649,500	0	2,216,500	1,795,365	421,135
106	Road Reconstruction-Significant Capacity Improvement - Stevensville Rd - Eagle Street to Bowen Road	2022 to 2031	10,529,000	0	10,529,000	0	0	10,529,000	6,317,400	0	4,211,600	3,411,396	800,204
107	Road Reconstruction-Moderate Capacity Improvement - Sodom Road - Lyons Creek Road to Willick Road	2022 to 2031	7,152,000	0	7,152,000	0	0	7,152,000	5,364,000	0	1,788,000	1,448,280	339,720
108	Road Reconstruction-Moderate Capacity Improvement - Eight Ave - Twenty First St to Seventeenth St	2022 to 2031	4,457,000	0	4,457,000	0	0	4,457,000	3,342,800	0	1,114,200	902,502	211,698
109	Road Reconstruction-Moderate Capacity Improvement - Victoria Ave - South Service Rd to Culp Rd	2022 to 2031	15,275,000	0	15,275,000	0	0	15,275,000	11,456,300	0	3,818,700	3,093,147	725,553



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110	Road Reconstruction-Moderate Capacity Improvement - Welland St - Mellanby Ave to Main St E	2022 to 2031	1,475,000	0	1,475,000	0	0	1,475,000	1,106,300	0	368,700	298,647	70,053
111	Road Reconstruction-Moderate Capacity Improvement - Mellanby Ave - RR3 Main St W to Mellanby Ave	2022 to 2031	1,475,000	0	1,475,000	0	0	1,475,000	1,106,300	0	368,700	298,647	70,053
112	Road Reconstruction-Significant Capacity Improvement - Garrison Rd - Rose Hill Rd to Concession Rd	2022 to 2031	36,818,000	0	36,818,000	0	0	36,818,000	22,090,800	0	14,727,200	11,929,032	2,798,168
113	Road Reconstruction-Moderate Capacity Improvement - York Rd - Queenston Rd to Conc 3	2022 to 2031	6,545,000	0	6,545,000	0	0	6,545,000	4,908,800	0	1,636,200	1,325,322	310,878
114	Road Reconstruction - Roads Reconstruction Program - Region Wide	2022 to 2041	320,000,000	0	320,000,000	0	0	320,000,000	288,000,000	0	32,000,000	25,920,000	6,080,000
n/a	Subtotal – Road Reconstruction/ Improvements Program	blank	782,144,000	299,400	781,844,600	0	0	781,844,600	612,351,500	628,600	168,864,500	136,780,245	32,084,255
115	Bridge Divesture - Lincoln St / Ontario St - Str. 029210 over Old Welland Canal 0.10km North of RR 27 Main St and Str. 031205 over Old Welland Canal 0.10km East of RR 54 Prince Charles	2022 to 2031	4,200,000	0	4,200,000	0	0	4,200,000	4,200,000	0	0	0	0
116	Culvert Reconstruction - Dominion Road Bridge - Str. 001205 over Six Mile Creek 1.30km West of RR 120 Stonemill Rd	2022 to 2031	1,700,000	0	1,700,000	0	0	1,700,000	1,700,000	0	0	0	0



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117	Deck Reconstruction - Ellis Bridge/Caistorville Rd Bridge - Str. 002210 over Wolf Creek 3.90km South of RR 65 Bismark Rd and Str. 002205 Caistorville Rd Bridge over Welland Canal 4.50km South of RR 65 Bismark Rd	2022 to 2031	4,286,000	0	4,286,000	0	0	4,286,000	4,286,000	0	0	0	0
118	Culvert Reconstruction - York Road Culvert - Str. 009305 2.30km West of RR 2 Caistorville Rd	2022 to 2031	625,000	0	625,000	0	0	625,000	625,000	0	0	0	0
119	Retaining Wall Rehabilitation - Mountain Rd Retaining Wall Retaining Wall - Ridge Rd to Oak St	2022 to 2031	1,050,000	0	1,050,000	0	0	1,050,000	1,050,000	0	0	0	0
120	Bridge Reconstruction/Improvement - Thirty Road Bridge - Str. 014235 over Spring Creek 1.60km South of RR 73 Mud St	2022 to 2031	950,000	0	950,000	0	0	950,000	731,500	0	218,500	176,985	41,515
121	Bridge Reconstruction/Improvement - Warner Bridge - Str. 014205 over Welland River 1.75km South of Conc 2 Road	2022 to 2031	2,750,000	0	2,750,000	0	0	2,750,000	2,117,500	0	632,500	512,325	120,175
122	Bridge Reconstruction - Hydro Canal Br North - Str. 020230 Over Hydro Canal 0.60km East of Montrose Road	2022 to 2031	2,500,000	0	2,500,000	0	0	2,500,000	2,500,000	0	0	0	0
123	Culvert Reconstruction - Hwy 20 Culvert - Str. 020315 0.10km East of RR 24 Vineland Townline	2022 to 2031	1,650,000	0	1,650,000	0	0	1,650,000	1,650,000	0	0	0	0
124	Bridge Reconstruction/Improvement - Highway 20 Bridge - Str. 020220 1.40km West of RR 82 Allanport	2022 to 2031	5,000,000	0	5,000,000	0	0	5,000,000	4,400,000	0	600,000	486,000	114,000



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125	Reconstruction/BO CPR - Highway 20 CPR Subway - Str. 020215 under CPR 2.30km West of RR 24 Townline Rd	2022 to 2031	5,000,000	0	5,000,000	0	0	5,000,000	5,000,000	0	0	0	0
126	Reconstruction/BO/NOW Temp Supports - Thompson Rd Bridge - Str. 021210 under Tracks 0.05km North of RR 21 Thompson Rd	2022 to 2031	5,000,000	0	5,000,000	0	0	5,000,000	5,000,000	0	0	0	0
127	Reconstruction/BO/NOW Temp Supports - Thompson Rd Bridge - Str. 021215 under Tracks 0.06km North of RR 21 Thompson Rd	2022 to 2031	5,000,000	0	5,000,000	0	0	5,000,000	5,000,000	0	0	0	0
128	Culvert Reconstruction/Improvement - Bowen Road Culvert - Str. 021305 over Frenchman Creek 0.30km East of Petit Rd	2022 to 2031	850,000	0	850,000	0	0	850,000	697,000	0	153,000	123,930	29,070
129	Culvert Reconstruction - Forks Creek Twin Culvert - Str. 024320 over Forks Creek 0.36km North of Hwy 3	2022 to 2031	2,000,000	0	2,000,000	0	0	2,000,000	2,000,000	0	0	0	0
130	Bridge Reconstruction/Improvement - Netherby Road Bridge - Str. 025210 0.75km West of RR 98 Montrose Rd	2022 to 2031	850,000	0	850,000	0	0	850,000	697,000	0	153,000	123,930	29,070
131	- Netherby Road Culvert - Str. 025310 (may be cross culvert)	2022 to 2031	750,000	0	750,000	0	0	750,000	750,000	0	0	0	0
132	Bridge Reconstruction - East Main St Bridge - Str. 027225 over Tracks 1.50km West of RR 84 Doan's Ridge	2022 to 2031	4,800,000	0	4,800,000	0	0	4,800,000	4,800,000	0	0	0	0
133	Bridge Reconstruction/Improvement - Seventh St Bridge - Str. 034205 over CNR railway 0.16km North of RR 77 4th Ave Louth	2022 to 2031	2,750,000	0	2,750,000	0	0	2,750,000	2,227,500	0	522,500	423,225	99,275



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
134	Culvert Reconstruction - South Pelham Street Culvert - Str. 036305 0.02km North of Thorold Road	2022 to 2031	700,000	0	700,000	0	0	700,000	700,000	0	0	0	0
135	Bridge Reconstruction/Improvement - JR Stork Bridge - Str. 038205 over Francis Creek 1.10km North of QEW	2022 to 2031	6,500,000	0	6,500,000	0	0	6,500,000	5,265,000	0	1,235,000	1,000,350	234,650
136	Bridge Reconstruction/Improvement - Sixteen Mile Creek Bridge - Str. 039215 over 16 Mile Creek 1.40km West of RR 34 Seventh Ave	2022 to 2031	6,300,000	0	6,300,000	0	0	6,300,000	4,662,000	0	1,638,000	1,326,780	311,220
137	Bridge Reconstruction/Improvement-Schedule with 040220 in St. Catharines - Sixteen Mile Creek Bridge - Str. 040215 over 16 Mile Creek 1.40 km West of Seventh Avenue	2022 to 2031	1,150,000	0	1,150,000	0	0	1,150,000	1,150,000	0	0	0	0
138	Bridge Reconstruction/Improvement-Schedule with 040215 in Lincoln - Fifteen Mile Creek Bridge - Str. 040220 over 15 Mile Creek 0.80km West of Jordan Road	2022 to 2031	1,600,000	0	1,600,000	0	0	1,600,000	1,600,000	0	0	0	0
139	Bridge Reconstruction - Woodlawn Road Bridges - Str. 041205 over Welland River 0.84km East of Niagara Street and Str. 041210 over Welland River 1.07km East of Niagara Street	2022 to 2031	1,450,000	0	1,450,000	0	0	1,450,000	1,450,000	0	0	0	0



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
140	Bridge Replacement - Oswego Creek Bridge - Str. 045205 over Oswego Creek 1.40 km East of RR 63 Canborough Rd	2022 to 2031	8,275,000	0	8,275,000	0	0	8,275,000	4,137,500	0	4,137,500	3,351,375	786,125
141	Culvert Reconstruction/Improvement - Niagara Street Culvert - Str. 048205 over Beamer Creek 0.50km South of RR 87 Lakeshore Rd	2022 to 2031	850,000	0	850,000	0	0	850,000	637,500	0	212,500	172,125	40,375
142	Culvert Reconstruction/Improvement - McLeod Road Phase 3 / Marineland Parkway Culvert - Str. 049310 0.10km East of McLeod Road	2022 to 2031	1,000,000	0	1,000,000	0	0	1,000,000	790,000	0	210,000	170,100	39,900
143	Bridge Reconstruction/Improvement - Glenridge Ave Bridge - Str. 050220 Over CNR Tracks 0.16km South of Edgedale Rd	2022 to 2031	8,000,000	0	8,000,000	0	0	8,000,000	7,200,000	0	800,000	648,000	152,000
144	Bridge Reconstruction - Niagara St Bridge - Str. 050205 Over Welland River 0.32km North of RR 27 Main St	2022 to 2031	7,350,000	0	7,350,000	0	0	7,350,000	7,350,000	0	0	0	0
145	Bridge Reconstruction/Slope Failure - Prince Charles Drive Bridge - Str. 054205 Over CNR 0.32 km North of RR 31 Broadway	2022 to 2031	1,650,000	0	1,650,000	0	0	1,650,000	1,650,000	0	0	0	0
146	Bridge Reconstruction - Prince Charles Drive Bridge - Str. 054210 over Welland River 0.10km North of RR 27 Main St	2022 to 2031	2,950,000	0	2,950,000	0	0	2,950,000	2,950,000	0	0	0	0
147	Bridge Reconstruction - Virgil Creek Bridge - Str. 055205 over Four Mile Creek 4.90km South of RR 87 Mary	2022 to 2031	900,000	0	900,000	0	0	900,000	900,000	0	0	0	0



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
148	Bridge Reconstruction - Beaver Creek Bridge - Str. 063215 Over Beaver Creek 1.30km East of RR 27 River Rd	2022 to 2031	1,750,000	0	1,750,000	0	0	1,750,000	1,750,000	0	0	0	0
149	Bridge Reconstruction - Canborough Road Bridge - Str. 063220 over Sucker Creek 3.60km East of RR 27 Old Hwy 57	2022 to 2031	675,000	0	675,000	0	0	675,000	675,000	0	0	0	0
150	Bridge Reconstruction - Mud Street Culvert - Str. 073215 over Spring Creek 0.40km East of RR 14 Thirty Rd	2022 to 2031	700,000	0	700,000	0	0	700,000	700,000	0	0	0	0
151	Culvert Reconstruction - Fly Road Underpass - Str. 073305 over Quarry Road 1.3km west of RR24 Victoria Ave	2022 to 2031	4,250,000	0	4,250,000	0	0	4,250,000	4,250,000	0	0	0	0
152	Railing Reconstruction - Sixteen Creek Arch Culvert - Str. 077310 over Sixteen Mile Creek 2.10km East of RR 26 Jordan Rd	2022 to 2031	675,000	0	675,000	0	0	675,000	675,000	0	0	0	0
153	Bridge Reconstruction - 12 Mile Creek Bridge - Str. 077225 over 12 Mile Creek 0.35km South of RR 42 Ontario St	2022 to 2031	3,750,000	0	3,750,000	0	0	3,750,000	3,750,000	0	0	0	0
154	Bridge Reconstruction - Fourth Ave CNR Bridge - Str. 077210 over CNR 0.90km East of RR 34 Seventh St	2022 to 2031	1,550,000	0	1,550,000	0	0	1,550,000	1,550,000	0	0	0	0
155	Bridge Reconstruction - Forty Mile Creek Bridge - Str. 081205 Over Forty Mile Creek 0.16km West of RR 12 Christie St	2022 to 2031	5,100,000	0	5,100,000	0	0	5,100,000	5,100,000	0	0	0	0
156	Bridge Reconstruction/Improvement - 20 Mile Arch - Str. 081210 Over 20 Mile Creek 1.90km East of RR 24 Victoria Ave	2022 to 2031	8,020,000	0	8,020,000	0	0	8,020,000	5,052,600	0	2,967,400	2,403,594	563,806



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
157	Retaining Wall Rehabilitation - King St Retaining Wall - Retaining Wall from Brookside to Twenty Mile Creek	2022 to 2031	4,350,000	0	4,350,000	0	0	4,350,000	4,350,000	0	0	0	0
158	Culvert Reconstruction - King Street Culvert - Str. 081320 over Sixteen Mile Creek 0.60km East of 13th St	2022 to 2031	2,750,000	0	2,750,000	0	0	2,750,000	2,750,000	0	0	0	0
159	Bridge Reconstruction/Improvement - St. Paul W CNR Bridge - Str. 081215 Over CNR 0.50km East of RR 72 Louth St	2022 to 2031	13,250,000	96,100	13,153,900	0	0	13,153,900	11,730,000	500,000	923,900	748,359	175,541
160	Engineering Study - Carlton St - New bridge crossing the Twelve Mile Creek	2032 to 2041	2,500,000	0	2,500,000	0	0	2,500,000	250,000	0	2,250,000	1,822,500	427,500
161	Culvert Reconstruction - Line 4 Bridge - Str. 083215 0.75km west of 055 Niagara Stone Rd	2022 to 2031	675,000	0	675,000	0	0	675,000	675,000	0	0	0	0
162	Culvert Reconstruction - Carlton Street Culvert - Str. 083300 0.06km West of Welland Canals Parkway	2022 to 2031	1,080,000	0	1,080,000	0	0	1,080,000	1,080,000	0	0	0	0
163	Bridge Reconstruction - Miller Rd / Townline - Str. 084205 at Townline Tunnel Road 0.15km South of RR525 Keefer Dr	2022 to 2031	1,300,000	0	1,300,000	0	0	1,300,000	1,300,000	0	0	0	0
164	Bridge Removal / Ped Tunnel - Nidels Bridge - Str. 084210 over abandoned Railway 0.22km North of RR525 Keefer Dr	2022 to 2031	1,900,000	0	1,900,000	0	0	1,900,000	1,900,000	0	0	0	0
165	Culvert Reconstruction/Improvement - Lakeshore Rd Culvert - Str. 087225 0.80km East of Four Mile Creek Rd	2022 to 2031	1,000,000	0	1,000,000	0	0	1,000,000	820,000	0	180,000	145,800	34,200



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
166	Bridge Reconstruction - Lakeshore Rd Bridge - Str. 087215 over Six Mile Creek 2.80km East of RR 86 Stewart Rd	2022 to 2031	875,000	0	875,000	0	0	875,000	875,000	0	0	0	0
167	Bridge Reconstruction/Improvement - Frank E Weir & Lakeport Rd Bridge - Str. 087205 & 087210 at Hydro Station 0.18km West of Michigan Ave	2022 to 2031	11,410,000	0	11,410,000	0	0	11,410,000	10,725,400	0	684,600	554,526	130,074
168	Culvert Reconstruction - Lakeshore Rd Culvert - Str. 087320 0.14km East of Aquadale Drive	2022 to 2031	1,650,000	0	1,650,000	0	0	1,650,000	1,650,000	0	0	0	0
169	Bridge Reconstruction/Improvement, Culvert Reconstruction/Improvement- joint with road project - Glendale Ave Bridge and Glendale Ave Twin Culverts - Str. 089215 over Seaway Haulage Rd 0.60km East of Welland Canal and Str. 089305 0.60km East of Welland Canal	2022 to 2031	9,950,000	0	9,950,000	0	0	9,950,000	8,457,500	0	1,492,500	1,208,925	283,575
170	Bridge Reconstruction - White Pigeon Bridge - Str. 098220 over Lyon's Creek 0.10km South of RR 27 Schisler Rd	2022 to 2031	850,000	0	850,000	0	0	850,000	850,000	0	0	0	0
171	Culvert Reconstruction - Montrose Road Culvert - Str. 098305 0.50km North of RR 25 Netherby Rd	2022 to 2031	750,000	0	750,000	0	0	750,000	750,000	0	0	0	0
172	Bridge Reconstruction - Humberstone Marsh Bridge - Str. 098200 3.65km North of Hwy 3	2022 to 2031	675,000	0	675,000	0	0	675,000	675,000	0	0	0	0



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
173	Bridge Reconstruction - Stanley Ave Bridge - Str. 102205 over Welland River 0.90km North of RR 47 Lyons Creek	2022 to 2031	3,000,000	0	3,000,000	0	0	3,000,000	3,000,000	0	0	0	0
174	Bridge Reconstruction - Stevensville Bridge - Str. 116215 over Black Creek 1.30km North of RR 21 Bowen Rd	2022 to 2031	1,700,000	0	1,700,000	0	0	1,700,000	1,700,000	0	0	0	0
175	Culvert Reconstruction - Stevensville Road Culvert (116315) - Str. 116315 over Beaver Creek 2.00km North of Hwy 3	2022 to 2031	1,550,000	0	1,550,000	0	0	1,550,000	1,550,000	0	0	0	0
176	Bridge Reconstruction - Ontario Ave / Hwy 420 - Str. 420215 Ontario over Hwy 420 north of Bender Street	2022 to 2031	2,100,000	0	2,100,000	0	0	2,100,000	2,100,000	0	0	0	0
177	Bridge Reconstruction - Victoria / Hwy 420 - Str. 420205 Victoria over Hwy 420 1.35km south of Bridge St.	2022 to 2031	1,600,000	0	1,600,000	0	0	1,600,000	1,600,000	0	0	0	0
178	Placeholder until Capital projects are determined - Struc Rehab Program - Region Wide	2022 to 2041	101,000,000	0	101,000,000	0	0	101,000,000	101,000,000	0	0	0	0
n/a	Subtotal – Structure Reconstruction/ Improvements Program	n/a	292,771,000	96,100	292,674,900	0	0	292,674,900	273,164,000	500,000	19,010,900	15,398,829	3,612,071
179	Region Wide Program - Traffic Signal Annual Program -	2022 to 2041	60,000,000	0	60,000,000	0	0	60,000,000	54,000,000	0	6,000,000	4,860,000	1,140,000
180	Region Wide Program - Illumination Annual Program -	2022 to 2041	35,200,000	0	35,200,000	0	0	35,200,000	31,680,000	0	3,520,000	2,851,200	668,800
181	Region Wide Program - Transportation Studies -	2022 to 2041	11,625,000	0	11,625,000	0	0	11,625,000	1,162,500	0	10,462,500	8,474,625	1,987,875
182	Region Wide Program - Miscellaneous Construction -	2022 to 2041	20,000,000	0	20,000,000	0	0	20,000,000	18,000,000	0	2,000,000	1,620,000	380,000
183	Region Wide Program - Miscellaneous Road Properties -	2022 to 2041	4,300,000	0	4,300,000	0	0	4,300,000	645,000	0	3,655,000	2,960,550	694,450



Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Prior Funding	Adjusted Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions (to recognize benefit to non-D.C. services)	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 81%	Non-Residential Share 19%
184	Region Wide Program - Development Related Projects	2022 to 2041	10,000,000	0	10,000,000	0	0	10,000,000	0	0	10,000,000	8,100,000	1,900,000
185	Region Wide Program - Future Engineering & Road Projects	2022 to 2041	10,000,000	0	10,000,000	0	0	10,000,000	0	0	10,000,000	8,100,000	1,900,000
186	Region Wide Program - Traffic Counts Collection	2022 to 2041	1,440,000	0	1,440,000	0	0	1,440,000	144,000	0	1,296,000	1,049,760	246,240
n/a	Subtotal – Annual Programs	n/a	152,565,000	0	152,565,000	0	0	152,565,000	105,631,500	0	46,933,500	38,016,135	8,917,365
187	Provisional Reduction for Oversizing - Residential	n/a	0	0	0	21,292,082	0	-21,292,082	0	0	-21,292,082	-21,292,082	0
188	Provisional Reduction for Oversizing - Non-Residential	n/a	0	0	0	32,935,580	0	-32,935,580	0	0	-32,935,580	0	-32,935,580
n/a	Reserve Fund Adjustment	n/a	0	0	0	0	0	0	4,060,839	0	-4,060,839	-3,289,280	-771,559
n/a	Total	blank	1,854,082,000	13,208,100	1,840,873,900	89,543,862	0	1,805,557,700	1,097,503,039	3,828,600	649,998,399	549,131,027	100,867,372



5.3.2 Public Works Facilities, Fleet & Equipment

The Region operates its public works department out of a number of facilities. Currently the facilities provide a total of approximately 169,000 sq.ft. of building area. The sq.ft. of facility space provided over the previous 10-year period results in an average level of service of 0.37 sq.ft. per capita which equates to an investment of \$108 per capita. Based on this service standard, the Region would be eligible to collect approximately \$13.21 million from D.C.s for public works facility space (over the 10-year period).

The Public Works service has a variety of vehicles and major equipment totalling approximately \$26.23 million. The number of vehicle and equipment provided over the previous 10-year period results in an average level of service of 1.30 vehicles and equipment per 1,000 population or a per capita level of investment of \$57. Over the forecast period, the D.C.-eligible amount for vehicles and equipment is approximately \$6.93 million.

Based on the projected growth over the 20-year forecast period, the Region has identified \$27.31 million for the purchase of vehicles and equipment items, additional facility space, a study and property for the future Niagara West Service Centre, and the construction of a traffic control centre. Of this amount, deductions totalling \$7.40 million have been made to account for the share of the works that benefits existing development. The net growth-related capital cost of \$19.91 million has been included in the D.C. calculation.

The residential and non-residential capital cost allocation for public works of 80% residential and 20% non-residential is based on the incremental growth in population to employment for the 20-year forecast period.



Table 5-7
Infrastructure Cost Included in the Development Charges Calculation
Class of Service – Public Works

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Service to which Project Relates	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Non-Residential Share 20%
1A	Provision for Additional Vehicles	Services Related to a Highway	2022 to 2041	1,770,000	0	0	1,770,000	0	0	1,770,000	1,416,000	354,000
1B	Provision for Additional Vehicles	Water Supply Services	2022 to 2041	1,770,000	0	0	1,770,000	0	0	1,770,000	1,416,000	354,000
1C	Provision for Additional Vehicles	Wastewater Services	2022 to 2041	1,770,000	0	0	1,770,000	0	0	1,770,000	1,416,000	354,000
2	Road Facility Program/ Yards	Services Related to a Highway	2022 to 2041	10,000,000	0	0	10,000,000	6,400,000	0	3,600,000	2,880,000	720,000
3	Traffic Control Centre Study & Construction	Services Related to a Highway	2022 to 2024	5,000,000	0	0	5,000,000	1,000,000	0	4,000,000	3,200,000	800,000
4	Niagara West Service Centre (Study/property)	Services Related to a Highway	2022 to 2026	5,000,000	0	0	5,000,000	0	0	5,000,000	4,000,000	1,000,000
5	Provision for Additional Facility Space	Services Related to a Highway	2027 to 2041	2,000,000	0	0	2,000,000	0	0	2,000,000	1,600,000	400,000
	Total			27,310,000	0	0	27,310,000	7,400,000	0	19,910,000	15,928,000	3,982,000



5.3.3 Policing Services

The Niagara Regional Police Service operates from several facilities, some of which are owned while others are leased. These facilities provide for a total of 344,018 sq.ft. of building area. The total sq.ft. provided over the previous 10-year period results in a per capita average level of service of 0.70 sq.ft. or an average level of investment of \$348 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 20-year forecast period of \$42.44 million.

In addition to the facility space, the Region also currently has 366 police vehicles in its inventory. The total D.C.-eligible amount calculated for police vehicles over the forecast period is approximately \$3.69 million, based on an average historical service standard of \$30 per capita.

The police service currently has 759 police officers, including senior officers, and 58 special constables. The police service provides equipment and gear for the officers, along with equipment for vehicles which are changed out when cruisers are replaced and therefore have a life of more than seven years. This equipment and gear provides a calculated average level of service for the historic 10-year period of \$18 per capita, providing for a D.C.-eligible amount over the forecast period of \$2.16 million.

Based on these service standards, the total D.C.-eligible amount over the 20-year forecast period related to Policing Services is \$48.29 million.

The Region has identified the need for \$20.74 million in policing projects. This includes recovery of approximately \$15.24 million in outstanding growth-related debt payments for the new headquarters and provisions for additional vehicles and equipment. A deduction in the amount of \$148,570 has been made to account for the balance in the reserve fund. The net growth-related amount included in the D.C. calculation is \$20.59 million.

The residential and non-residential allocation for policing services is based on the relationship between population and employment resulting in an allocation of 80% to residential development and 20% to non-residential development.



Table 5-8
Infrastructure Cost Included in the Development Charges Calculation
Policing Services

Project Number	Increased Service Needs Attributable to Anticipated Development 2022 to 2041	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Non-Residential Share 20%
1	New Headquarters/#2 District - 5700 Valley Way, Niagara Falls Station (Growth related Principal)	2022 to 2045	12,627,757	0	0	12,627,757	0	0	12,627,757	10,102,206	2,525,551
2	New Headquarters/#2 District - 5700 Valley Way, Niagara Falls Station (Growth related discounted Interest)	2022 to 2045	2,614,654	0	0	2,614,654	0	0	2,614,654	2,091,723	522,931
3	Provision for Patrol and Non-Patrol Vehicles	2022 to 2041	1,900,000	0	0	1,900,000	0	0	1,900,000	1,520,000	380,000
4	Provision for Other Police Vehicles	2022 to 2041	1,500,000	0	0	1,500,000	0	0	1,500,000	1,200,000	300,000
5	Provision for Equipment and Gear	2022 to 2041	2,100,000	0	0	2,100,000	0	0	2,100,000	1,680,000	420,000
n/a	Reserve Fund Adjustment	n/a	0	0	0		148,570	0	-148,570	-118,856	-29,714
	Total		20,742,411	0	0	20,742,411	148,570	0	20,593,841	16,475,073	4,118,768



5.4 Service Levels and Urban 30-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with urban 30-year capital costs.

5.4.1 Wastewater Services

As part of the Water and Wastewater Master Servicing Plan, GM BluePlan is undertaking a detailed review of the wastewater servicing needs required to accommodate growth over the forecast period to 2051. Appendix F provides more details on the service coverage and capital program, along with their methodology towards levels of service, allocation of works between existing benefit and growth, pose period/excess capacity, provisions for grants, subsidies, and other contributions, etc.

In total, GM BluePlan have identified capital works totalling \$1.27 billion required to service growth. Of this amount, \$405.65 million has been identified as benefiting existing development within the Region and \$91.58 million has been identified as post-period benefit. The reserve fund balance of \$53,050,647 has been deducted from the capital program. Additional deductions have been made in the amount of \$11.64 million for residential development and \$32.54 million for non-residential development to reflect variations in the growth forecast between the D.C. study and the Water and Wastewater Master Servicing Plan. This results in a net growth-related amount of approximately \$674.78 million attributable to growth over the 30-year forecast period. In addition to their work, adjustments have been made to recognize amounts for unfunded works previously constructed. These works total an additional \$45.70 million. Therefore, the total to be included in the D.C. calculation for previous unfunded works and future works is \$720.48 million.

The costs for all wastewater services are shared 80%/20% between residential and non-residential based on the anticipated population to employment over the 30-year forecast period. The population and employment figures have been adjusted for W.A.H. and N.F.P.O.W. figures (discussed in detail in Appendix F).



**Table 5-9
Infrastructure Cost Included in the Development Charges Calculation
Wastewater Services**

Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	WWTP	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Costs (2022\$)	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Non-Residential Share 20%
WW-D-001	Decommissioning of Queenston WWTP - Decommissioning of Queenston WWTP, to be replaced by new SPS and forcemain to St. David's #1	Niagara-on-the-Lake	Queenston	Treatment	2032 to 2041	2,256,000	0	2,256,000	1,579,200	0	676,800	541,440	135,360
WW-D-003	Decommissioning of South Side High Lift SPS - Decommissioning of SSHL SPS, to be replaced by gravity trunk sewer to SNF WWTP	Niagara Falls	South Niagara Falls	Forcemain	2042 to 2051	500,000	0	500,000	350,000	0	150,000	120,000	30,000
WW-D-004	Decommissioning of Garner SPS - Decommissioning of Garner SPS to be replaced by gravity connection to SNF WWTP	Niagara Falls	South Niagara Falls	Forcemain	2032 to 2041	450,000	0	450,000	315,000	0	135,000	108,000	27,000
WW-D-006	Decommissioning of Grassy Brook SPS - Decommissioning of Grassy Brook SPS to be replaced by gravity connection to SNF WWTP	Niagara Falls	South Niagara Falls	Sewer	2032 to 2041	450,000	0	450,000	315,000	0	135,000	108,000	27,000
WW-FM-003	Upgrade Foss Road SPS Forcemain - Replace existing 200 mm Foss Road SPS Forcemain with new single 250 mm forcemain in Welland. (5720m)	Pelham	Welland	Forcemain	2022 to 2031	9,883,000	988,300	8,894,700	1,976,600	0	6,918,100	5,534,480	1,383,620
WW-FM-004	Laurie Avenue SPS Forcemain Upgrade - New 250 mm Laurie Avenue SPS Forcemain Upgrade in Lincoln (850m)	Lincoln	Baker Road	Forcemain	2022 to 2031	2,605,000	0	2,605,000	521,000	0	2,084,000	1,667,200	416,800
WW-FM-005	New Peel Street SPS Forcemain - New 400 mm Peel Street SPS Forcemain in Thorold from station to Black Horse SPS (2000m)	Thorold	South Niagara Falls	Forcemain	2022 to 2031	5,062,000	506,200	4,555,800	1,012,400	0	3,543,400	2,834,720	708,680
WW-FM-006	New Black Horse Forcemain to Niagara Falls - New 400mm Black Horse Forcemain to New South Niagara Falls Trunk on Barron Road to the Montrose Trunk Sewer (2665m)	Thorold	South Niagara Falls	Forcemain	2022 to 2031	2,839,000	283,900	2,555,100	567,800	0	1,987,300	1,589,840	397,460
WW-FM-009	Dorchester Forcemain Upgrade - Replace Existing 350 mm Dorchester SPS Forcemain with new single 500 mm forcemain in Niagara Falls. (50m)	Niagara Falls	Niagara Falls	Forcemain	2022 to 2031	659,000	65,900	593,100	131,800	0	461,300	369,040	92,260
WW-FM-010	St. Davids #1 Forcemain Upgrade - Replace existing 200 mm St. Davids #1 Forcemain with new single 400 mm in Niagara-on-the-Lake (2030m)	Niagara-on-the-Lake	Niagara Falls	Forcemain	2022 to 2031	5,803,000	0	5,803,000	2,901,500	0	2,901,500	2,321,200	580,300
WW-FM-011	Smithville Forcemain Upgrade - Replace existing 400 mm Smithville SPS Forcemain with new single 750 mm forcemain in Smithville. (10790m)	West Lincoln	Baker Road	Forcemain	2022 to 2031	41,785,000	4,178,500	37,606,500	8,357,000	0	29,249,500	23,399,600	5,849,900



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WW-FM-012	New Queenston Forcemain - New 250 mm Queenston Forcemain into Niagara Falls system (5060m)	Niagara-on-the-Lake	Niagara Falls	Forcemain	2022 to 2031	12,427,000	0	12,427,000	8,698,900	0	3,728,100	2,982,480	745,620
WW-FM-013	Lake Street Forcemain Upgrade - Replace existing 445 mm Lake Street SPS Forcemain with new single 750 mm forcemain in Grimsby. (790m)	Grimsby	Baker Road	Forcemain	2022 to 2031	3,454,000	345,400	3,108,600	690,800	0	2,417,800	1,934,240	483,560
WW-FM-014	Ontario Street Forcemain Upgrade - Replace Existing 534 mm Ontario Street SPS Forcemain with new single 750 mm forcemain in Grimsby. (2930m)	Lincoln	Baker Road	Forcemain	2022 to 2031	11,408,000	1,140,800	10,267,200	2,281,600	0	7,985,600	6,388,480	1,597,120
WW-FM-017	New Streamside Forcemain and Outlet - New 200 mm forcemain and alignment (980m)	West Lincoln	Baker Road	Forcemain	2032 to 2041	2,350,000	235,000	2,115,000	470,000	0	1,645,000	1,316,000	329,000
WW-FM-018	Beaverdams Forcemain Replacement - Replace existing 150 mm Beaverdams SPS forcemain with new single 200 mm in Thorold (1730m)	Thorold	Port Dalhousie	Forcemain	2022 to 2031	3,660,000	366,000	3,294,000	732,000	0	2,562,000	2,049,600	512,400
WW-FM-019	Haulage Road Forcemain Upgrade - New 250 mm Forcemain (285m)	St. Catharines	Port Weller	Forcemain	2042 to 2051	4,500,000	450,000	4,050,000	900,000	0	3,150,000	2,520,000	630,000
WW-FM-022	Commission 600 mm Towpath Road Forcemain - Bring constructed 600 mm Towpath SPS forcemain into service	Welland	Welland	Forcemain	2032 to 2041	250,000	25,000	225,000	50,000	0	175,000	140,000	35,000
WW-FM-024	St. David's #2 Forcemain Upgrade - Replace existing 250 mm St David's #2 SPS forcemain with new single 400 mm in Niagara Falls (1420m)	Niagara-on-the-Lake	Niagara Falls	Forcemain	2022 to 2031	5,689,000	568,900	5,120,100	2,844,500	0	2,275,600	1,820,480	455,120
WW-FM-025	Alliston Road Forcemain Upgrade - Replace existing 250 mm Alliston Road SPS forcemain with new single 350 mm in Fort Erie (1560m)	Fort Erie	Anger Ave	Forcemain	2022 to 2031	4,233,000	423,300	3,809,700	846,600	0	2,963,100	2,370,480	592,620
WW-FM-026	Lakeshore Forcemain Replacement - Upgrade existing 200 mm Lakeshore SPS forcemain with new single 250 mm in Fort Erie (300m)	Fort Erie	Anger Ave	Forcemain	2022 to 2031	1,155,000	115,500	1,039,500	231,000	0	808,500	646,800	161,700
WW-FM-027	Spring Gardens Forcemain Replacement - Upgrade existing 400 mm Spring Gardens SPS forcemain with new single 500 mm in St Catharines (623m)	St. Catharines	Port Weller	Forcemain	2022 to 2031	3,058,000	305,800	2,752,200	611,600	0	2,140,600	1,712,480	428,120
WW-FM-028	Jordan Valley Forcemain Replacement - Replace existing 200 mm Jordan Valley SPS forcemain with new single 300 mm in Lincoln (1125m)	Lincoln	Baker Road	Forcemain	2022 to 2031	2,915,000	291,500	2,623,500	583,000	0	2,040,500	1,632,400	408,100
WW-II-017	Region Wide Wet weather Reduction - Wet weather reduction program in all systems to be executed from 2022 to 2051	Region-Wide	0	Wet Weather Reduction	2022 to 2051	225,000,000	0	225,000,000	112,500,000	0	112,500,000	90,000,000	22,500,000
WW-SPS-001	Alliston SPS Upgrade - Anger Avenue - Upgrade from 67 L/s to ultimate ECA of 130 L/s by adding final pump.	Fort Erie	Anger Ave	Pumping	2022 to 2031	1,107,000	0	1,107,000	0	0	1,107,000	885,600	221,400



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WW-SPS-002	Catherine Street SPS Replacement - Anger Avenue - Increase station capacity from 150.8 L/s to 190 L/s by replacing station at new location.	Fort Erie	Anger Ave	Pumping	2022 to 2031	9,372,000	937,200	8,434,800	4,686,000	0	3,748,800	2,999,040	749,760
WW-SPS-003	Lakeshore SPS Upgrade - Anger Avenue - Increase station capacity from 63 L/s to 79 L/s by replacing the station at a new location.	Fort Erie	Anger Ave	Pumping	2022 to 2031	7,748,000	0	7,748,000	3,874,000	0	3,874,000	3,099,200	774,800
WW-SPS-004	Shirley SPS Upgrade - Crystal Beach - Increase station capacity from 29 L/s to 57 L/s; Also includes sustainability upgrades to the station	Fort Erie	Crystal Beach	Pumping	2022 to 2031	4,845,000	484,500	4,360,500	969,000	0	3,391,500	2,713,200	678,300
WW-SPS-005	Nigh Road SPS Pump Replacement - Crystal Beach - Increase station capacity from 22 L/s to 44 L/s by replacing the existing two pumps.	Fort Erie	Crystal Beach	Pumping	2022 to 2031	2,053,000	205,300	1,847,700	410,600	0	1,437,100	1,149,680	287,420
WW-SPS-006	Stevensville SPS Upgrade - Stevensville Douglastown - Increase station capacity from 41 L/s to 87 L/s. Scope includes wet well expansion and replacing the two existing pumps.	Fort Erie	Stevensville Douglastown	Pumping	2022 to 2031	2,797,000	0	2,797,000	559,400	0	2,237,600	1,790,080	447,520
WW-SPS-008	Oxford SPS Pump Replacement - Seaway - Increase station capacity from 6 L/s to re-establish 8L/s ECA capacity by replacing the existing two pumps.	Port Colborne	Seaway	Pumping	2022 to 2031	1,213,000	0	1,213,000	606,500	0	606,500	485,200	121,300
WW-SPS-009	Steele SPS Pump Replacement - Seaway - Increase station capacity from 25 L/s to re-establish 35 L/s ECA capacity by replacing the station at a new location	Port Colborne	Seaway	Pumping	2032 to 2041	3,485,000	0	3,485,000	1,742,500	0	1,742,500	1,394,000	348,500
WW-SPS-011	Foss Road SPS Upgrade - Welland - Increase station capacity from 25 L/s to 50 L/s ECA capacity by replacing the existing two pumps.	Pelham	Welland	Pumping	2022 to 2031	2,778,000	0	2,778,000	555,600	0	2,222,400	1,777,920	444,480
WW-SPS-012	Smithville SPS Upgrade - Baker Road - Increase station capacity from 104 L/s to 705 L/s. Scope includes wet well expansion, pump upgrade and adding two pumps.	West Lincoln	Baker Road	Pumping	2022 to 2031	17,623,000	1,762,300	15,860,700	1,762,300	0	14,098,400	11,278,720	2,819,680
WW-SPS-013	Campden SPS Pump Replacement - Baker Road - Increase station capacity from 11 L/s to 21 L/s by replacing the existing two pumps. (Construction 2022)	Lincoln	Baker Road	Pumping	2022 to 2031	1,430,000	0	1,430,000	286,000	0	1,144,000	915,200	228,800
WW-SPS-014	Laurie Avenue SPS Upgrade - Baker Road - Increase station capacity from 28 L/s to 90 L/s. Scope includes new wet well and pump upgrades.	Lincoln	Baker Road	Pumping	2022 to 2031	3,354,000	0	3,354,000	335,400	0	3,018,600	2,414,880	603,720
WW-SPS-015	Victoria Avenue SPS Pump Replacement - Baker Road - Increase station capacity from 120 L/s to 380 L/s by replacing the existing three pumps	Lincoln	Baker Road	Pumping	2022 to 2031	5,070,000	0	5,070,000	1,014,000	0	4,056,000	3,244,800	811,200



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WW-SPS-016	Bridgeport SPS Pump Replacement - Baker Road - Increase station capacity from 11 L/s to 25 L/s, as planned in 2022 design, by replacing the existing two pumps	Lincoln	Baker Road	Pumping	2022 to 2031	3,475,000	0	3,475,000	695,000	0	2,780,000	2,224,000	556,000
WW-SPS-017	Jordan Valley SPS Pump Replacement - Baker Road - Increase station capacity from 40 L/s to 74 L/s, as planned in 2022 design, by replacing the existing two pumps.	Lincoln	Baker Road	Pumping	2022 to 2031	3,593,000	718,600	2,874,400	718,600	0	2,155,800	1,724,640	431,160
WW-SPS-018	Ontario Street SPS Upgrade - Baker Road - Increase station capacity from 420 L/s to 840 L/s. Upgrades include dry and wet well expansions and two additional pumps.	Lincoln	Baker Road	Pumping	2022 to 2031	14,316,000	1,431,600	12,884,400	1,431,600	0	11,452,800	9,162,240	2,290,560
WW-SPS-019	Biggar Lagoon Pump Replacement - Baker Road - Increase station capacity from 54 L/s to re-establish 95 L/s ECA capacity by replacing the existing two pumps.	Grimsby	Baker Road	Pumping	2022 to 2031	2,898,000	0	2,898,000	1,449,000	0	1,449,000	1,159,200	289,800
WW-SPS-020	Lake Street SPS Pump Replacement - Baker Road - Increase station capacity from 375 L/s to 600 L/s by replacing existing four pumps.	Grimsby	Baker Road	Pumping	2022 to 2031	6,762,000	0	6,762,000	1,352,400	0	5,409,600	4,327,680	1,081,920
WW-SPS-021	Beaverdams SPS Pump Replacement - Port Dalhousie - Increase station capacity from 10 L/s to 40 L/s as planned in 2022 design	Thorold	Port Dalhousie	Pumping	2022 to 2031	4,161,000	0	4,161,000	832,200	0	3,328,800	2,663,040	665,760
WW-SPS-026	Dorchester SPS Pump Replacement - Niagara Falls - Increase station capacity from 185 L/s to 345 L/s by replacing the existing three pumps. Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Niagara Falls	Niagara Falls	Pumping	2022 to 2031	5,070,000	507,000	4,563,000	1,014,000	0	3,549,000	2,839,200	709,800
WW-SPS-028	Black Horse SPS Upgrade - South Niagara Falls - New SPS location with increased capacity from 67 L/s to 180 L/s.	Thorold	South Niagara Falls	Pumping	2022 to 2031	5,054,000	505,400	4,548,600	1,010,800	0	3,537,800	2,830,240	707,560
WW-SPS-031	St. Davids #2 SPS Upgrade - Niagara Falls - Increase station capacity from 42 L/s to 202 L/s with a full station Reconstruction	Niagara-on-the-Lake	Niagara Falls	Pumping	2022 to 2031	6,571,000	657,100	5,913,900	3,285,500	0	2,628,400	2,102,720	525,680
WW-SPS-032	St. Davids #1 SPS Upgrade - Niagara Falls - Increase station capacity from 29 L/s to 174 L/s. with a full station Reconstruction	Niagara-on-the-Lake	Niagara Falls	Pumping	2022 to 2031	5,740,000	0	5,740,000	2,870,000	0	2,870,000	2,296,000	574,000
WW-SPS-035	Line 2 SPS Pump Replacement - Niagara-on-the-Lake - Increase station capacity from 7 L/s to re-establish 8 L/s ECA capacity by replacing the existing two pumps, as per 2022 design	Niagara-on-the-Lake	NOTL	Pumping	2022 to 2031	1,213,000	0	1,213,000	606,500	0	606,500	485,200	121,300



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WW-SPS-037	Towpath SPS Upgrade - Welland - Increase station capacity from 118 L/s to 600 L/s. Scope includes pump upgrades and one additional pump.	Thorold	Welland	Pumping	2022 to 2031	6,519,000	651,900	5,867,100	1,303,800	0	4,563,300	3,650,640	912,660
WW-SPS-038	Hurricane Road SPS Pump Replacement - Welland - Increase station capacity from 39 L/s to 67 L/s by replacing existing two pumps.	Pelham	Welland	Pumping	2022 to 2031	2,415,000	0	2,415,000	483,000	0	1,932,000	1,545,600	386,400
WW-SPS-039	New Queenston SPS - New Queenston SPS with firm capacity of 62 L/s	Niagara-on-the-Lake	Niagara Falls	Pumping	2022 to 2031	2,996,000	0	2,996,000	2,097,200	0	898,800	719,040	179,760
WW-SPS-041	Streamside SPS Upgrade - Baker Road - Increase station capacity from 16 L/s to 41 L/s. Scope includes wet well expansion and pump upgrades.	West Lincoln	Baker Road	Pumping	2022 to 2031	1,314,000	131,400	1,182,600	262,800	0	919,800	735,840	183,960
WW-SPS-042	Haulage Road SPS Pump Replacement -Port Weller - Increase station capacity from 45 L/s to 80 L/s by replacing both pumps.	St. Catharines	Port Weller	Pumping	2042 to 2051	2,415,000	241,500	2,173,500	483,000	0	1,690,500	1,352,400	338,100
WW-SPS-043	Spring Gardens SPS Pump Replacement -Port Weller - Increase station capacity from 291 L/s to 349 L/s by replacing existing three pumps.	St. Catharines	Port Weller	Pumping	2022 to 2031	6,519,000	0	6,519,000	1,303,800	0	5,215,200	4,172,160	1,043,040
WW-SPS-045	Front Street SPS Pump Replacement -NOTL - Increase station capacity from 25 L/s to 56 L/s by replacing existing two pumps. Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Niagara-on-the-Lake	NOTL	Pumping	2032 to 2041	2,778,000	0	2,778,000	555,600	0	2,222,400	1,777,920	444,480
WW-SPS-046	Omer SPS Pump Replacement - Seaway - Increase station capacity from 108 L/s to 131 L/s by replacing existing three pumps	Port Colborne	Seaway	Pumping	2032 to 2041	3,621,000	0	3,621,000	724,200	0	2,896,800	2,317,440	579,360
WW-SPS-047	Union SPS Pump Replacement - Seaway - Increase station capacity from 100.9 L/s to re-establish 126 L/s ECA capacity by replacing the existing three pumps. Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Port Colborne	Seaway	Pumping	2022 to 2031	3,621,000	362,100	3,258,900	1,810,500	0	1,448,400	1,158,720	289,680



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WW-SPS-049	Dain City SPS Pump Replacement - Welland - Increase station capacity from 90 L/s to 164 L/s by replacing existing three pumps.	Welland	Welland	Pumping	2042 to 2051	4,346,000	434,600	3,911,400	869,200	0	3,042,200	2,433,760	608,440
WW-SPS-050	Bender Hill SPS Pump Replacement - Niagara Falls - Full station replacement at new location from 237 L/s to re-establish 330 L/s ECA capacity.	Niagara Falls	Niagara Falls	Pumping	2022 to 2031	15,234,000	3,046,800	12,187,200	7,617,000	0	4,570,200	3,656,160	914,040
WW-SPS-051	Central SPS Pump Replacement - Niagara Falls - Increase station capacity from 800 L/s to re-establish 1000 L/s ECA capacity by replacing the existing five pumps.	Niagara Falls	Niagara Falls	Pumping	2042 to 2051	10,777,000	0	10,777,000	5,388,500	0	5,388,500	4,310,800	1,077,700
WW-SPS-052	Lundy's Lane SPS Pump Replacement- Niagara Falls - Increase station capacity from 56 L/s to re-establish 98 L/s ECA capacity by replacing the existing three pumps.	Niagara Falls	Niagara Falls	Pumping	2042 to 2051	3,079,000	0	3,079,000	1,539,500	0	1,539,500	1,231,600	307,900
WW-SPS-053	Royal Manor SPS Pump Replacement - Niagara Falls - Increase station capacity from 9 L/s to 16 L/s by replacing existing two pumps	Niagara Falls	Niagara Falls	Pumping	2022 to 2031	1,213,000	0	1,213,000	242,600	0	970,400	776,320	194,080
WW-SPS-054	Thompson SPS Upgrade - Anger Avenue - Increase station capacity from 362 L/s to 510 L/s by installing one additional planned pump; consistent with phased approach under ultimate ECA capacity of 680 L/s	Fort Erie	Anger Ave	Pumping	2032 to 2041	1,690,000	169,000	1,521,000	0	0	1,521,000	1,216,800	304,200
WW-SPS-055	Douglastown SPS Upgrade - Stevensville Douglastown - Increase station capacity from 33 L/s to 79 L/s. Scope includes wet well expansion and pump upgrades.	Fort Erie	Stevensville Douglastown	Pumping	2042 to 2051	2,428,000	242,800	2,185,200	485,600	0	1,699,600	1,359,680	339,920
WW-SPS-058	Peel Street SPS Upgrade- Thorold - Station upgrades which may be required to accommodate new forcemain	Thorold	South Niagara Falls	Pumping	2022 to 2031	500,000	50,000	450,000	350,000	0	100,000	80,000	20,000
WW-SPS-059	Lakeshore Road SPS Pump Replacement - Niagara-on-the-Lake - Increase station capacity from 90 L/s to 168 L/s by replacing existing two pumps, Included wet well upgrades	Niagara-on-the-Lake	NOTL	Pumping	2042 to 2051	4,055,000	0	4,055,000	811,000	0	3,244,000	2,595,200	648,800



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WW-SS-002	Quaker Road Trunk Sewer - New 600 mm trunk sewer on Quaker Rd. between Pelham Street trunk and Rice Road trunk sewers. (1250m)	Welland	Welland	Sewer	2022 to 2031	3,106,000	310,600	2,795,400	0	0	2,795,400	2,236,320	559,080
WW-SS-006	New Montrose Trunk Sewer - New tunneled 1500mm trunk sewer on Montrose conveying flows from South Side High Lift SPS to the new South Niagara Falls WWTP (5635m)	Niagara Falls	South Niagara Falls	Sewer	2022 to 2031	88,622,000	8,862,200	79,759,800	17,724,400	0	62,035,400	49,628,320	12,407,080
WW-SS-007	New Brown Road Trunk Sewer - Shallow 600mm gravity trunk from South Thorold to Garner SPS-South Niagara Falls trunk connection (4500m)	Niagara Falls	South Niagara Falls	Sewer	2022 to 2031	16,765,000	1,676,500	15,088,500	3,353,000	0	11,735,500	9,388,400	2,347,100
WW-SS-008	Chippawa Trunk Sewer Phase 1 - New tunneled 1200 mm trunk sewer from west of Lyon's Creek to South Niagara Falls WWTP (3520m)	Niagara Falls	South Niagara Falls	Sewer	2032 to 2041	60,923,000	12,184,600	48,738,400	6,092,300	0	42,646,100	34,116,880	8,529,220
WW-SS-009	Lister Road Trunk Upgrade 1 - Replace existing 600 mm gravity sewer downstream of Victoria Ave forcemain with new 750 mm gravity sewer (465m)	Lincoln	Baker Road	Sewer	2022 to 2031	1,758,000	175,800	1,582,200	0	0	1,582,200	1,265,760	316,440
WW-SS-010	Lister Road Trunk Upgrade 2 - Replace existing 675 mm gravity sewer downstream of Victoria Ave forcemain with new 825 mm gravity sewer (610m)	Lincoln	Baker Road	Sewer	2022 to 2031	5,747,000	574,700	5,172,300	0	0	5,172,300	4,137,840	1,034,460
WW-SS-011	Beamsville Trunk Upgrade 1 - Replace existing 600 mm gravity sewer with new 825 mm gravity sewer (1125m)	Lincoln	Baker Road	Sewer	2022 to 2031	7,766,000	776,600	6,989,400	0	0	6,989,400	5,591,520	1,397,880
WW-SS-012	Beamsville Trunk Upgrade 2 - Replace existing 750 mm gravity sewer with new 1050 mm gravity sewer (280m)	Lincoln	Baker Road	Sewer	2022 to 2031	1,575,000	157,500	1,417,500	0	0	1,417,500	1,134,000	283,500
WW-SS-013	Smithville Trunk Upgrade - 600mm Sewer upgrades and EA to determine alignment of forcemain and sewer upgrades to WWTP. Replaces old MSP SS-(003-004). (14275m)	Grimsby	Baker Road	Sewer	2022 to 2031	49,272,000	4,927,200	44,344,800	0	0	44,344,800	35,475,840	8,868,960
WW-SS-014	South Niagara Falls SSO Trunk - New 1050mm sewer to eliminate overflows upstream of South Side High Lift SPS (880m)	Niagara Falls	South Niagara Falls	Sewer	2022 to 2031	1,554,000	0	1,554,000	777,000	0	777,000	621,600	155,400
WW-SS-015	Chippawa Trunk Sewer Phase 2 - New tunneled 1200 mm trunk sewer from South Side Low Lift to west of Lyon's Creek (1220m)	Niagara Falls	South Niagara Falls	Sewer	2042 to 2051	27,082,000	5,416,400	21,665,600	13,541,000	0	8,124,600	6,499,680	1,624,920
WW-TP-001	Baker Road WWTP Upgrade - Baker Road WWTP Upgrade to provide an additional 16 MLD	Grimsby	Baker Road	Treatment	2032 to 2041	123,895,000	12,389,500	111,505,500	12,389,500	0	99,116,000	79,292,800	19,823,200
WW-TP-002	South Niagara Falls Wastewater Treatment Plant - Phase 1 - New South Niagara Falls WWTP Phase 1 with 30 MLD capacity	Niagara Falls	South Niagara Falls	Treatment	2022 to 2031	203,557,000	20,355,700	183,201,300	83,458,400	0	99,742,900	79,794,320	19,948,580



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	WWTP	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Costs (2022\$)	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Non-Residential Share 20%
WW-TP-004	South Niagara Falls Wastewater Treatment Plant Outfall - New 1800mm South Niagara Falls WWTP Outfall Structure	Niagara Falls	South Niagara Falls	Treatment	2022 to 2031	4,718,000	943,600	3,774,400	1,698,500	0	2,075,900	1,660,720	415,180
WW-TP-005	Region-wide WWTP Process Upgrades - Process upgrades to re-establish ECA capacity	Region-Wide	n/a	Treatment	2022 to 2051	50,000,000	0	50,000,000	25,000,000	0	25,000,000	20,000,000	5,000,000
WW-TP-006	Region-wide WWTP Process Upgrades - Upgrades for odour control across the Region at forcemains, pump stations, and other locations.	Region-Wide	n/a	Treatment	2022 to 2051	40,000,000	0	40,000,000	20,000,000	0	20,000,000	16,000,000	4,000,000
WW-ST-001	Region Wide Flow Monitoring and Data Collection - Funding to support flow monitoring and data collection initiatives	Region-Wide	n/a	Wet Weather Reduction	2022 to 2051	12,000,000	0	12,000,000	6,000,000	0	6,000,000	4,800,000	1,200,000
WW-ST-002	Fort Erie QEW Corridor Long-Term Study - Crystal Beach WWTP, SD WWTP long term strategy	Fort Erie	Stevensville Douglastown	Treatment	2022 to 2031	500,000	0	500,000	0	0	500,000	400,000	100,000
n/a	Studies: Wastewater Master Servicing Plan	Region-wide	n/a	n/a	2025 to 2051	4,500,000	0	4,500,000	0	0	4,500,000	3,600,000	900,000
n/a	Studies: Wastewater Servicing Study	Region-wide	n/a	n/a	2023 to 2048	750,000	0	750,000	0	0	750,000	600,000	150,000
n/a	Studies: Wet Weather Management - CSO Program	Region-wide	n/a	n/a	2022 to 2027	15,500,000	0	15,500,000	7,750,000	0	7,750,000	6,200,000	1,550,000
n/a	Other: Provisional Reduction for System Oversizing - Residential	Region-wide	n/a	n/a	n/a	0	11,635,201	-11,635,201	0	0	-11,635,201	-11,635,201	0
n/a	Other: Provisional Reduction for System Oversizing - Non-residential	Region-wide	n/a	n/a	n/a	0	32,536,836	-32,536,836	0	0	-32,536,836	0	-32,536,836
n/a	Reserve Fund Adjustment	Region-wide	n/a	n/a	n/a	0	0	0	53,050,647	0	-53,050,647	-42,440,518	-10,610,129
	Total					1,269,229,000	135,752,038	1,133,476,962	458,696,247	0	674,780,715	563,527,001	111,253,714



Table 5-10
Growth-related Component of Works Previously Completed
Wastewater Services

Project Number	System	Type	Description	Timing	Gross Capital Cost Est. (2022 \$)	Potential DC Recoverable Cost	Residential Share	Non-Residential Share
ZSW0716	Anger Avenue	Recovery of PPC	Anger Avenue WWTP - P2 Project	<2012	291,805	291,805	166,531	125,274
n/a	Anger Avenue (#5)	Recovery of PPC	Frenchman's Creek Trunk Sewer - PH2	<2012	415,822	415,822	237,307	178,515
n/a	Anger Avenue	Recovery of PPC	Parkway PS Replacement (Fort Erie)	<2004	1,154,993	1,154,993	659,147	495,846
	Anger Subtotal			blank cell	1,862,620	1,862,620	1,062,985	799,635
ZSW0006	Baker Road	Recovery of PPC	Smithville PS Expansion (for growth in Smithville)	<2012	1,117,205	1,117,205	826,466	290,739
ZSW0006	Baker Road	Recovery of PPC	Baker Road WWTP Capacity Expansion Stage 1	<2012	6,011,183	6,011,183	4,446,846	1,564,337
ZSW0013	Baker Road (#1)	Recovery of PPC	Replace existing Smithville pumping station	<2008	197,293	197,293	145,950	51,343
n/a	Baker Road	Recovery of PPC	Smithville PS & Sewer (West Lincoln)	<2004	55,887	55,887	41,343	14,544
n/a	Baker Road	Recovery of PPC	Install Forcemain on North Service - Biggar PS to Roberts PS	<2004	131,190	131,190	97,049	34,141
n/a	Baker Road	Recovery of PPC	Gravity Trunk Sewer Along Ontario St. @ QEW Crossing	<2004	719,262	719,262	532,083	187,179
	Baker Road Subtotal			blank cell	8,232,020	8,232,020	6,089,737	2,142,282
ZSW0721	Crystal Beach Subtotal	Recovery of PPC	Crystal Beach WWTP - P2 Project	<2012	291,805	291,805	281,687	10,118
ZSW0115	Stephensville/Douglastown	Recovery of PPC	Douglastown Forcemain	<2012	994,690	994,690	608,083	386,607
ZSW0607	Stephensville/Douglastown	Recovery of PPC	Stevensville PS capacity upgrade	<2012	218,854	218,854	133,792	85,062
	Stephensville/Douglastown Subtotal			blank cell	1,213,544	1,213,544	741,875	471,669
ZSW0302	Niagara Falls	Recovery of PPC	Alternative biosolids management program	<2008	932,679	932,679	620,930	311,749
ZSW0714	Niagara Falls	Recovery of PPC	Niagara Falls WWTP - P2 project	<2012	266,126	266,126	177,173	88,953
n/a	Niagara Falls	Recovery of PPC	HRT facility at NF High Lift Pumping Station	<2012	466,888	466,888	310,830	156,058



Project Number	System	Type	Description	Timing	Gross Capital Cost Est. (2022 \$)	Potential DC Recoverable Cost	Residential Share	Non-Residential Share
ZSW9305	Niagara Falls (#2)	Recovery of PPC	Central Avenue Pumping Station and forcemain	<2008	613,248	613,248	408,269	204,979
n/a	Niagara Falls	Recovery of PPC	Upgrade Niagara Falls WPCP	<2004	1,257,452	1,257,452	837,147	420,304
n/a	Niagara Falls	Recovery of PPC	Upgrade NF WPCP	<2004	5,375,564	5,375,564	3,578,777	1,796,788
Niagara Falls Subtotal				blank cell	8,911,958	8,911,958	5,933,127	2,978,830
ZSW0807	Niagara-on-the-Lake	Recovery of PPC	Niagara-on-the-Lake WWTP Capacity Upgrade from 5.7 ML/D to 6.9 ML/D.	<2012	2,446,797	2,446,797	1,845,896	600,901
n/a	Niagara-on-the-Lake	Recovery of PPC	NOTL Sewage Treatment Facility Upgrade	<2004	237,519	237,519	179,187	58,331
n/a	Niagara-on-the-Lake	Recovery of PPC	William St PS and Forcemain (NOTL)	<2004	78,241	78,241	59,026	19,215
Niagara-on-the-Lake Subtotal				blank cell	2,762,557	2,762,557	2,084,109	678,448
ZSW9816	Port Dalhousie	Recovery of PPC	Port Dalhousie WPCP optimization study and upgrades	<2008	395,327	395,327	210,006	185,321
ZSW0712	Port Dalhousie	Recovery of PPC	Port Dalhousie WWTP - P2 Project	<2012	510,659	510,659	271,273	239,386
n/a	Port Dalhousie	Recovery of PPC	Port Dalhousie WPCP Upgrading	<2004	137,388	137,388	72,983	64,405
Port Dalhousie Subtotal				blank cell	1,043,374	1,043,374	554,262	489,112
n/a	Port Weller	Recovery of PPC	Upgrade Black Horse PS	<2004	446,789	446,789	286,092	160,698
n/a	Port Weller	Recovery of PPC	Peel St PS	<2004	2,692,193	2,692,193	1,723,886	968,307
Port Weller Subtotal				blank cell	3,138,982	3,138,982	2,009,978	1,129,004
n/a	Seaway	Recovery of PPC	Seaway WPCP Upgrading (Port Colborne)	<2004	1,064,642	1,064,642	777,725	286,917
n/a	Seaway	Recovery of PPC	Elm Street PS Upgrading (Port Colborne)	<2004	344,262	344,262	251,485	92,777
n/a	Seaway	Recovery of PPC	Industrial PS Upgrade	<2004	177,857	177,857	129,925	47,932
Seaway Subtotal				blank cell	1,586,761	1,586,761	1,159,135	427,626
n/a	Welland	Recovery of PPC	Sanitary Sewer Service to East Industrial Lands (Welland)	<2004	218,517	218,517	174,280	44,237
n/a	Welland	Recovery of PPC	North East Welland Trunk Sewer	<2004	2,137,668	2,137,668	1,704,912	432,756



Project Number	System	Type	Description	Timing	Gross Capital Cost Est. (2022 \$)	Potential DC Recoverable Cost	Residential Share	Non-Residential Share
n/a	Welland	Recovery of PPC	Dain City PS upgrade	<2004	316,189	316,189	252,179	64,010
ZSW0609	Welland	Recovery of PPC	Welland WWTP - P2 Project	<2012	30,056	30,056	23,971	6,085
ZSW9815, 0209 and 0504	Welland (#1,2,12,13,14,16,17,18 and 19)	Recovery of PPC	South Thorold PS, forcemains, sewers	<2008	13,956,134	13,956,134	11,130,814	2,825,320
	Welland Subtotal				16,658,564	16,658,564	13,286,156	3,372,408
	Total				45,702,184	45,702,184	33,203,052	12,499,132

Residential/non-residential Shares are as follows:

- Anger: 57.1%/42.9%
- Baker Road: 74.0%/26.0%
- Crystal Beach: 96.5%/3.5%
- Stephenville/Douglastown: 64.1%/38.9%
- Niagara Falls: 66.6%/33.4%
- Niagara-on-the-Lake: 75.4%/24.6%
- Port Dalhousie: 53.1%/46.9%
- Port Weller: 64.0%/36.0%
- Seaway: 73.1%/26.9%
- Welland: 79.8%/20.2%



5.4.2 Water Services

GM BluePlan Engineering (GM BluePlan) is currently undertaking the Regions Water and Wastewater Master Servicing Plan to assess of the needs for water services throughout the Region over the 30-year forecast period. Appendix F provides more details on the service coverage and capital program along with their methodology towards levels of service, allocation of works between existing benefit and growth, post period/excess capacity, provisions for grants, subsidies, and other contributions, etc.

GM BluePlan have identified capital works totalling \$660.06 million required to service growth over the 30-year forecast. Of this amount, \$159.57 million has been identified as benefiting existing development within the Region and \$72.87 million has been identified as post-period benefit. The reserve fund balance of \$19.10 million has been deducted from the calculations.

Additional deductions have been made in the amount of \$16.08 million for residential development and \$22.25 million for non-residential development to reflect variations in the growth forecast between the D.C. study and the Water and Wastewater Master Servicing Plan. This results in a net growth-related amount of approximately \$370.20 million attributable to growth over the 30-year forecast period. In addition to their work, adjustments have been made to recognize amounts for unfunded works previously constructed. These works total an additional \$20.69 million. Therefore, the total to be included in the D.C. calculation is \$390.89 million.

The costs for all water services are shared 79%/21% between residential and non-residential based on the anticipated population to employment over the 30-year forecast period. The population and employment figures have been adjusted for W.A.H. and N.F.P.O.W. figures (discussed in detail in Appendix F).



**Table 5-11
Infrastructure Cost Included in the Development Charges Calculation
Water Services**

Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-D-001	Decommissioning of Central Ave (Fort Erie South) ET - New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir; Central Ave ET to be decommissioned	Fort Erie	Rosehill	Storage	2027 to 2031	823,000	0	823,000	576,100	0	246,900	195,051	51,849
W-D-002	Decommissioning of Stevensville Res + PS - New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir; Stevensville Reservoir and Pumping Station to be decommissioned	Fort Erie	Rosehill	Storage	2027 to 2031	1,611,000	0	1,611,000	1,127,700	0	483,300	381,807	101,493
W-D-003	Decommissioning of Park Road Res + PS - Decommissioning of Park Road Reservoir and Pumping Station, to be replaced by new Grimsby Reservoir and additional pumping capacity at the WTP. To be completed after completion of W-M-005.	Grimsby	Grimsby	Storage	2027 to 2031	1,611,000	0	1,611,000	1,127,700	0	483,300	381,807	101,493
W-D-004	Decommissioning of Lundy's Lane ET - Lundy's Lane ET to be decommissioned and replaced by new South Niagara Falls ET	Niagara Falls	Niagara Falls	Storage	2027 to 2031	823,000	0	823,000	576,100	0	246,900	195,051	51,849
W-D-005	Decommissioning of Pelham ET - Decommissioning of existing Pelham ET, to be replaced by a new ET	Pelham	Welland	Storage	2027 to 2031	1,290,000	0	1,290,000	903,000	0	387,000	305,730	81,270
W-D-007	Decommissioning of Fielden Ave Res + PS - Decommissioning of Fielden Avenue Reservoir and Pumping Station	Port Colborne	Port Colborne	Storage	2027 to 2031	1,611,000	0	1,611,000	1,127,700	0	483,300	381,807	101,493
W-D-008	Decommissioning of Bemis Elevated Tank - Decommissioning of Bemis Elevated Tank to be replaced with a new elevated tank	Welland	Welland	Storage	2027 to 2031	823,000	0	823,000	576,100	0	246,900	195,051	51,849
W-D-009	Decommissioning of one Shoalt's Reservoir Cell - Decommissioning of one Shoalt's Reservoir Cell. Placeholder project - to be confirmed through Bemis Elevated Tank Environmental Assessment	Welland	Welland	Storage	2032 to 2041	512,000	0	512,000	358,400	0	153,600	121,344	32,256
W-D-010	Decommissioning of Smithville ET - Decommissioning of existing Smithville ET, to be replaced by a new ET	West Lincoln	Grimsby	Storage	2042 to 2051	1,290,000	0	1,290,000	903,000	0	387,000	305,730	81,270



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-D-012	Decommissioning of Thorold South ET - Decommissioning of existing Thorold South ET, to be replaced by a new ET	Thorold	Decew	Storage	2032 to 2041	1,290,000	0	1,290,000	903,000	0	387,000	305,730	81,270
W-F-001	Grimsby WTP Expansion - Provide an additional 22 MLD treatment	Grimsby	Grimsby	Treatment	2022 to 2026	73,904,000	14,780,800	59,123,200	0	0	59,123,200	46,707,328	12,415,872
W-M-001	New trunk main in Central Fort Erie - New 450mm trunk main in Central Fort Erie (2820m)	Fort Erie	Rosehill	Watermain	2022 to 2026	12,299,000	1,229,900	11,069,100	6,149,500	0	4,919,600	3,886,484	1,033,116
W-M-002	New trunk main to Port Colborne East side - New 450mm trunk main to East side of Port Colborne across canal (1640m)	Port Colborne	Port Colborne	Watermain	2027 to 2031	12,251,000	1,225,100	11,025,900	6,125,500	0	4,900,400	3,871,316	1,029,084
W-M-004	Upgrade trunk main from Grimsby WTP to Park Road (Partially Completed) - Upgrade 750mm trunk main from Grimsby WTP to Park Road. Partially completed. Alignment to be completed is the section from Baker Road to Park Road.(1120m)	Grimsby	Grimsby	Watermain	2022 to 2026	6,157,000	0	6,157,000	3,078,500	0	3,078,500	2,432,015	646,485
W-M-005	New dedicated feedermain from Grimsby WTP to New Grimsby Reservoir - New 750mm trunk main from Grimsby WTP to New Grimsby Reservoir (9070m)	Grimsby	Grimsby	Watermain	2022 to 2026	54,668,000	5,466,800	49,201,200	5,466,800	0	43,734,400	34,550,176	9,184,224
W-M-006	New trunk main in Smithville (Phase 1) - New 400mm trunk main in Smithville (Phase 1 currently in design) (2860m)	West Lincoln	Grimsby	Watermain	2022 to 2026	6,563,000	656,300	5,906,700	656,300	0	5,250,400	4,147,816	1,102,584
W-M-007	New trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls - New 450mm trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls (1220m)	Niagara Falls	Niagara Falls	Watermain	2022 to 2026	4,040,000	0	4,040,000	2,020,000	0	2,020,000	1,595,800	424,200
W-M-008	Secondary feed to Virgil ET (NOTL) - 600mm Trunk main from South NOTL to Virgil ET with PRV in NOTL to supply Decew system from Niagara Falls system. Preliminary proposed alignment along Four Mile Creek. (5700m)	Niagara-on-the-Lake	Decew	Watermain	2032 to 2041	15,020,000	1,502,000	13,518,000	7,510,000	0	6,008,000	4,746,320	1,261,680



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-M-009	New Niagara Falls South trunk main to New Elevated Tank - New 750mm Niagara Falls South trunk main to provide additional supply to new growth areas. Placeholder project - subject to change based on preferred elevated tank location which is to be confirmed through the corresponding elevated tank EA (1360m)	Niagara Falls	Niagara Falls	Watermain	2022 to 2026	5,466,000	546,600	4,919,400	0	0	4,919,400	3,886,326	1,033,074
W-M-013	New trunk watermain from Grimsby to Lincoln - New 600mm trunk watermain from new Grimsby Reservoir to Hixon Reservoir in Lincoln. Preliminary alignment along Park Road, Elm Tree Road, Walker Road, Philp Road, Mountain Road, Edelheim Road. Alignment subject to change through Schedule B EA. (8700m)	Lincoln	Grimsby	Watermain	2032 to 2041	32,080,000	6,416,000	25,664,000	3,208,000	0	22,456,000	17,740,240	4,715,760
W-M-014	New trunk main in southwest Welland - New 600mm trunk main on Humberstone Road and Prince Charles Drive. Allows for secondary connection for Dain City (significant projected growth) and closes the Region's trunk main loop across the canal. (2770m)	Welland	Welland	Watermain	2022 to 2026	8,867,000	886,700	7,980,300	886,700	0	7,093,600	5,603,944	1,489,656
W-M-015	New trunk main in northwest Welland - New 450mm trunk main in northwest Welland to service growth areas. Watermain on Merritt Road and Merrittville Highway (3570m)	Welland	Welland	Watermain	2032 to 2041	6,520,000	1,304,000	5,216,000	0	0	5,216,000	4,120,640	1,095,360
W-M-016	Fourth Ave Watermain Twinning - Fourth Avenue 450mm watermain twinning from St. Catharines to Vineland to address security of supply to Vineland. Preliminary alignment along Fourth Avenue, Nineteenth Street, and along King Street. Alignment subject to change through Schedule B EA. (9570m)	Lincoln	Decew	Watermain	2042 to 2051	19,187,000	3,837,400	15,349,600	9,593,500	0	5,756,100	4,547,319	1,208,781
W-M-017	New trunk main from Welland WTP to North - New 450mm trunk main from Welland WTP to North service area. Preliminary alignment along Ross Street, McMaster Avenue, Major Street, Atlas Avenue, Brown Road, Woodlawn Road (3930m)	Welland	Welland	Watermain	2032 to 2041	9,346,000	934,600	8,411,400	4,673,000	0	3,738,400	2,953,336	785,064



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-M-018	New trunk main in Smithville (Phase 2) - New 400mm trunk main in Smithville (Phase 2, further details to be provided through the Smithville Community Master Plan, alignment subject to change) (5000m)	West Lincoln	Grimsby	Watermain	2032 to 2041	14,382,000	1,438,200	12,943,800	1,438,200	0	11,505,600	9,089,424	2,416,176
W-M-019	New Niagara Falls South trunk main from Dorchester Road to Lyon's Creek Road - New 600mm Niagara Falls South trunk main to provide additional supply to new growth areas (W-M-009, W-M-019, W-M-020, W-M-021 form the loop). Preliminary alignment along Dorchester Road, across the Welland River, through South NF WWTP property, and Dell Road. Preferred alignment to be determined through EA process and depends on ET location. (3050m)	Niagara Falls	Niagara Falls	Watermain	2032 to 2041	24,950,000	4,990,000	19,960,000	0	0	19,960,000	15,768,400	4,191,600
W-M-020	New Niagara Falls South trunk main along Lyon's Creek Road - New 600mm Niagara Falls South trunk main to provide additional supply to new growth areas (W-M-009, W-M-019, W-M-020, W-M-021 form the loop). Preliminary alignment along Lyon's Creek Road from Dell Road to Stanley Avenue. Preferred alignment to be determined through EA process and depends on ET location. (2150m)	Niagara Falls	Niagara Falls	Watermain	2042 to 2051	6,982,000	1,396,400	5,585,600	0	0	5,585,600	4,412,624	1,172,976
W-M-021	New Niagara Falls South trunk main along Stanley Avenue - New 600mm Niagara Falls South trunk main to provide additional supply to new growth areas (W-M-009, W-M-019, W-M-020, W-M-021 form the loop). Preliminary alignment along Stanley Avenue from Lyon's Creek Road to existing Region 1050 mm watermain approximately 700 m south of Marineland Parkway. Preferred alignment to be determined through EA process and depends on ET location. (2520m)	Niagara Falls	Niagara Falls	Watermain	2032 to 2041	16,048,000	3,209,600	12,838,400	0	0	12,838,400	10,142,336	2,696,064



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-M-022	New trunk main from Decew WTP to Townline Road East in Thorold - New 750mm trunk main from Decew WTP to Townline Road East in Thorold. Provides security of supply for City of Thorold through a secondary watermain feed. Routing and need for the project to be determined through ongoing EA. (8085m)	Thorold	Decew	Watermain	2022 to 2026	62,270,000	6,227,000	56,043,000	31,135,000	0	24,908,000	19,677,320	5,230,680
W-M-023	Twinning of transmission main across the Welland Canal at the Welland WTP - Construction of new 900mm HDPE watermain across Welland Canal to Merritt Street and Aqueduct Street. (180m)	Welland	Welland	Watermain	2022 to 2026	6,848,000	684,800	6,163,200	3,424,000	0	2,739,200	2,163,968	575,232
W-M-024	New trunk main on Merritt Street from Aqueduct Street to Niagara Street - New 600mm trunk main on Merritt Street from Aqueduct Street to Niagara Street. Part of the Welland canal transmission main twinning project (W-M-022) (210m)	Welland	Welland	Watermain	2022 to 2026	932,000	93,200	838,800	466,000	0	372,800	294,512	78,288
W-M-025	New trunk main on Niagara Street from Mill Street to Riverbank Street - New 600mm trunk main on Niagara Street from Mill Street to Riverbank Street. EA is undergoing with Transportation project to replace Niagara Street bridge over Welland River (160m)	Welland	Welland	Watermain	2022 to 2026	832,000	83,200	748,800	416,000	0	332,800	262,912	69,888
W-M-026	New dedicated trunk main from Shoalt's HLPS to Pelham ET - New dedicated 400mm trunk main from Shoalt's HLPS to the new Pelham elevated tank. Alignment provided by the Region through the Pelham ET EA. (3070m)	Welland	Welland	Watermain	2022 to 2026	6,655,000	665,500	5,989,500	1,331,000	0	4,658,500	3,680,215	978,285
W-M-027	New trunk main from Pelham ET to Highway 20 and Haist Avenue - New 400mm trunk main from Pelham ET to Highway 20 and Haist Avenue. Alignment provided by the Region through the Pelham ET EA. (1480m)	Welland	Welland	Watermain	2022 to 2026	4,208,000	420,800	3,787,200	841,600	0	2,945,600	2,327,024	618,576



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-M-028	New dedicated feedermain from Welland WTP to existing Bemis ET - New dedicated 400mm feedermain from Welland WTP to existing Bemis ET. Placeholder project - preferred size and alignment to be determined through the Bemis ET EA. (2040m)	Welland	Welland	Watermain	2027 to 2031	4,466,000	893,200	3,572,800	2,233,000	0	1,339,800	1,058,442	281,358
W-P-001	Upgrade Shoalt's Drive LLPS - Replace existing 3 MLD low lift pumps with three 20.5 MLD pumps (41 MLD/474 L/s firm capacity to support 2051 required capacity in Welland, total station capacity of 61.5 MLD/712 L/s). Placeholder project - to be confirmed through Bemis Elevated Tank Environmental Assessment	Welland	Welland	Pumping	2027 to 2031	6,868,000	0	6,868,000	686,800	0	6,181,200	4,883,148	1,298,052
W-P-002	Upgrade Shoalt's Drive HLPS - Replace all four 5.4 MLD high lift pumps with four 8 MLD pumps (24 MLD/278 L/s firm capacity to support PHD plus MECP fire flow for 2051 and buildout, total station capacity of 32 MLD/370 L/s)	Welland	Welland	Pumping	2027 to 2031	6,868,000	686,800	6,181,200	686,800	0	5,494,400	4,340,576	1,153,824
W-P-004	Upgrade Smithville Pumping Station - Replace one 4.32 MLD pump with 10.8 MLD pump (firm capacity of 32.4 MLD/375 L/s to support 2051 and buildout growth, total station capacity of 36.7 MLD/425 L/s)	West Lincoln	Grimsby	Pumping	2042 to 2051	1,716,000	171,600	1,544,400	343,200	0	1,201,200	948,948	252,252
W-P-005	New HLP at Welland to support increased HGL - New separate set of high lift pumps at Welland WTP to support potential increase in hydraulic grade line (same capacity as existing pumps, but increased head). Placeholder project - to be confirmed through Bemis Elevated Tank Environmental Assessment	Welland	Welland	Pumping	2027 to 2031	13,620,000	1,362,000	12,258,000	6,810,000	0	5,448,000	4,303,920	1,144,080
W-P-006	New HLP at Grimsby for dedicated reservoir feed - New separate set of high lift pumps at Grimsby WTP to support dedicated feed to the new Grimsby Reservoir (48 MLD/556 L/s firm capacity to support 2051 MDD for the Grimsby system, total station capacity of 64 MLD/741 L/s).	Grimsby	Grimsby	Pumping	2022 to 2026	12,983,000	1,298,300	11,684,700	2,596,600	0	9,088,100	7,179,599	1,908,501



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-S-001	New Fort Erie ET - New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir (capacity of 11.5)	Fort Erie	Rosehill	Storage	2022 to 2026	20,084,000	0	20,084,000	10,042,000	0	10,042,000	7,933,180	2,108,820
W-S-003	New Pelham ET - New Pelham ET to replace existing ET. Assuming property acquisition is required (5% for new site).(capacity of 8)	Pelham	Welland	Storage	2022 to 2026	14,313,000	0	14,313,000	7,156,500	0	7,156,500	5,653,635	1,502,865
W-S-004	New South Niagara Falls ET - New South Niagara Falls ET to replace the Lundy's Lane ET and provide additional storage. Final preferred location to be determined through the EA process. Preliminary location shown on map. Assuming property acquisition is required (5% for new site).(capacity of 15)	Niagara Falls	Niagara Falls	Storage	2022 to 2026	27,933,000	0	27,933,000	5,586,600	0	22,346,400	17,653,656	4,692,744
W-S-005	New Grimsby Reservoir - New Grimsby Reservoir to provide additional storage - already designed Includes associated connection to existing Park Road facility and associated upgrades to Park Road pump station to support interm operational configuration(capacity of 15)	Grimsby	Grimsby	Storage	2022 to 2026	24,921,000	0	24,921,000	2,492,100	0	22,428,900	17,718,831	4,710,069
W-S-007	Fifth Avenue Reservoir Expansion - One additional cell to support 2051 and buildout growth (capacity of 4.25)	Lincoln	Decew	Storage	2042 to 2051	12,542,000	6,271,000	6,271,000	0	0	6,271,000	4,954,090	1,316,910
W-S-008	New elevated tank in NOTL - New ET in Virgil to support 2051 growth. Assuming property acquisition is required (5% for new site). (capacity of 7.5)	Niagara-on-the-Lake	Decew	Storage	2042 to 2051	10,734,000	0	10,734,000	0	0	10,734,000	8,479,860	2,254,140
W-S-009	Replace Thorold South ET - New larger Thorold South ET to replace existing ET Assuming property acquisition is required (5% for new site).(capacity of 12)	Thorold	Decew	Storage	2027 to 2031	25,605,000	0	25,605,000	5,121,000	0	20,484,000	16,182,360	4,301,640
W-S-010	Replace Smithville Elevated Tank - Replace Smithville Elevated Tank with a larger tank to support 2051 and buildout growth. Assuming property acquisition is required (5% for new site).(capacity of 9)	West Lincoln	Grimsby	Storage	2042 to 2051	20,950,000	4,190,000	16,760,000	4,190,000	0	12,570,000	9,930,300	2,639,700



Master Plan ID	Increased Service Needs Attributable to Anticipated Development 2022 to 2051	Municipality	System	Project Type	Timing (year)	Gross Capital Cost Estimate (2022\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total D.C. Recoverable	Residential Share 79%	Non-Residential Share 21%
W-S-011	Replace Bemis Elevated Tank - Replace Bemis Elevated Tank - Sizing to be confirmed through Bemis Elevated Tank Environmental Assessment (capacity of 15)	Welland	Welland	Storage	2027 to 2031	26,547,000	0	26,547,000	13,273,500	0	13,273,500	10,486,065	2,787,435
W-S-015	Grimsby WTP Reservoir Baffle Improvements - Grimsby WTP Reservoir baffle improvements to increase baffle factor, allowing for more usable volume at the WTP. Current baffle factor is 0.3, target to increase to at least 0.5.(capacity of 9)	Grimsby	Grimsby	Storage	2022 to 2026	2,500,000	0	2,500,000	1,750,000	0	750,000	592,500	157,500
n/a	Studies: Water Master Servicing Plan	Region-wide	Region-wide	n/a	2025 to 2051	4,500,000	0	4,500,000	0	0	4,500,000	3,555,000	945,000
n/a	Studies: Water Servicing Study	Region-wide	Region-wide	n/a	2023 to 2048	750,000	0	750,000	0	0	750,000	592,500	157,500
n/a	Provisional Reduction for System Oversizing - Residential	Region-wide	Region-wide	n/a	n/a	0	16,078,821	-16,078,821	0	0	-16,078,821	-16,078,821	0
n/a	Provisional Reduction for System Oversizing - Non-residential	Region-wide	Region-wide	n/a	n/a	0	22,247,087	-22,247,087	0	0	-22,247,087	0	-22,247,087
n/a	Reserve Fund Adjustment	n/a	n/a	n/a	n/a	0	0	0	19,096,585	0	-19,096,585	-15,086,302	-4,010,283
	Total					660,059,000	111,193,708	548,865,292	178,663,085	0	370,202,207	306,658,390	63,543,817



Table 5-12
Growth-related Component of Works Previously Completed
Water Services

Project Number	System	Type	Description	Timing	Gross Capital Cost Est. (2022 \$)	Potential DC Recoverable Cost	Residential Share	Non-residential Share
ZCW0405	Decew	Recovery of PPC	New Watermains Decew System	<2012	1,772,715	1,772,715	1,095,972	676,743
ZCW9709	Decew Falls	Recovery of PPC	DeCew WTP Phase 3 Upgrade	<2008	244,331	244,331	151,057	93,275
ZCW0405	Decew Falls	Recovery of PPC	Loop trunk system from Eastchester to Roehampton (1.3 km)	<2012	131,312	131,312	81,183	50,129
ZCW0205	Decew Falls (# 11)	Recovery of PPC	Consolidated Storage in Vineland	<2008	994,621	994,621	614,919	379,702
n/a	Decew Falls	Recovery of PPC	Decew Falls WTP Upgrade	<2004	206,082	206,082	127,409	78,673
n/a	Decew Falls	Recovery of PPC	Water Supply Reinforcement, Niagara Falls/NOTL	<2004	164,167	164,167	101,496	62,672
	Subtotal				3,513,230	3,513,230	2,172,036	1,341,194
ZCW0504	Fort Erie (#12, 13, 14)	Recovery of PPC	Eagle Street Watermain - From Stevensville to Bridge/Pettit (Fort Erie)	<2012	1,986,388	1,986,388	1,341,874	644,514
n/a	Fort Erie	Recovery of PPC	Treated Water Reservoir in Stevensville	<2004	954,230	954,230	644,615	309,615
n/a	Fort Erie	Recovery of PPC	Trunk Watermain - Barnard St. from Dominion to Garrison (Fort Erie)	<2004	404,145	404,145	273,014	131,131
n/a	Fort Erie	Recovery of PPC	10 ML/d expansion to the water plant and upgrades	<2004	352,724	352,724	238,277	114,447
	Subtotal				3,697,486	3,697,486	2,497,780	1,199,706
ZCW0303	Grimsby (# 7)	Recovery of PPC	London Road Booster Station and reservoir	<2008	4,417,509	4,417,509	3,285,782	1,131,727
ZCW0303	Grimsby (#9)	Recovery of PPC	Watermain from Park Road Booster Station to new London Road Reservoir	<2008	3,589,702	3,589,702	2,670,052	919,650
n/a	Grimsby	Recovery of PPC	Grimsby WTP Expansion	<2004	1,403,280	1,403,280	1,043,772	359,508
	Subtotal				9,410,491	9,410,491	6,999,606	2,410,885
ZCW9504	Niagara Falls (#7)	Recovery of PPC	Niagara Falls WTP Upgrade and reservoir expansion	<2008	208,151	208,151	141,951	66,200
n/a	Niagara Falls	Recovery of PPC	Water Supply Reinforcement, Niagara Falls/NOTL	<2004	131,908	131,908	89,956	41,952
n/a	Niagara Falls	Recovery of PPC	Trunk Watermain - St. Paul St. from Thorold Stone to Mountain Rd	<2004	420,984	420,984	287,095	133,889



Project Number	System	Type	Description	Timing	Gross Capital Cost Est. (2022 \$)	Potential DC Recoverable Cost	Residential Share	Non-residential Share
n/a	Niagara Falls	Recovery of PPC	400mm WM across Welland River at Niagara Pkwy (water plant to Main St.)	<2004	16,453	16,453	11,220	5,233
n/a	Niagara Falls	Recovery of PPC	400mm WM on Church's Lane from St. Paul Ave to Stanley Ave	<2004	225,738	225,738	153,945	71,793
n/a	Niagara Falls	Recovery of PPC	26 ML additional system storage	<2004	428,002	428,002	291,881	136,121
	Subtotal				1,431,235	1,431,235	976,049	455,186
n/a	Port Colborne	Recovery of PPC	Install a 500mm x 1km watermain on King Street from the King Street tank to Princess	<2012	51,218	51,218	37,413	13,805
ZCW0402	Port Colborne (# 3)	Recovery of PPC	Fielden Avenue Pumping Station	<2008	85,393	85,393	62,377	23,016
ZCW0203	Port Colborne (#1)	Recovery of PPC	Elizabeth Street watermain Killally Street East to Main Street	<2008	30,549	30,549	22,315	8,234
ZCW1002/ZCW0709	Port Colborne (#4)	Recovery of PPC	Fielden Reservoir expansion (10ML) in lieu of tank replacement	<2012	165,754	165,754	121,079	44,676
ZCW9621	Port Colborne (#5)	Recovery of PPC	Port Colborne WTP Upgrades	<2008	16,309	16,309	11,913	4,396
n/a	Port Colborne	Recovery of PPC	Bell-Elizabeth Trunk Watermain (part of)	<2004	58,470	58,470	42,711	15,759
	Subtotal				407,693	407,693	297,808	109,885
ZCW9814	Welland (# 8)	Recovery of PPC	Hwy 406 and Towpath Road watermain	<2008	1,853,012	1,853,012	1,477,830	375,182
ZCW0204	Welland (#1, #4)	Recovery of PPC	Welland WTP Upgrade including new inground reservoir and HL pumping station (Phase 1). Phase 2 design to follow in 2018	<2012	136,582	136,582	108,928	27,654
n/a	Welland	Recovery of PPC	Welland WTP Improvement	<2004	56,131	56,131	44,766	11,365
n/a	Welland	Recovery of PPC	400mm WM on Ridge Rd from Southworth to Moore	<2004	181,092	181,092	144,426	36,666
	Subtotal				2,226,817	2,226,817	1,775,950	450,867
	Total				20,686,952	20,686,952	14,719,229	5,967,724

Residential/non-residential Shares are as follows:

- Decew: 61.8%/38.2%
- Fort Erie: 67.6%/32.4%
- Grimsby: 74.4%/25.6%
- Niagara Falls: 68.2%/31.8%
- Port Colborne: 73.0%/27.0%
- Welland: 79.8%/20.2%



Chapter 6

D.C. Calculation



6. D.C. Calculation

Tables 6-1 and 6-2 calculate the proposed uniform D.C.s to be imposed for infrastructure services based upon an urban 30-year horizon. Tables 6-3 to 6-5 calculate the proposed uniform D.C. to be imposed on anticipated development in the Region for Region-wide services over a 20-year planning horizon. Tables 6-6 to 6-10 calculate 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 2+ bedrooms, apartments 1 bedroom, all other multiples, and special care/special dwelling units). The non-residential D.C. has been calculated on a per sq.ft. of G.F.A. basis for all types of non-residential development (industrial, commercial, and institutional).

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 to 6-10.

With respect to non-residential development, the total costs are allocated to each category of non-residential development (i.e. industrial, commercial, and residential) based on the relative share of employment forecasted. Then these costs are divided by the anticipated development for the respective category over the planning period to calculate a cost per sq.ft. of G.F.A.

Table 6-11 summarizes the total D.C. that is applicable for municipal-wide services and Table 6-12 summarizes the gross capital expenditures and sources of revenue for works to be undertaken during the 5-year life of the by-law.



Table 6-1a
D.C. Calculation – Urban Services – Wastewater - 2022 to 2051
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non-Residential 2022\$ D.C.- Eligible Cost
1.1 Wastewater Treatment Plants & Sewers	\$563,527,001	\$111,253,714
1.2 Wastewater Previously Constructed Unfunded Works	\$33,203,052	\$12,499,132
Total	\$596,730,053	\$123,752,847
Urban 30-year Gross Population/ GFA Growth (sq.ft.)	233,473	32,050,500
Cost Per Capital/ Non-Residential GFA (sq.ft.)	\$2,556.88	\$3.86

Table 6-1b
D.C. Calculation – Urban Services – Wastewater - 2022 to 2051
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$7,486
Other Multiples	2.093	\$5,349
Apartments 2+ Bedrooms	1.991	\$5,089
Apartments 1 Bedroom	1.214	\$3,103
Special Care/Special Dwelling Units	1.100	\$2,811

Table 6-1c
D.C. Calculation – Urban Services – Wastewater - 2022 to 2051
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
1.1 Wastewater Treatment Plants & Sewers	\$63,925,087	\$22,605,318	\$24,723,310
1.2 Wastewater Previously Constructed Unfunded Works	\$7,181,856	\$2,539,662	\$2,777,614
Total	\$71,106,942	\$25,144,980	\$27,500,925
Urban 30-year GFA Growth (sq.ft.)	13,561,700	11,378,300	7,110,500
Cost Per Non-Residential GFA (sq.ft.)	\$5.24	\$2.21	\$3.87



Table 6-2a
D.C. Calculation – Urban Services – Water - 2022 to 2051
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
2.1 Treatment, storage and distribution systems	\$306,658,390	\$63,543,817
2.2 Water, Previously Completed Unfunded Works	\$14,719,229	\$5,967,724
Total	\$321,377,618	\$69,511,541
Urban 30-year Gross Population/ GFA Growth (sq.ft.)	233,766	32,050,500
Cost Per Capita/ Non-Residential GFA (sq.ft.)	\$1,374.78	\$2.17

Table 6-2b
D.C. Calculation – Urban Services – Water - 2022 to 2051
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$4,027
Other Multiples	2.093	\$2,878
Apartments 2+ Bedrooms	1.991	\$2,737
Apartments 1 Bedroom	1.214	\$1,669
Special Care/Special Dwelling Units	1.100	\$1,512

Table 6-2c
D.C. Calculation – Urban Services – Water - 2022 to 2051
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
2.1 Treatment, storage and distribution systems	\$36,511,536	\$12,911,283	\$14,120,998
2.2 Water, Previously Completed Unfunded Works	\$3,428,984	\$1,212,564	\$1,326,175
Total	\$39,940,521	\$14,123,847	\$15,447,173
Urban 30-year GFA Growth (sq.ft.)	13,561,700	11,378,300	7,110,500
Cost Per Non-Residential GFA (sq.ft.)	\$2.95	\$1.24	\$2.17



Table 6-3a
D.C. Calculation – Region-wide Services – Services Related to a Highway -
2022 to 2041
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
3.1 Services Related to a Highway - Roads and Related	\$549,131,027	\$100,867,372
Total	\$549,131,027	\$100,867,372
20-year Gross Population/GFA Growth (sq.ft.)	162,741	21,900,400
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$3,374.26	\$4.61

Table 6-3b
D.C. Calculation – Region-wide Services – Services Related to a Highway - 2022 to
2041
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$9,883
Other Multiples	2.093	\$7,062
Apartments 2+ Bedrooms	1.991	\$6,718
Apartments 1 Bedroom	1.214	\$4,096
Special Care/Special Dwelling Units	1.100	\$3,712

Table 6-3c
D.C. Calculation – Region-wide Services – Services Related to a Highway - 2022 to
2041
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
3.1 Services Related to a Highway - Roads and Related	\$60,998,953	\$20,123,995	\$19,744,425
Total	\$60,998,953	\$20,123,995	\$19,744,425
20-year GFA Growth (sq.ft.)	8,999,200	9,023,400	3,877,800
Cost Per Non-Residential GFA (sq.ft.)	\$6.78	\$2.23	\$5.08



Table 6-4a
D.C. Calculation – Region-wide Services – Public Works - 2022 to 2041
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
4.1 Services Related to a Highway	\$13,096,000	\$3,274,000
4.2 Water Services	\$1,416,000	\$354,000
4.3 Wastewater Services	\$1,416,000	\$354,000
Total	\$15,928,000	\$3,982,000
20-year Gross Population/GFA Growth (sq.ft.)	162,741	21,900,400
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$97.87	\$0.19

Table 6-4b
D.C. Calculation – Region-wide Services – Public Works - 2022 to 2041
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$286
Other Multiples	2.093	\$204
Apartments 2+ Bedrooms	1.991	\$194
Apartments 1 Bedroom	1.214	\$119
Special Care/Special Dwelling Units	1.100	\$107

Table 6-4c
D.C. Calculation – Region-wide Services – Public Works - 2022 to 2041
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
4.1 Services Related to a Highway	\$1,979,932	\$653,194	\$640,874
4.2 Water Services	\$214,079	\$70,626	\$69,294
4.3 Wastewater Services	\$214,079	\$70,626	\$69,294
Total	\$2,408,091	\$794,447	\$779,462
20-year GFA Growth (sq.ft.)	8,999,200	9,023,400	3,877,800
Cost Per Non-Residential GFA (sq.ft.)	\$0.26	\$0.09	\$0.21



Table 6-5a
D.C. Calculation – Region-wide Services – Policing Services - 2022 to 2041
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
5.1 Policing Services - Facilities, vehicles and equipment, small equipment and gear	\$16,475,073	\$4,118,768
Total	\$16,475,073	\$4,118,768
20-year Gross Population/GFA Growth (sq.ft.)	162,741	21,900,400
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$101.23	\$0.18

Table 6-5b
D.C. Calculation – Region-wide Services – Policing Services - 2022 to 2041
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$297
Other Multiples	2.093	\$212
Apartments 2+ Bedrooms	1.991	\$202
Apartments 1 Bedroom	1.214	\$123
Special Care/Special Dwelling Units	1.100	\$112

Table 6-5c
D.C. Calculation – Region-wide Services – Policing Services - 2022 to 2041
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
5.1 Policing Services - Facilities, vehicles and equipment, small equipment and gear	\$2,490,801	\$821,733	\$806,234
Total	\$2,490,801	\$821,733	\$806,234
20-year GFA Growth (sq.ft.)	8,999,200	9,023,400	3,877,800
Cost Per Non-Residential GFA (sq.ft.)	\$0.28	\$0.09	\$0.21



Table 6-6a
D.C. Calculation – Region-wide Services – Growth Studies - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
6.1 Growth Studies - Policing Services	\$82,650	\$19,387
6.2 Growth Studies - Services Related to a Highway	\$312,022	\$73,190
6.3 Growth Studies - Public Works	\$82,569	\$19,368
6.4 Growth Studies - Public Health	\$80,393	\$18,858
6.5 Growth Studies - P.O.A. including by-law Enforcement Services	\$80,393	\$18,858
6.6 Growth Studies - Ambulance Services	\$81,360	\$19,085
6.7 Growth Studies - Long-term Care Services	\$84,745	\$19,879
6.8 Growth Studies - Housing Services	\$86,921	\$20,389
6.9 Growth Studies - Child Care and Early Years Programs and Services	\$80,393	\$18,858
6.10 Growth Studies - Waste Diversion Services	\$80,957	\$18,990
6.11 Growth Studies - Water Supply Services	\$889,218	\$208,582
6.12 Growth Studies - Wastewater Services	\$475,589	\$111,558
Total	\$2,417,213	\$567,000
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$28.25	\$0.04

Table 6-6b
D.C. Calculation – Region-wide Services – Growth Studies - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$84
Other Multiples	2.093	\$60
Apartments 2+ Bedrooms	1.991	\$57
Apartments 1 Bedroom	1.214	\$35
Special Care/Special Dwelling Units	1.100	\$32



Table 6-6c
D.C. Calculation – Region-wide Services – Growth Studies - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
6.1 Growth Studies - Policing Services	\$12,734	\$3,734	\$2,919
6.2 Growth Studies - Services Related to a Highway	\$48,074	\$14,096	\$11,020
6.3 Growth Studies - Public Works	\$12,722	\$3,730	\$2,916
6.4 Growth Studies - Public Health	\$12,386	\$3,632	\$2,839
6.5 Growth Studies - P.O.A. including by-law Enforcement Services	\$12,386	\$3,632	\$2,839
6.6 Growth Studies - Ambulance Services	\$12,535	\$3,676	\$2,874
6.7 Growth Studies - Long-term Care Services	\$13,057	\$3,829	\$2,993
6.8 Growth Studies - Housing Services	\$13,392	\$3,927	\$3,070
6.9 Growth Studies - Child Care and Early Years Programs and Services	\$12,386	\$3,632	\$2,839
6.10 Growth Studies - Waste Diversion Services	\$12,473	\$3,657	\$2,859
6.11 Growth Studies - Water Supply Services	\$137,003	\$40,173	\$31,406
6.12 Growth Studies - Wastewater Services	\$73,275	\$21,486	\$16,797
Total	\$372,424	\$109,204	\$85,373
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.06	\$0.02	\$0.04



Table 6-7a

D.C. Calculation – Region-wide Services – Long-term Care Services - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
7.1 Long-term Care Services - Facilities, vehicles and equipment	\$36,267,007	\$4,029,667
Total	\$36,267,007	\$4,029,667
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$423.84	\$0.40

Table 6-7b

D.C. Calculation – Region-wide Services – Long-term Care Services - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$1,241
Other Multiples	2.093	\$887
Apartments 2+ Bedrooms	1.991	\$844
Apartments 1 Bedroom	1.214	\$514
Special Care/Special Dwelling Units	1.100	\$466

Table 6-7c

D.C. Calculation – Region-wide Services – Long-term Care Services - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
7.1 Long-term Care Services - Facilities, vehicles and equipment	\$2,646,813	\$776,109	\$606,745
Total	\$2,646,813	\$776,109	\$606,745
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.60	\$0.20	\$0.38



Table 6-8a
D.C. Calculation – Region-wide Services – Public Health Services - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
8.1 Public Health Services - Facilities	\$0	\$0
Total	\$0	\$0
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$0.00	\$0.00

Table 6-8b
D.C. Calculation – Region-wide Services – Public Health Services - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$0
Other Multiples	2.093	\$0
Apartments 2+ Bedrooms	1.991	\$0
Apartments 1 Bedroom	1.214	\$0
Special Care/Special Dwelling Units	1.100	\$0

Table 6-8c
D.C. Calculation – Region-wide Services – Public Health Services - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
8.1 Public Health Services - Facilities	\$0	\$0	\$0
Total	\$0	\$0	\$0
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.00	\$0.00	\$0.00



Table 6-9a
D.C. Calculation – Region-wide Services – Provincial Offences Act - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
9.1 Provincial Offences Act - Facilities	\$0	\$0
Total	\$0	\$0
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$0.00	\$0.00

Table 6-9b
D.C. Calculation – Region-wide Services – Provincial Offences Act - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$0
Other Multiples	2.093	\$0
Apartments 2+ Bedrooms	1.991	\$0
Apartments 1 Bedroom	1.214	\$0
Special Care/Special Dwelling Units	1.100	\$0

Table 6-9c
D.C. Calculation – Region-wide Services – Provincial Offences Act - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
9.1 Provincial Offences Act - Facilities	\$0	\$0	\$0
Total	\$0	\$0	\$0
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.00	\$0.00	\$0.00



Table 6-10a
D.C. Calculation – Region-wide Services – Ambulance Services - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
10.1 Ambulance facilities, vehicles and equipment	\$7,783,135	\$864,793
Total	\$7,783,135	\$864,793
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$90.96	\$0.09

Table 6-10b
D.C. Calculation – Region-wide Services – Ambulance Services - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$266
Other Multiples	2.093	\$190
Apartments 2+ Bedrooms	1.991	\$181
Apartments 1 Bedroom	1.214	\$110
Special Care/Special Dwelling Units	1.100	\$100

Table 6-10c
D.C. Calculation – Region-wide Services – Ambulance Services - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
10.1 Ambulance facilities, vehicles and equipment	\$568,023	\$166,558	\$130,211
Total	\$568,023	\$166,558	\$130,211
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.14	\$0.04	\$0.08



Table 6-11a
D.C. Calculation – Region-wide Services – Housing Services - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
11.1 Housing Services - Facilities	\$59,596,475	\$0
Total	\$59,596,475	\$0
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$696.48	\$0.00

Table 6-11b
D.C. Calculation – Region-wide Services – Housing Services - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$2,039
Other Multiples	2.093	\$1,457
Apartments 2+ Bedrooms	1.991	\$1,386
Apartments 1 Bedroom	1.214	\$845
Special Care/Special Dwelling Units	1.100	\$766

Table 6-11c
D.C. Calculation – Region-wide Services – Housing Services - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
11.1 Housing Services - Facilities	\$0	\$0	\$0
Total	\$0	\$0	\$0
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.00	\$0.00	\$0.00



Table 6-12a

D.C. Calculation – Region-wide Services – Waste Diversion Services - 2022 to 2031
Residential D.C. per capita and Non-residential D.C. per sq.ft.

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost
12.1 Waste diversion facilities, vehicles, equipment and other	\$5,137,279	\$270,383
Total	\$5,137,279	\$270,383
10-year Gross Population/GFA Growth (sq.ft.)	85,568	10,247,500
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$60.04	\$0.03

Table 6-12b

D.C. Calculation – Region-wide Services – Waste Diversion Services - 2022 to 2031
Residential D.C. by Unit Type

Residential Unit Type	Persons per Unit	D.C. per Unit
Single and Semi-Detached Dwelling	2.929	\$176
Other Multiples	2.093	\$126
Apartments 2+ Bedrooms	1.991	\$120
Apartments 1 Bedroom	1.214	\$73
Special Care/Special Dwelling Units	1.100	\$66

Table 6-12c

D.C. Calculation – Region-wide Services – Waste Diversion Services - 2022 to 2031
Non-residential D.C. by Category

Service/Class of Service	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost
12.1 Waste diversion facilities, vehicles, equipment and other	\$177,596	\$52,075	\$40,711
Total	\$177,596	\$52,075	\$40,711
10-year GFA Growth (sq.ft.)	4,495,200	4,094,600	1,657,700
Cost Per Non-Residential GFA (sq.ft.)	\$0.04	\$0.01	\$0.03



Table 6-13
Regional Municipality of Niagara
Development Charge Calculation
Total All Services and Classes of Services

Service/Class of Service	Residential 2022\$ D.C.- Eligible Cost	Non- Residential 2022\$ D.C.- Eligible Cost	D.C. per S.D.U	D.C. per sq.ft.	Commercial 2022\$ D.C.- Eligible Cost	Industrial 2022\$ D.C.- Eligible Cost	Institutional 2022\$ D.C.- Eligible Cost	Commercial D.C. per sq.ft.	Industrial D.C. per sq.ft.	Institutional D.C. per sq.ft.
Urban-wide Services/Classes 30-year	\$596,730,053	\$123,752,847	\$11,513	\$3.86	\$71,106,942.21	\$25,144,979.78	\$27,500,924.77	\$8.19	\$3.45	\$6.04
Region-wide Services/Classes 20-year	\$581,534,100	\$108,968,140	\$10,466	\$4.98	\$65,897,844.79	\$21,740,174.59	\$21,330,120.77	\$7.32	\$2.41	\$5.50
Region-wide Services/Classes 10-year	\$111,201,108	\$5,731,844	\$3,806	\$0.56	\$3,764,855.69	\$1,103,946.70	\$863,041.36	\$0.84	\$0.27	\$0.53
Total	\$1,289,465,261	\$238,452,831	\$25,785	\$9.40	\$140,769,642.68	\$47,989,101.07	\$49,694,086.90	\$16.35	\$6.13	\$12.07



Table 6-14
Regional Municipality of Niagara
Gross Expenditure and Sources of Revenue Summary
For Costs to be Incurred over the Life of the By-law

Service/Class of Service	Total Gross Cost	Other Deductions	Benefit to Existing	Other Funding	Post D.C. Period Benefit	Residential D.C.	Non-Residential D.C.
1.1 Wastewater Services: Treatment plants and sewers	397,911,167	0	126,605,583	0	37,257,806	191,188,626	42,859,151
2.1 Water Services: Treatment, storage and distribution systems	221,292,718	0	64,534,500	0	20,485,651	110,021,769	26,250,798
3.1 Services Related to a Highway: Roads and Related	755,699,250	0	411,836,225	8,555,950	19,286,415	261,634,815	54,385,844
4.1 Public Works: Services Related to a Highway	12,942,500	0	2,600,000	0	0	8,274,000	2,068,500
4.2 Public Works: Water Services	442,500	0	0	0	0	354,000	88,500
4.3 Public Works: Wastewater Services	442,500	0	0	0	0	354,000	88,500
5.1 Policing Services: Facilities, vehicles and equipment, small equipment and gear	4,550,502	0	0	0	0	3,640,402	910,100
6.1 Growth Studies: Policing Services	169,467	16,667	24,917	0	0	103,586	24,298
6.2 Growth Studies: Services Related to a Highway	587,900	50,000	74,750	0	0	375,152	87,999
6.3 Growth Studies: Public Works	169,367	16,667	24,917	0	0	103,505	24,279
6.4 Growth Studies: Public Health	166,667	16,667	24,917	0	0	101,318	23,766



Service/Class of Service	Total Gross Cost	Other Deductions	Benefit to Existing	Other Funding	Post D.C. Period Benefit	Residential D.C.	Non-Residential D.C.
6.5 Growth Studies: P.O.A. including by-law Enforcement Services	166,667	16,667	24,917	0	0	101,318	23,766
6.6 Growth Studies: Ambulance Services	167,867	16,667	24,917	0	0	102,290	23,994
6.7 Growth Studies: Long-term Care Services	172,067	16,667	24,917	0	0	105,692	24,792
6.8 Growth Studies: Housing Services	174,767	16,667	24,917	0	0	107,879	25,305
6.9 Growth Studies: Child Care and Early Years Programs and Services	166,667	16,667	24,917	0	0	101,318	23,766
6.10 Growth Studies: Waste Diversion Services	167,367	16,667	24,917	0	0	101,885	23,899
6.11 Growth Studies: Water Supply Services	916,567	66,667	99,667	0	0	607,689	142,544
6.12 Growth Studies: Wastewater Services	957,767	66,667	99,667	0	0	641,061	150,372
7.1 Long-term Care Services: Facilities, vehicles and equipment	0	0	0	0	0	0	0
8.1 Public Health Services: Facilities	0	0	0	0	0	0	0
9.1 Provincial Offences Act: Facilities	0	0	0	0	0	0	0
10.1 Ambulance Services: Ambulance facilities, vehicles and equipment	76,024,369	0	28,718,260	0	40,357,930	6,253,361	694,818
11.1 Housing Services: Facilities	61,935,200	0	0	10,500,000	0	51,435,200	0



Service/Class of Service	Total Gross Cost	Other Deductions	Benefit to Existing	Other Funding	Post D.C. Period Benefit	Residential D.C.	Non-Residential D.C.
12.1 Waste Diversion: Waste diversion facilities, vehicles, equipment and other	7,922,500	950,000	1,030,500	0	0	5,644,900	297,100
Total Expenditures & Revenues	\$1,543,146,339	\$1,283,333	\$635,823,402	\$19,055,950	\$117,387,803	\$641,353,761	\$128,242,090



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 subsection 5 (1) 2-7 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 generally based on the Region’s existing policies; with some modifications and consideration for the changes to the D.C.A. resulting from Bills 108, 197, and 213. However, there are items under consideration at this time and these may be refined prior to adoption of the by-law. Further discussion on D.C. policies is provided in the 2022 D.C. Policy Report available on the Region’s D.C. webpage.



7.2 D.C. By-law Structure

It is recommended that:

- classes of services be established for growth studies and public works;
- the Region uses a uniform Region-wide D.C. calculation for all municipal services (except water and wastewater);
- water and wastewater services be imposed on the urban service areas of the Region; and
- one Region-wide D.C. by-law be used for all services and classes of services referenced above.

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 constructed during the previous decade. Costs allocated to non-residential uses will be assigned based on the amount of square feet of G.F.A. constructed for eligible uses (i.e. industrial, commercial, and institutional).
- 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 and P.O.A., the costs have been based on a population vs. employment growth ratio (81%/19%) for residential and non-residential, respectively) over the 10-year forecast period;
 - for services related to a highway an 81% residential/19% non-residential attribution has been made based on the adjusted population vs. employment growth ratio over the 20-year forecast period (see Appendix G for details);
 - for public works and policing services, an 80% residential/20% non-residential share has been utilized based on the ratio of anticipated population to employment growth over the 20-year forecast period;
 - for long-term care, public health and ambulance services, the costs have been based on an allocation of 90% for residential development and 10% for non-residential development;
 - for waste diversion services, a 5% non-residential attribution has been made to recognize use by the non-residential sector;
 - for housing services, a 100% residential attribution has been made to recognize use by the residential sector only;
 - for water services, a 79% residential/21% non-residential allocation has been made based on the adjusted population vs. employment growth over the 30-year urban forecast period (see Appendix F for details); and



- for wastewater services an 80% residential/20% non-residential allocation has been made based on the adjusted population vs. employment growth over the 30-year urban forecast period (see Appendix F for details).

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

If a development involves the demolition and replacement of a building or structure on the same site (within 5 years of the demolition permit), or the conversion from one principal use to another, the developer shall be allowed a credit equivalent to:

- 1) the number of dwelling units demolished/converted multiplied by the applicable residential D.C. in place at the time the D.C. is payable; and/or
- 2) the G.F.A. of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. is payable.

The credit can, in no case, exceed the amount of D.C.s that would otherwise be payable.

Where demolition takes place on a brownfield or an archeological site, the above conditions apply however, an application may be made to the Regional Treasurer for an extension of time for the redevelopment credit of up to three additional years if the redevelopment has not been able to proceed due to delays in completing the remediation works. This application must be received prior to the expiry of the initial five-year period as provided in the by-law.

7.3.4 Exemptions (full or partial)

- a) Statutory exemptions:
 - industrial building additions of up to and including 50% of the existing G.F.A. (defined in O. Reg. 82/98, section 1) of the building; for industrial building additions that exceed 50% of the existing G.F.A., 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 in existing buildings: development that results only in the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in section 2 of O. Reg. 82/98);
- residential development in new dwellings: development that includes the creation of up to two detached dwelling units (based on prescribed limits set out in section 2 of O. Reg. 82/98); and
- a university in Ontario that receives direct, regular, and ongoing operating funding from the Government of Ontario.

b) Discretionary exemptions:

- The Region has undertaken (through a separate process) a detailed incentives review which included a review of the exemptions included in the D.C. by-law. As a result of the best practices review in the Policy Report and findings from the incentives review, it is recommended that the Region remove all discretionary exemptions from the D.C. by-law. Any funds the Region wishes to provide, may be provided through grant programs whereby Regional Council will be able to outline the eligibility parameters and set aside specific amounts in the budget each year.

7.3.5 Phasing in

A phase-in of the development charges has not been considered at this time.

7.3.6 Timing of Collection

The D.C.s for all services and classes are payable upon issuance of a building permit for each dwelling unit, building, or structure, subject to early or late payment agreements entered into by the Region and an owner under s. 27 of the D.C.A.

Commencing January 1, 2020, rental housing and institutional developments will pay D.C.s in six equal annual payments commencing at occupancy. Non-profit housing developments will pay D.C.s in 21 equal annual payments. Moreover, the D.C. amount for all developments occurring within two (2) years of a Site Plan or Zoning By-law Amendment planning approval (for applications submitted after January 1, 2020), shall



be determined based on the D.C. in effect on the day of the applicable Site Plan or Zoning By-law Amendment application.

Instalment payments and payments determined at the time of Site Plan or Zoning By-law Amendment application are subject to annual interest charges calculated based on the Region's D.C. Interest Rate Policy (CSD 49-2020), as may be amended from time to time.

7.3.7 Indexing

Indexing of the D.C.s shall be implemented on a mandatory basis annually commencing on January 1st of each year, 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:

- all Region-wide services – the full residential and non-residential charge will be imposed on all lands within the Region; and
- water and wastewater services– the full residential and non-residential charge will be imposed on the urban service areas of the Region.

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.



7.4 Other D.C. By-law Provisions

It is recommended that:

7.4.1 Categories of Services/Classes of Services for Reserve Fund and Credit Purposes

The Region's D.C. collections are currently reserved in eleven (11) separate reserve funds: general government, police, roads, sewer, water, emergency medical services, long-term care, P.O.A., health, social housing, and waste diversion.

It is recommended that the Region rename the roads reserve fund to "Services Related to a Highway", general government to "Growth Studies", police to "Policing Services", emergency medical services to "Ambulance Services", health to "Public Health Services", and social housing to "Housing Services". Further, it is recommended that the Region create a new reserve fund for "Public Works" related to the classes of services required under the D.C.A. as amended.

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 at a later date, determined by Council.

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 D.C.A. 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 an area-specific basis. All other Region services are recovered based on a uniform, Region-wide basis. There have been several reasons why area-specific charges for these services have not been imposed:

1. All Region 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 that 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 D.C.s 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 provided (roads, public health, long-term care, etc.) are not restricted to one specific area and are often used by all residents.

For the reasons noted above, it is recommended that Council continue the approach of providing all services/classes of services (except for water and wastewater) on a uniform Region-wide basis.

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;”

“Classes of services be established for growth studies and public works;”

“Continue the D.C. approach to calculate the charges on a uniform Region-wide basis for all services (except water and wastewater) and on a uniform urban-area basis for water and wastewater services;”

“Approve the capital project listing in principle set out in Chapter 5 of the updated D.C.s Background Study dated May 30, 2022, subject to further annual approval during the capital budget process;”

“Approve the updated D.C. Background Study dated May 30, 2022, as amended (if applicable);”

“Determine that no further public meeting is required;” and

“Approve the D.C. By-law as set out in Appendix I.”



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 8.2 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 Ontario Land Tribunal (O.L.T.) (formerly the Local Planning Appeal Tribunal (LPAT) and 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 Region 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 Region D.C. policy. Their primary concern is frequently with the quantum of the charge, G.F.A. 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 can, 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 can 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 that follow present an overview of 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 that 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 O.L.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 O.L.T. hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the O.L.T. by filing a notice of appeal with the Region 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 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 Council to the O.L.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 that 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 that 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



Schedule 1
Regional Municipality of Niagara
Residential Growth Forecast Summary

Year	Population (Including Census Undercount) ^[1]	Population (Excluding Census Undercount)	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached Housing Units	Multiple Dwellings Housing Units ^[2]	Apartment Housing Units ^[3]	Other Housing Units	Total Households	Equivalent Institutional Households	Person Per Unit (P.P.U.): Total Population/ Total Households
Mid-2006	438,280	427,421	7,996	419,425	123,945	16,030	28,325	1,130	169,430	7,269	2.523
Mid-2011	442,300	431,346	8,536	422,810	128,789	16,692	28,289	915	174,685	7,760	2.469
Mid-2016	459,260	447,888	9,728	438,160	133,300	19,460	30,095	970	183,825	8,844	2.436
Mid-2022	498,660	486,314	10,529	475,785	141,829	24,017	32,613	970	199,429	9,572	2.439
Mid-2032	560,230	546,355	11,845	534,510	157,407	34,100	42,980	970	235,457	10,768	2.320
Mid-2041	623,650	608,203	13,210	594,993	171,423	43,172	52,309	970	267,874	12,009	2.270
Mid-2051	694,000	676,813	14,787	662,026	184,748	51,816	61,111	970	298,645	13,443	2.266

^[1] Census undercount estimated at approximately 2.5%.

^[2] Includes townhouses and apartments in duplexes.

^[3] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Note: Population including the Census undercount has been rounded.

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd. by Watson & Associates Economists Ltd.



Year	Population (Including Census Undercount) ^[1]	Population (Excluding Census Undercount)	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached Housing Units	Multiple Dwellings Housing Units ^[2]	Apartment Housing Units ^[3]	Other Housing Units	Total Households	Equivalent Institutional Households
Mid-2006 to Mid-2011	4,020	3,925	540	3,385	4,844	662	-36	-215	5,255	491
Mid-2011 to Mid-2016	16,960	16,542	1,192	15,350	4,511	2,768	1,806	55	9,140	1,084
Mid-2016 to Mid-2022	39,400	38,426	801	37,625	8,529	4,557	2,518	0	15,604	728
Mid-2022 to Mid-2032	61,570	60,041	1,316	58,725	15,578	10,083	10,367	0	36,028	1,196
Mid-2022 to Mid-2041	124,990	121,889	2,681	119,208	29,594	19,155	19,696	0	68,445	2,437
Mid-2022 to Mid-2051	195,340	190,499	4,258	186,241	42,919	27,799	28,498	0	99,216	3,871

^[1] Census undercount estimated at approximately 2.5%.

^[2] Includes townhouses and apartments in duplexes.

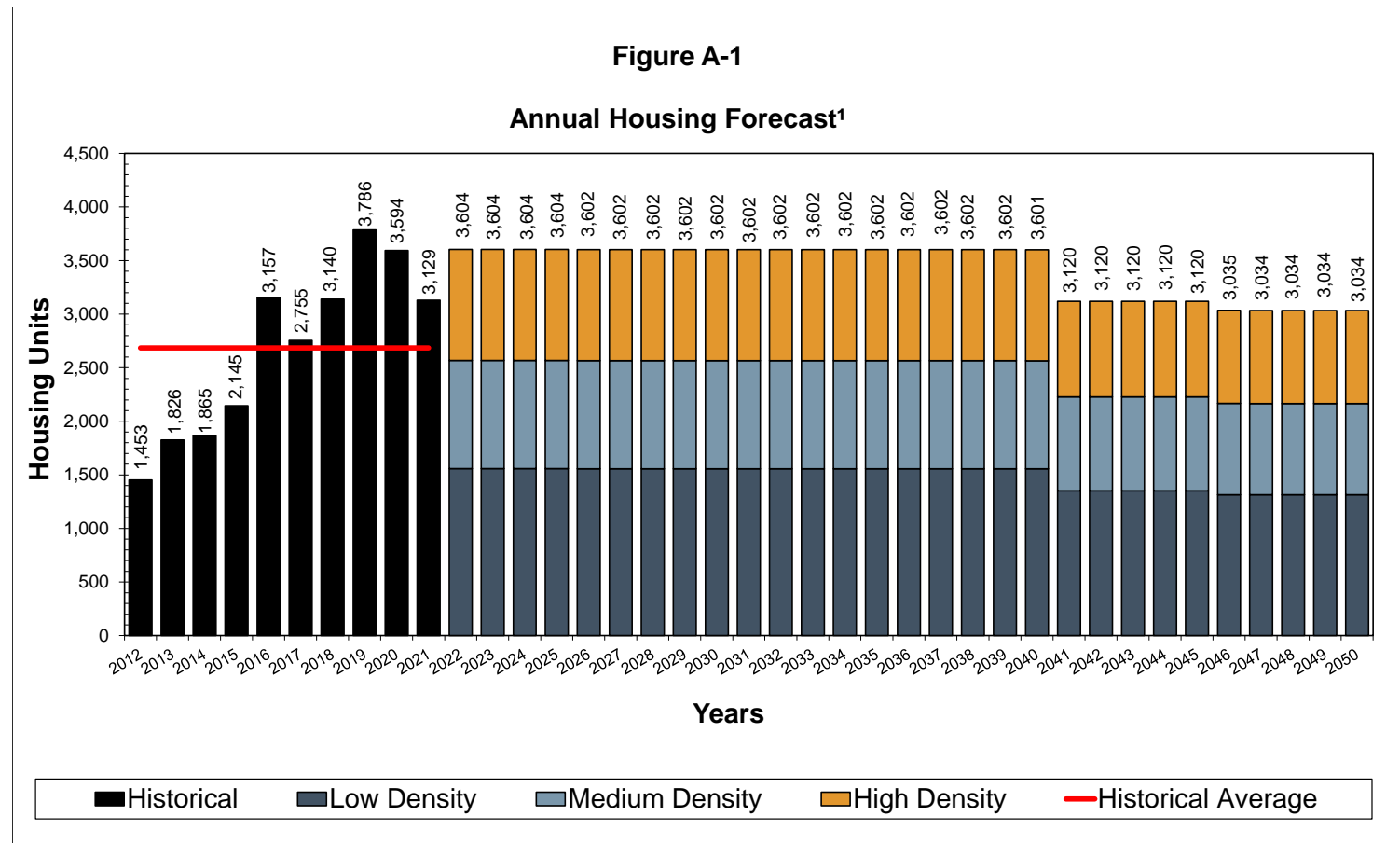
^[3] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Note: Population including the Census undercount has been rounded.

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd. by Watson & Associates Economists Ltd.



Figure A-1
Regional Municipality of Niagara
Annual Housing Forecast^[1]



[1] Growth forecast represents calendar year.

Source: Historical housing activity derived from Statistics Canada building permit data for the Regional Municipality of Niagara, 2012-2015, from Niagara Region building permit data from 2016 to 2020, and 2021 estimated based on Statistics Canada October 2021 year-to-date data, by Watson & Associates Economists Ltd.



Schedule 2
Regional Municipality of Niagara
Estimate of the Anticipated Amount, Type and Location of
Residential Development for Which Development Charges can be Imposed

Development Location	Timing	Single & Semi-Detached	Multiples ^[1]	Apartments ^[2]	Total Residential Units	Gross Population in New Units	Existing Unit Population Change	Net Population Increase, Excluding Institutional	Institutional Population	Net Population Including Institutional
Water Servicing	2022 to 2032	15,278	10,083	10,367	35,728	83,373	-24,775	58,598	1,316	59,914
Water Servicing	2022 to 2041	29,024	19,155	19,696	67,875	158,390	-39,649	118,741	2,681	121,422
Water Servicing	2022 to 2051	42,049	27,799	28,498	98,346	229,508	-44,467	185,041	4,258	189,299
Wastewater Servicing	2022 to 2032	15,255	10,083	10,367	35,705	83,306	-23,792	59,514	1,316	60,830
Wastewater Servicing	2022 to 2041	28,958	19,155	19,696	67,809	158,197	-38,076	120,121	2,681	122,802
Wastewater Servicing	2022 to 2051	41,949	27,799	28,498	98,246	229,215	-42,702	186,513	4,258	190,771
Unserviced	2022 to 2032	300	0	0	300	879	-752	127	0	127
Unserviced	2022 to 2041	570	0	0	570	1,670	-1,203	467	0	467
Unserviced	2022 to 2051	870	0	0	870	2,548	-1,349	1,199	0	1,199
Region of Niagara ^[3]	2022 to 2032	15,578	10,083	10,367	36,028	84,252	-25,527	58,725	1,316	60,041
Region of Niagara ^[3]	2022 to 2041	29,594	19,155	19,696	68,445	160,060	-40,852	119,208	2,681	121,889



Development Location	Timing	Single & Semi-Detached	Multiples ^[1]	Apartments ^[2]	Total Residential Units	Gross Population in New Units	Existing Unit Population Change	Net Population Increase, Excluding Institutional	Institutional Population	Net Population Including Institutional
Region of Niagara ^[3]	2022 to 2051	42,919	27,799	28,498	99,216	232,056	-45,816	186,240	4,258	190,498

^[1] Includes townhouses and apartments in duplexes.

^[2] Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

^[3] Regional Municipality of Niagara total reflects the water servicing area plus unserved area.

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

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, and discussions with Niagara Region staff, by Watson & Associates Economists Ltd.



**Schedule 3
Regional Municipality of Niagara
Current Year Growth Forecast
Mid 2016 to Mid 2022**

		Population
Mid 2016 Population		447,888
Occupants of New Housing Units, Mid 2016 to Mid 2022	<i>Units (2)</i>	15,604
	<i>multiplied by P.P.U. (3)</i>	2,509
	<i>gross population increase</i>	39,155
Occupants of New Equivalent Institutional Units, Mid 2016 to Mid 2022	<i>Units</i>	728
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	801
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2022	<i>Units (4)</i>	183,825
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.008
	<i>total decline in population</i>	-1,530
Population Estimate to Mid 2022		486,314
<i>Net Population Increase, Mid 2016 to Mid 2022</i>		38,426

- (1) 2016 population based on Statistics Canada Census unadjusted for Census undercount.
- (2) Estimated residential units constructed, Mid-2016 to the beginning of the growth period assuming a six-month 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
<i>Singles & Semi Detached</i>	2.929	55%	1.601
<i>Multiples (6)</i>	2.189	29%	0.639
<i>Apartments (7)</i>	1.669	16%	0.269
Total	n/a	100%	2.509

¹ Based on 2016 Census custom database

² Based on Building permit/completion activity

(4) 2016 households taken from Statistics Canada Census.

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

(6) Includes townhouses and apartments in duplexes.

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

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



Schedule 4a
Regional Municipality of Niagara
Ten Year Growth Forecast
Mid 2022 to Mid 2032

		Population
Mid 2022 Population		486,314
Occupants of New Housing Units, Mid 2022 to Mid 2032	<i>Units (2)</i>	36,028
	<i>multiplied by P.P.U. (3)</i>	2,339
	<i>gross population increase</i>	84,252
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2032	<i>Units</i>	1,196
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	1,316
Decline in Housing Unit Occupancy, Mid 2022 to Mid 2032	<i>Units (4)</i>	199,429
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.128
	<i>total decline in population</i>	-25,527
Population Estimate to Mid 2032		546,355
<i>Net Population Increase, Mid 2022 to Mid 2032</i>		<i>60,041</i>

- (1) Mid 2022 Population based on:
2016 Population (447,888) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (15,604 x 2.509 = 39,155) + (728 x 1.1 = 801) + (183,825 x -0.008 = -1,530) = 486,314
- (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
<i>Singles & Semi Detached</i>	2.929	43%	1.267
<i>Multiples (6)</i>	2.093	28%	0.586
<i>Apartments (7)</i>	1.690	29%	0.486
<i>one bedroom or less</i>	1.214	n/a	n/a
<i>two bedrooms or more</i>	1.991	n/a	n/a
Total	n/a	100%	2.339

- ¹ Persons per unit based on adjusted Statistics Canada Custom 2016 Census database.
- ² Forecast unit mix based upon historical trends and housing units in the development process.
- (4) Mid 2022 households based upon 2016 Census (183,825 units) + Mid 2016 to Mid 2022 unit estimate (15,604 units) = 199,429 units.
- (5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.
- (6) Includes townhouses and apartments in duplexes.
- (7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.
- Note: Numbers may not add to totals due to rounding.



**Schedule 4b
Regional Municipality of Niagara
2041 Growth Forecast
Mid 2022 to Mid 2041**

		Population
Mid 2022 Population		486,314
Occupants of New Housing Units, Mid 2022 to Mid 2041	<i>Units (2)</i>	68,445
	<i>multiplied by P.P.U. (3)</i>	2,339
	<i>gross population increase</i>	160,060
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2041	<i>Units</i>	2,437
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	2,681
Decline in Housing Unit Occupancy, Mid 2022 to Mid 2041	<i>Units (4)</i>	199,429
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.205
	<i>total decline in population</i>	-40,852
Population Estimate to Mid 2041		608,203
<i>Net Population Increase, Mid 2022 to Mid 2041</i>		121,889

- (1) Mid 2022 Population based on:
2016 Population (447,888) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (15,604 x 2.509 = 39,155) + (728 x 1.1 = 801) + (183,825 x -0.008 = -1,530) = 486,314
- (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
<i>Singles & Semi Detached</i>	2.929	43%	1.267
<i>Multiples (6)</i>	2.093	28%	0.586
<i>Apartments (7)</i>	1.690	29%	0.486
<i>one bedroom or less</i>	1.214	n/a	n/a
<i>two bedrooms or more</i>	1.991	n/a	n/a
Total	n/a	100%	2.339

- ¹ Persons per unit based on adjusted Statistics Canada Custom 2016 Census database.
- ² Forecast unit mix based upon historical trends and housing units in the development process.
- (4) Mid 2022 households based upon 2016 Census (183,825 units) + Mid 2016 to Mid 2022 unit estimate (15,604 units) = 199,429 units.
- (5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.
- (6) Includes townhouses and apartments in duplexes.
- (7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.
- Note: Numbers may not add to totals due to rounding.



**Schedule 5
Regional Municipality of Niagara
2051 Growth Forecast
Mid 2022 to Mid 2051**

		Population
Mid 2022 Population		486,314
Occupants of New Housing Units, Mid 2022 to Mid 2051	<i>Units (2)</i>	99,216
	<i>multiplied by P.P.U. (3)</i>	2,339
	<i>gross population increase</i>	232,056
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2051	<i>Units</i>	3,871
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	4,258
Decline in Housing Unit Occupancy, Mid 2022 to Mid 2051	<i>Units (4)</i>	199,429
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.230
	<i>total decline in population</i>	-45,816
Population Estimate to Mid 2051		676,812
<i>Net Population Increase, Mid 2022 to Mid 2051</i>		190,498

(1) 2016 Population (447,888) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (15,604 x 2.509 = 39,155) + (728 x 1.1 = 801) + (183,825 x -0.008 = -1,530) = 486,314

(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
<i>Singles & Semi Detached</i>	2.929	43%	1.267
<i>Multiples (6)</i>	2.093	28%	0.586
<i>Apartments (7)</i>	1.690	29%	0.486
<i>one bedroom or less</i>	1.214	n/a	n/a
<i>two bedrooms or more</i>	1.991	n/a	n/a
Total	n/a	100%	2.339

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

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

(4) Mid 2022 households based upon 2016 Census (183,825 units) + Mid 2016 to Mid 2022 unit estimate (15,604 units) = 199,429 units.

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

(6) Includes townhouses and apartments in duplexes.

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

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



Schedule 6
Regional Municipality of Niagara
Historical Residential Building Permits
Years 2012 to 2021

Year	Singles & Semi Detached	Multiples ^[1]	Apartments ^[2]	Total
2012	867	296	290	1,453
2013	1,033	628	165	1,826
2014	1,269	456	140	1,865
2015	1,338	472	335	2,145
2016	2,006	582	569	3,157
Sub-total (2012 to 2016)	6,513	2,434	1,499	10,446
Average (2012 to 2016)	1,303	487	300	2,089
% Breakdown (2012 to 2016)	62.3%	23.3%	14.3%	100.0%
2017	1,590	898	267	2,755
2018	1,426	769	945	3,140
2019	1,632	1,309	845	3,786
2020	1,349	874	1,368	3,591
2021	1,399	951	779	3,129
Sub-total (2017 to 2021)	7,396	4,801	4,204	16,401
Average (2017 to 2021)	1,479	960	841	3,280
% Breakdown (2017 to 2021)	45.1%	29.3%	25.6%	100.0%
Total (2012 to 2021)	13,909	7,235	5,703	26,847
Average (2012 to 2021)	1,391	724	570	2,685
% Breakdown (2012 to 2021)	51.8%	26.9%	21.2%	100.0%

[1] Includes townhouses and apartments in duplexes.

[2] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Source: Historical housing activity derived from Statistics Canada building permit data for the Regional Municipality of Niagara, 2012-2015, from Niagara Region building permit data from 2016 to 2020, and 2021 estimated based on Statistics Canada October 2021 year-to-date data, by Watson & Associates Economists Ltd..



Schedule 7
Regional Municipality of Niagara
Person Per Unit by Age and Type of Dwelling
(2016 Census)

Singles and Semi-Detached

Age of Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average	25 Year Average Adjusted ^[1]
1-5	n/a	1.500	1.915	3.045	4.522	2.929		
6-10	n/a	1.500	1.864	3.078	4.414	2.981		
11-15	n/a	1.909	1.928	3.005	4.323	2.999		
16-20	n/a	n/a	1.846	2.962	3.950	2.936		
20-25	n/a	1.615	1.893	2.931	4.022	2.895	2.948	2.929
25-35	n/a	1.594	1.929	2.797	3.713	2.805		
35+	2.091	1.420	1.816	2.532	3.765	2.445		
Total	2.467	1.481	1.834	2.666	3.895	2.592		

^[1] Includes townhouses and apartments in duplexes.

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

^[3] Adjusted based on 2001-2016 historical trends.

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.

Multiples^[1]

Age of Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average	25 Year Average Adjusted ^[2]
1-5	n/a	1.647	1.726	2.424	n/a	2.189		
6-10	n/a	1.231	1.807	2.275	n/a	1.997		
11-15	n/a	1.529	1.675	2.432	n/a	2.111		
16-20	n/a	1.500	1.914	2.494	n/a	2.208		
20-25	n/a	1.360	1.748	2.726	3.143	2.296	2.160	2.093
25-35	n/a	1.292	2.000	2.640	2.750	2.404		
35+	n/a	1.216	1.823	2.630	3.407	2.176		
Total	n/a	1.275	1.814	2.562	3.243	2.197		

^[1] Includes townhouses and apartments in duplexes.

^[2] Adjusted based on 2001-2016 historical trends.

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.



Apartments^[1]

Age of Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average	25 Year Average Adjusted ^[2]
1-5	n/a	1.317	1.652	2.783	n/a	1.669		
6-10	n/a	1.178	1.721	3.067	n/a	1.685		
11-15	n/a	1.381	1.865	2.632	n/a	1.817		
16-20	n/a	1.241	1.847	2.652	n/a	1.686		
20-25	n/a	1.224	1.780	2.974	n/a	1.668	1.705	1.690
25-35	0.800	1.199	1.729	3.082	n/a	1.589		
35+	1.085	1.167	1.740	2.616	2.550	1.562		
Total	0.892	1.185	1.746	2.716	2.875	1.589		

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

^[2] Adjusted based on 2001-2016 historical trends.

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.

All Density Types

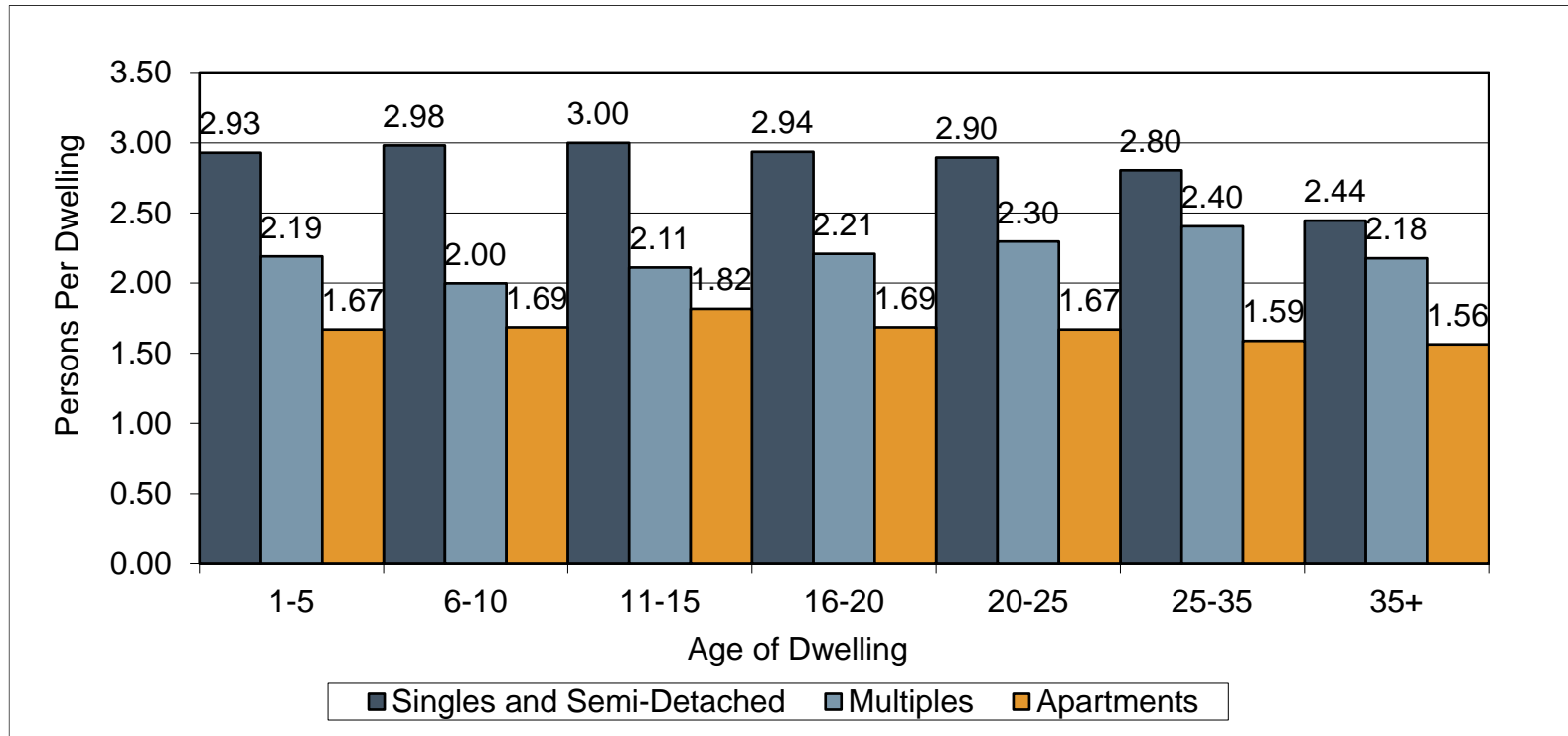
Age of Dwelling	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	n/a	1.411	1.792	2.879	4.380	2.604
6-10	n/a	1.337	1.821	2.966	4.291	2.688
11-15	n/a	1.447	1.836	2.931	4.284	2.745
16-20	n/a	1.430	1.868	2.895	3.934	2.656
20-25	n/a	1.253	1.799	2.895	3.934	2.515
25-35	n/a	1.231	1.818	2.787	3.648	2.497
35+	1.250	1.219	1.790	2.539	3.725	2.272
Total	1.250	1.242	1.800	2.658	3.841	2.383

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 8
Regional Municipality of Niagara
Person Per Unit Structural Type and Age of Dwelling
(2016 Census)





Schedule 9a
Regional Municipality of Niagara
Employment Forecast, 2022 to 2051

Activity Rate - Total

Period	Population	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Including N.F.P.O.W.
Mid-2006	427,421	0.93%	3.20%	10.36%	18.65%	8.18%	41.33%	4.33%	45.66%
Mid-2011	431,346	0.83%	2.86%	8.20%	17.26%	9.14%	38.29%	4.75%	43.04%
Mid-2016	447,888	0.87%	3.12%	7.40%	17.05%	9.08%	37.51%	5.12%	42.63%
Mid-2022	486,314	0.81%	3.15%	7.06%	16.13%	9.10%	36.26%	5.12%	41.38%
Mid-2032	546,355	0.78%	3.20%	6.72%	16.01%	8.68%	35.38%	5.13%	40.51%
Mid-2041	608,203	0.76%	3.22%	6.51%	15.86%	8.44%	34.80%	5.13%	39.92%
Mid-2051	676,813	0.76%	3.23%	6.72%	15.89%	8.45%	35.05%	5.14%	40.19%

^[1] 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.
Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Activity Rate - Incremental Change

Period	Population	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Including N.F.P.O.W.
Mid-2006 to Mid-2011	3,925	-0.11%	-0.34%	-2.16%	-1.39%	0.96%	-3.04%	0.42%	-2.62%
Mid-2011 to Mid-2016	16,542	0.04%	0.26%	-0.80%	-0.22%	-0.06%	-0.78%	0.37%	-0.40%
Mid-2016 to Mid-2022	38,426	-0.05%	0.03%	-0.34%	-0.92%	0.02%	-1.25%	0.00%	-1.25%
Mid-2022 to Mid-2032	60,041	-0.03%	0.05%	-0.34%	-0.13%	-0.42%	-0.87%	0.01%	-0.87%
Mid-2022 to Mid-2041	121,889	-0.05%	0.07%	-0.55%	-0.27%	-0.66%	-1.46%	0.01%	-1.45%
Mid-2022 to Mid-2051	190,499	-0.05%	0.09%	-0.33%	-0.24%	-0.66%	-1.20%	0.01%	-1.19%

^[1] 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.

Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Activity Rate - Annual Average

Period	Population	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Including N.F.P.O.W.
Mid-2006 to Mid-2011	785	-0.02%	-0.07%	-0.43%	-0.28%	0.19%	-0.61%	0.08%	-0.52%
Mid-2011 to Mid-2016	3,308	0.01%	0.05%	-0.16%	-0.04%	-0.01%	-0.16%	0.07%	-0.08%
Mid-2016 to Mid-2022	6,404	-0.01%	0.01%	-0.06%	-0.15%	0.00%	-0.21%	0.00%	-0.21%
Mid-2022 to Mid-2032	6,004	0.00%	0.01%	-0.03%	-0.01%	-0.04%	-0.09%	0.00%	-0.09%
Mid-2022 to Mid-2041	6,415	0.00%	0.00%	-0.03%	-0.01%	-0.03%	-0.08%	0.00%	-0.08%
Mid-2022 to Mid-2051	6,569	0.00%	0.00%	-0.01%	-0.01%	-0.02%	-0.04%	0.00%	-0.04%

^[1] 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.
Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Employment - Total

Period	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2006	3,990	13,665	44,293	79,733	34,975	176,655	18,505	195,160	162,990
Mid 2011	3,570	12,315	35,370	74,470	39,430	165,155	20,485	185,640	152,840
Mid 2016	3,875	13,965	33,143	76,358	40,670	168,010	22,940	190,950	154,045
Mid 2022	3,958	15,309	34,324	78,457	44,277	176,324	24,908	201,232	161,015
Mid 2032	4,263	17,472	36,719	87,447	47,426	193,327	28,022	221,349	175,855
Mid 2041	4,636	19,599	39,583	96,455	51,353	211,626	31,194	242,820	192,027
Mid 2051	5,158	21,890	45,505	107,534	57,157	237,244	34,756	272,000	215,354

^[1] 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.
Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Employment - Incremental Change

Period	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2006 to Mid 2011	-420	-1,350	-8,923	-5,263	4,455	- 11,500	1,980	-9,520	-10,150
Mid 2011 to Mid 2016	305	1,650	-2,228	1,888	1,240	2,855	2,455	5,310	1,205
Mid 2016 to Mid 2022	83	1,344	1,181	2,099	3,607	8,314	1,968	10,282	6,970
Mid 2022 to Mid 2032	305	2,163	2,396	8,991	3,149	17,003	3,114	20,117	14,840
Mid 2022 to Mid 2041	678	4,290	5,260	17,999	7,076	35,302	6,286	41,588	31,012
Mid 2022 to Mid 2051	1,200	6,581	11,182	29,078	12,880	60,920	9,848	70,768	54,339

^[1] 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.
Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Employment - Annual Average

Period	Primary	Work at Home	Industrial	Commercial / Population Related	Institutional	Total	N.F.P.O.W. ^[1]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2006 to Mid 2011	-84	-270	-1,785	-1,053	891	-2,300	396	-1,904	-2,030
Mid 2011 to Mid 2016	61	330	-446	378	248	571	491	1,062	241
Mid 2016 to Mid 2022	14	224	197	350	601	1,386	328	1,714	1,162
Mid 2022 to Mid 2032	31	216	240	899	315	1,700	311	2,012	1,484
Mid 2022 to Mid 2041	36	226	277	947	372	1,858	331	2,189	1,632
Mid 2022 to Mid 2051	41	227	386	1,003	444	2,101	340	2,440	1,874

^[1] 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.
 Source: Derived from Niagara Region Official Plan, Appendix 3 - PDS 41-2021, 2051 Land Needs Assessment, December 2021, by Watson & Associates Economists Ltd.



Schedule 9b
Regional Municipality of Niagara
Employment and Gross Floor Area (G.F.A.) Forecast, 2022 to 2051

Total Employment for Gross Floor Area (G.F.A.)

Period	Population	Primary Employment ^[1]	Industrial Employment	Commercial/ Population Related Employment	Institutional Employment ^[2]	Total Employment
Mid 2006	427,421	3,990	44,293	79,733	34,975	162,990
Mid 2011	431,346	3,570	35,370	74,470	39,430	152,840
Mid 2016	447,888	3,875	33,143	76,358	40,670	154,045
Mid-2022	486,314	3,958	34,324	78,457	43,904	160,642
Mid-2032	546,355	4,263	36,719	87,447	46,440	174,869
Mid-2041	608,203	4,636	39,583	96,455	49,730	190,404
Mid-2051	676,813	5,158	45,505	107,534	54,799	212,996

^[1] Primary industry includes bona-fide, non bona-fide farming and cannabis growing operation related employment.

^[2] Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Incremental Employment Change for Gross Floor Area (G.F.A.)

Period	Population	Primary Employment ^[1]	Industrial Employment	Commercial/ Population Related Employment	Institutional Employment ^[2]	Total Employment
Mid 2006 to Mid 2011	3,925	-420	-8,923	-5,263	4,455	-10,150
Mid 2011 to Mid 2016	16,542	305	-2,228	1,888	1,240	1,205
Mid 2016 to Mid-2022	38,426	83	1,181	2,099	3,234	6,597
Mid-2022 to Mid-2032	60,041	305	2,396	8,991	2,536	14,227
Mid-2022 to Mid-2041	121,889	678	5,260	17,999	5,826	29,762
Mid-2022 to Mid-2051	190,499	1,200	11,182	29,078	10,895	52,354

^[1] Primary industry includes bona-fide, non bona-fide farming and cannabis growing operation related employment.

^[2] Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Annual Employment Change for Gross Floor Area (G.F.A.)

Period	Population	Primary Employment ^[1]	Industrial Employment	Commercial/ Population Related Employment	Institutional Employment ^[2]	Total Employment
Mid 2006 to Mid 2011	785	-84	-1,785	-1,053	891	-2,030
Mid 2011 to Mid 2016	3,308	61	-446	378	248	241
Mid 2016 to Mid-2022	6,404	14	197	350	539	1,100
Mid-2022 to Mid-2032	6,004	31	240	899	254	1,423
Mid-2022 to Mid-2041	6,415	36	277	947	307	1,566
Mid-2022 to Mid-2051	6,569	41	386	1,003	376	1,805

^[1] Primary industry includes bona-fide, non bona-fide farming and cannabis growing operation related employment.

^[2] Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Incremental Gross Floor Area (G.F.A.) Forecast in Square Feet (Estimated)^[1]

Period	Primary G.F.A. ^[2]	Industrial G.F.A.	Commercial/Population Related Employment G.F.A.	Institutional G.F.A. ^[3]	Total G.F.A.
Mid-2022 to Mid-2032	1,220,000	2,874,600	4,495,200	1,657,700	10,247,500
Mid-2022 to Mid-2041	2,712,000	6,311,400	8,999,200	3,877,800	21,900,400
Mid-2022 to Mid-2051	4,800,000	13,417,800	14,538,700	7,406,800	40,163,300

Annual Average Incremental Gross Floor Area (G.F.A.) Forecast in Square Feet (Estimated)^[1]

Period	Primary G.F.A. ^[2]	Industrial G.F.A.	Commercial/Population Related Employment G.F.A.	Institutional G.F.A. ^[3]	Total G.F.A.
Mid-2022 to Mid-2032	122,000	287,460	449,520	165,770	1,024,750
Mid-2022 to Mid-2041	142,737	332,179	473,642	204,095	1,152,653
Mid-2022 to Mid-2051	165,517	462,683	501,334	255,407	1,384,941

^[1] Square Foot Per Employee Assumptions

Primary: 4,000

Industrial: 1,200

Commercial/Population-Related: 500

Institutional: 680

^[2] Primary industry includes bona-fide, non bona-fide farming and cannabis growing operation related employment.

^[3] Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Schedule 9c
Regional Municipality of Niagara
Estimate of the Anticipated Amount, Type and Location of
Non-Residential Development for Which Development Charges can be Imposed

Development Location	Timing	Primary		Industrial		Commercial		Institutional		Total Non-Residential G.F.A. S.F.	Employment Increase ^[4]
		G.F.A.	S.F. ^{[1], [2]}	G.F.A.	S.F. ^[1]	G.F.A.	S.F. ^[1]	G.F.A.	S.F. ^{[1], [3]}		
Municipally Serviced (Water and Wastewater)	2022 to 2032			2,437,700		4,193,100		1,591,400		8,222,200	12,852
Municipally Serviced (Water and Wastewater)	2022 to 2041			5,352,100		8,394,500		3,722,700		17,469,300	26,842
Municipally Serviced (Water and Wastewater)	2022 to 2051			11,378,300		13,561,700		7,110,500		32,050,500	47,065
Unserviced	2022 to 2032	1,220,000		436,900		302,100		66,300		2,025,300	1,375
Unserviced	2022 to 2041	2,712,000		959,300		604,700		155,100		4,431,100	2,920
Unserviced	2022 to 2051	4,800,000		2,039,500		977,000		296,300		8,112,800	5,289
Region of Niagara	2022 to 2032	1,220,000		2,874,600		4,495,200		1,657,700		10,247,500	14,227
Region of Niagara	2022 to 2041	2,712,000		6,311,400		8,999,200		3,877,800		21,900,400	29,762
Region of Niagara	2022 to 2051	4,800,000		13,417,800		14,538,700		7,406,800		40,163,300	52,354

^[1] Square Foot Per Employee Assumptions

Primary 4,000
Industrial 1,200
Commercial/Population-Related 500
Institutional 680

^[2] Primary industry includes bona-fide, non bona-fide farming and cannabis growing operation related employment.

^[3] Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

^[4] Employment increase does not include No Fixed Place of Work.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Schedule 10
Regional Municipality of Niagara
Employment to Population Ratio by Major Employment Sector, 2006 to 2016

Primary Industry Employment

NAICS	NAICS Description	2006	2011	2016	2006 to 2011	2011 to 2016
11	<i>Agriculture, forestry, fishing and hunting</i>	6,200	4,955	5,170	-1,245	215
21	<i>Mining and oil and gas extraction</i>	195	295	245	100	-50
	Sub-total	6,395	5,250	5,415	-1,145	165

Industrial and Other Employment

NAICS	NAICS Description	2006	2011	2016	2006 to 2011	2011 to 2016
22	<i>Utilities</i>	1,105	1,400	1,055	295	-345
23	<i>Construction</i>	6,395	6,465	6,035	70	-430
31-33	<i>Manufacturing</i>	22,860	16,155	14,605	-6,705	-1,550
41	<i>Wholesale trade</i>	6,395	5,795	5,485	-600	-310
48-49	<i>Transportation and warehousing</i>	6,215	5,455	5,500	-760	45
56	<i>Administrative and support</i>	4,285	3,390	3,590	-895	200
	Sub-total	47,255	38,660	36,270	-8,595	-2,390



Population Related Employment

NAICS	NAICS Description	2006	2011	2016	2006 to 2011	2011 to 2016
44-45	<i>Retail trade</i>	22,750	23,280	24,090	530	810
51	<i>Information and cultural industries</i>	2,715	2,015	1,920	-700	-95
52	<i>Finance and insurance</i>	6,115	5,670	5,335	-445	-335
53	<i>Real estate and rental and leasing</i>	2,600	2,885	2,705	285	-180
54	<i>Professional, scientific and technical services</i>	7,165	7,215	8,095	50	880
55	<i>Management of companies and enterprises</i>	175	195	150	20	-45
56	<i>Administrative and support</i>	4,285	3,390	3,590	-895	200
71	<i>Arts, entertainment and recreation</i>	9,595	8,575	7,865	-1,020	-710
72	<i>Accommodation and food services</i>	21,765	19,320	22,145	-2,445	2,825
81	<i>Other services (except public administration)</i>	9,145	7,925	7,920	-1,220	-5
	Sub-total	86,310	80,470	83,815	-5,840	3,345

Institutional

NAICS	NAICS Description	2006	2011	2016	2006 to 2011	2011 to 2016
61	<i>Educational services</i>	11,425	12,655	12,985	1,230	330
62	<i>Health care and social assistance</i>	18,385	18,850	21,490	465	2,640
91	<i>Public administration</i>	6,885	9,270	8,035	2,385	-1,235
	Sub-total	36,695	40,775	42,510	4,080	1,735



Employment to Population Ratio

NAICS Description	2006	2011	2016	2006 to 2011	2011 to 2016
Total Employment	176,655	165,155	168,010	-11,500	2,855
Population	427,421	431,346	447,888	3,925	16,542
Employment to Population Ratio - Industrial and Other Employment	0.11	0.09	0.08	-0.02	-0.01
Employment to Population Ratio - Population Related Employment	0.20	0.19	0.19	-0.02	0.00
Employment to Population Ratio - Institutional Employment	0.09	0.09	0.09	0.01	0.00
Employment to Population Ratio - Primary Industry Employment	0.01	0.01	0.01	0.00	0.00
Total Employment to Population Ratio	0.41	0.38	0.38	-0.03	-0.01

Note: 2006-2016 employment figures are classified by the North American Industry Classification System (NAICS) Code.

Source: Statistics Canada Employment by Place of Work.



Appendix B

Level of Service



Appendix B: Level of Service

Service Category and Sub-Component	Cost (per capita)	Quantity (per capita)	Quantity Unit of Measure	Quality (per capita)	Quality Unit of Measure	Maximum Ceiling LOS
Public Works - Facilities	\$108.35	0.3731	sq.ft. of building area	290	per sq.ft.	13,206,673
Public Works - Vehicles & Equipment	\$56.89	0.0013	No. of vehicles and equipment	43,762	per vehicle	6,934,265
Policing Services - Facilities	\$348.22	0.6976	sq.ft. of building area	499	per sq.ft.	42,444,188
Policing Services - Vehicles	\$30.25	0.0008	No. of vehicles and equipment	37,813	per vehicle	3,687,142
Policing Services - Small Equipment and Gear	\$17.73	0.0028	No. of equipment and gear	6,332	per item	2,161,092
Long-term Care Facilities	\$744.79	1.3861	sq.ft. of building area	537	per sq.ft.	44,717,936
Long-term Care Vehicles and Equipment	\$0.42	0.0000	No. of vehicles and equipment	42,000	per vehicle	25,217
Child Care and Early Years Programs - Facilities	\$33.79	0.0806	sq.ft. of building area	419	per sq.ft.	2,028,785
Ambulance Facilities	\$92.42	0.1986	sq.ft. of building area	465	per sq.ft.	5,548,989
Ambulance Vehicles	\$37.06	0.0002	No. of vehicles and equipment	185,300	per vehicle	2,225,119
Housing Services - Facilities	\$2,007.82	0.0062	No. of units	325,000	per unit	120,551,521
Provincial Offences Act - Facilities	\$37.77	0.0488	sq.ft. of building area	774	per sq.ft.	2,267,749
Public Health - Facilities	\$94.71	0.1991	sq.ft. of building area	476	per sq.ft.	5,686,483
Waste Diversion - Facilities - Stations/Depots	\$186.59	0.5513	sq.ft. of building area	338	per sq.ft.	11,203,050
Waste Diversion - Facilities - Stations/Depots Land	\$19.29	0.0001	acres of land	192,900	per acre	1,158,191
Waste Diversion - Vehicles & Equipment	\$33.42	0.0002	No. of vehicles and equipment	167,100	per vehicle	2,006,570
Waste Diversion - Other	\$33.44	0.0003	No. of items	111,467	per Item	2,007,771

*Note: Services related to a highway – Roads service standard calculation is provided in the Transportation D.C. Background Study



Niagara Region Service Standard Calculation Sheet
Public Works Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Smithville Yard - Office Building	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	\$360	\$613
Smithville Yard - 2 Bays	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,700	\$270	\$270
Smithville Yard - Garage (2)	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	\$270	\$270
Smithville Yard - Sand Dome/Soft Structure	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	\$150	\$150
Smithville Yard - Salt Dome	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	\$150	\$150
Smithville Yard - Salt Hut	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	\$150	\$150
Smithville Yard - Garage (2)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	\$270	\$270
Pelham Yard - Office Building & Vehicle Storage Garage	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	\$360	\$539
Pelham Yard - Equipment Storage Building	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$150	\$150
Pelham Yard - Garage	500	500	500	500	500	500	500	500	500	500	\$270	\$270
Pelham Yard - Sand Hut	700	700	700	700	700	700	700	700	700	700	\$180	\$180
Pelham Yard - Sand/Salt Domes (2)	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	\$180	\$180
Thorold Yard - Office Building & Vehicle Storage Garage	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	\$360	\$661
Thorold Yard - Bays	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	\$270	\$270
Thorold Yard - Salt Domes (2)	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	\$180	\$180
Thorold Yard - Sand Dome/Soft Structure	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	\$150	\$150
Thorold Yard - Equipment Storage Building	600	600	600	600	600	600	600	600	600	600	\$150	\$150
Thorold Yard - Workshop/Garage	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$270	\$270
Welland Yard - Main Building	7,100	7,100	7,100	7,100	7,100	7,100	7,100	7,100	7,100	7,100	\$360	\$485
Welland Yard - 3 Bays	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	\$270	\$270
Welland Yard - Garage/Workshop	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	\$270	\$270
Welland Yard - Storage Building	26,300	26,300	26,300	26,300	26,300	26,300	26,300	26,300	26,300	26,300	\$150	\$150



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Welland Yard - Soft Structure	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	\$150	\$150
PW Service Centre Facility	45,700	45,700	45,700	45,700	45,700	45,700	45,700	45,700	45,700	45,700	\$360	\$423
Total	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000		



Niagara Region Service Standard Calculation Sheet
Public Works Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000	169,000
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard (sq.ft.)	0.3894	0.3872	0.3842	0.3809	0.3773	0.3719	0.3672	0.3627	0.3573	0.3529

Niagara Region Service Standard Calculation Sheet
Public Works Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.3731
Quality Standard	\$290
Service Standard	\$108

Niagara Region Service Standard Calculation Sheet
Public Works Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	20 Year
Forecast Population	121,889
\$ per Capita	\$108
Eligible Amount	\$13,206,673



Niagara Region Service Standard Calculation Sheet
Public Works Vehicles and Equipment
Number of Vehicles and Equipment

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
12 - Passenger Vehicle Full Size	0	0	0	0	0	4	4	4	4	4	\$35,700
21 - Truck 5000-5999 GVW	46	45	42	42	45	50	42	42	46	50	\$35,700
22 - Truck 6000-7999 GVW	41	45	50	55	59	64	60	59	59	53	\$38,700
23 - Truck 8000-9999 GVW	52	57	62	67	72	78	64	66	69	67	\$56,500
24 - Truck 10000-14999 GVW	10	10	7	5	8	7	6	6	5	5	\$58,100
25 - Truck 15000-18999 GVW	20	22	24	26	28	28	19	19	19	19	\$95,700
26 - Truck 19000-23999 GVW	3	3	3	5	5	6	6	6	6	6	\$152,100
29 - Truck 32000-35999 GVW	1	2	2	2	1	5	3	4	4	4	\$328,200
30 - Truck 36000-48999 GVW	10	10	10	4	4	4	1	1	1	1	\$354,900
32 - Truck 54000-65000 GVW	15	15	15	21	21	24	25	25	25	25	\$330,700
33 - Truck > 29000 KG GVW	0	0	0	0	0	1	1	1	1	1	\$330,700
37 - Front End Loader 1½-2½ Cy	5	5	4	4	2	2	2	2	2	2	\$176,200
40 - Grader 100-114 HP	0	0	2	2	2	2	2	2	2	2	\$251,300
43 - Grader >150 HP	2	2	0	0	0	0	0	0	0	0	\$215,800
47 - Mechanical Chipper	2	2	2	2	2	2	2	2	2	2	\$101,200
50 - Tractor Wheeled 21-27 HP	4	4	4	4	4	7	7	7	7	7	\$5,800
51 - Tractor Wheeled 28-37 HP	2	2	2	2	2	2	2	2	2	2	\$6,300
52 - Tractor Wheeled 38-45 HP	6	6	6	6	3	3	4	3	3	2	\$29,200
54 - Tractor Wheeled 56-60 HP	1	1	1	1	1	2	2	1	1	1	\$26,400
55 - Tractor Wheeled >60 HP	11	11	11	11	13	13	14	13	12	12	\$95,600
57 - Compressor	2	2	2	2	2	1	1	1	1	1	\$1,100
60 - Roller <3 Ton	1	1	1	1	1	1	1	1	1	1	\$49,500
68 - Trailer >10000lb	1	1	1	1	3	6	6	6	6	6	\$22,200
69 - Trailer 3001-10000lb	31	33	35	34	35	33	37	36	36	36	\$16,200
70 - Trailer <3000lb	29	30	31	32	33	33	36	33	33	33	\$6,000
73 - Road Breakers and Drills	5	4	4	4	4	4	4	4	4	4	\$6,500



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
75 - Line Striper	4	4	4	4	4	4	4	4	4	4	\$11,700
77 - Post Driver	4	4	7	8	5	5	6	6	6	7	\$5,700
78 - Snowblowers	5	5	5	5	5	5	5	5	5	5	\$1,000
79 - Post Hole Augers	1	1	1	1	1	1	1	0	0	0	\$12,100
80 - Chainsaws	22	25	28	31	34	35	32	34	36	31	\$800
81 - Waterpumps	10	12	12	12	11	12	12	13	14	12	\$1,100
82 - Concrete Saws	10	10	8	8	10	10	10	10	9	9	\$900
83 - Vibratory Tampers	2	2	2	2	2	4	4	4	4	4	\$4,400
84 - Generators	19	21	21	21	21	20	20	20	19	14	\$3,200
85 - Mowers	42	46	50	54	58	61	67	64	60	53	\$11,800
86 - Steam Washers	2	1	1	1	1	1	3	3	3	3	\$27,000
87 - Water Tanks	3	3	3	5	5	5	5	5	5	5	\$6,200
88 - Power Brooms	8	8	8	8	8	10	9	8	8	8	\$21,700
89 - Spreader Attachments	2	2	0	0	2	2	4	4	4	4	\$9,100
90 - Miscellaneous Equipment	4	5	5	5	5	7	6	8	9	9	\$10,300
99 - Attachments	73	72	65	75	64	70	66	65	66	66	\$9,200
Total	511	534	541	573	586	634	605	599	603	580	



Niagara Region Service Standard Calculation Sheet
Public Works Vehicles and Equipment
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Vehicles	511	534	541	573	586	634	605	599	603	580
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard (vehicle)	0.0012	0.0012	0.0012	0.0013	0.0013	0.0014	0.0013	0.0013	0.0013	0.0012

Niagara Region Service Standard Calculation Sheet
Public Works Vehicles and Equipment
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0013
Quality Standard	\$43,762
Service Standard	\$57

Niagara Region Service Standard Calculation Sheet
Public Works Vehicles and Equipment
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	20 Year
Forecast Population	121,889
\$ per Capita	\$57
Eligible Amount	\$6,934,265



Niagara Region Service Standard Calculation Sheet
Police Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Operations Service Branch (3250 Schmon Pkwy) Thorold	7,219	7,219	7,219	7,219	0	0	0	0	0	0	\$443	\$526
NRPS #8 District - 45 Clarke St. Grimsby - Owned	8,180	8,180	8,180	8,180	8,180	8,180	8,180	8,180	8,180	8,180	\$590	\$696
Police Building (Division 22) - 4343 Morrison Niagara Falls	17,900	17,900	17,900	17,900	0	0	0	0	0	0	\$443	\$526
NRPS #6 District - 501 Fielden Ave Port Colborne - Owned	5,260	5,260	5,260	5,260	5,260	5,260	5,260	5,260	5,260	5,260	\$443	\$526
NRPS #1 District- 68 Church Street - St. Catharines - Owned	75,280	75,280	75,280	75,280	37,640	37,640	37,640	37,640	37,640	0	\$443	\$526
NRPS #3 District - 5 Lincoln Ave Welland - Owned	25,995	25,995	25,995	25,995	25,995	25,995	25,995	25,995	25,995	25,995	\$443	\$526
NRPS Patrol Yard - 3551 Townline Rd Thorold - Owned	19,050	19,050	19,050	19,050	19,050	19,050	19,050	19,050	19,050	19,050	\$443	\$526
Police Building 110 James St. St. Catharines	40,000	40,000	40,000	40,000	0	0	0	0	0	0	\$443	\$526
Police Building 5741 River Rd. Niagara Falls	4,500	4,500	4,500	4,500	0	0	0	0	0	0	\$443	\$526



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
NRPS Gun Range - 107 Seneca Trail Welland - Owned	21,480	21,480	21,480	21,480	21,480	21,480	21,480	21,480	21,480	21,480	\$519	\$614
NRPS Tactical Unit - 2 Cushman Road SC - Owned	18,352	18,352	18,352	18,352	18,352	18,352	18,352	18,352	18,352	18,352	\$443	\$526
63 Church St. St. Catharines - Server room rental space	2,025	2,025	2,025	2,025	0	0	0	0	0	0	\$443	\$526
Hwy #20 Secure storage - leased facility	15,000	15,000	15,000	15,000	0	0	0	0	0	0	\$443	\$526
NRPS #5 - 650 Gilmore Rd Fort Erie - Owned	7,560	7,560	7,560	7,560	7,560	7,560	7,560	7,560	7,560	7,560	\$580	\$684
NRPS HQ/#2 District - 5700 Valley Way NF - Owned	0	0	0	0	207,528	207,528	207,528	207,528	207,528	207,528	\$348	\$416
NRPS #1 District- 198 Welland Ave - St. Catharines - Owned	0	0	0	0	0	0	0	0	0	30,613	\$576	\$680
Total	267,801	267,801	267,801	267,801	351,045	351,045	351,045	351,045	351,045	344,018		



Niagara Region Service Standard Calculation Sheet
Police Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	267,801	267,801	267,801	267,801	351,045	351,045	351,045	351,045	351,045	344,018
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.6170	0.6136	0.6088	0.6037	0.7838	0.7725	0.7627	0.7534	0.7421	0.7183

Niagara Region Service Standard Calculation Sheet
Police Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.6976
Quality Standard	499
Service Standard	\$348

Niagara Region Service Standard Calculation Sheet
Police Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	20 Year
Forecast Population	121,889
\$ per Capita	\$348
Eligible Amount	\$42,444,188



Niagara Region Service Standard Calculation Sheet
Police Vehicles
Number of Vehicles

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Mobile Command Post	1	1	1	1	1	1	1	1	1	1	\$185,900
Bomb Truck	1	1	1	1	1	1	1	1	1	1	\$94,800
Emergency Task Unit	1	1	1	1	1	3	3	3	3	3	\$120,800
Boats	2	2	2	3	3	5	5	5	5	5	\$297,600
Boat Trailers	5	5	5	5	4	5	5	5	5	5	\$9,700
Hike 30 Foot Command Vessel	1	1	1	1	1	0	0	0	0	0	\$311,100
Protector, 28 Foot Patrol Vessel	1	1	1	1	1	0	0	0	0	0	\$373,400
Bomb Trailer	1	1	1	1	0	0	0	0	0	0	\$13,200
One Ton Pick-up Truck	4	4	4	4	2	0	0	0	0	0	\$54,100
One Ton Cube Van	1	1	1	1	1	1	1	1	1	1	\$35,900
Utility Trailers	3	3	3	3	4	4	4	4	4	4	\$11,400
One Ton Van Prisoner Transport	5	5	5	5	4	4	4	4	4	4	\$36,200
Personal Watercraft (See Docs)	2	2	2	2	2	2	2	2	2	2	\$21,400
Personal Watercraft Trailers	2	1	1	1	1	1	1	1	1	1	\$2,200
One Ton Van, 15 Passenger	3	3	3	3	4	0	0	0	0	0	\$54,900
SUV, Special Service Package	13	13	13	13	16	3	3	3	3	3	\$47,400
SUV, Tactical	4	4	4	4	4	1	1	1	1	1	\$58,000
Patrol Cruisers	124	124	124	124	119	121	121	121	121	121	\$44,100
Non-Patrol Vehicles	141	141	141	141	131	140	140	140	140	140	\$22,000
Motorcycles	7	7	10	10	10	10	10	10	10	10	\$25,800
Light Vans	38	38	38	38	42	40	40	40	40	40	\$29,100
Light Truck	12	12	12	12	9	16	16	16	16	16	\$44,100
Medium Truck	3	3	3	3	3	0	0	0	0	0	\$65,600
ATV	4	6	6	6	6	6	6	6	6	6	\$13,700
Tow Motors	2	1	1	1	1	2	2	2	2	2	\$30,900
Total	381	381	384	385	371	366	366	366	366	366	



Niagara Region Service Standard Calculation Sheet
Police Vehicles
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Vehicles	381	381	384	385	371	366	366	366	366	366
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0009	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008

Niagara Region Service Standard Calculation Sheet
Police Vehicles
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0008
Quality Standard	\$37,813
Service Standard	\$30

Niagara Region Service Standard Calculation Sheet
Police Vehicles
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	20 Year
Forecast Population	121,889
\$ per Capita	\$30
Eligible Amount	\$3,687,142



Niagara Region Service Standard Calculation Sheet
Police Equipment and Gear
Number of Equipment and Gear

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Equipped Officers	684	685	685	681	677	685	687	693	738	738	\$7,000
Equipped Senior Officers	20	21	21	21	21	21	21	21	21	21	\$4,200
Equipped Special Constables	60	60	58	58	58	58	58	58	58	58	\$3,700
Portable Radios APX6000	353	354	353	351	349	450	450	450	450	450	\$5,800
Portable Radios APX7000	30	30	30	30	30	20	20	20	20	20	\$9,500
Radar (Gensis II)	19	19	19	19	19	19	19	19	19	19	\$3,100
Radar (Gensis II Directional)	11	11	11	11	11	11	11	11	11	11	\$3,100
Radar (MPH Bee III)	8	8	8	8	8	8	8	8	8	8	\$3,100
Radar (Genesis VPD)	31	31	31	31	31	31	31	31	31	31	\$3,100
Lidar (LTI Ultralyte LRB)	9	9	9	9	9	9	9	9	9	9	\$7,500
Lidar (LTI Ultralyte LR)	2	2	2	2	2	2	2	2	2	2	\$7,500
Radar (Spectre RDD)	3	3	3	3	3	3	3	3	3	3	\$3,100
Total	1,230	1,233	1,230	1,224	1,218	1,317	1,319	1,325	1,370	1,370	



Niagara Region Service Standard Calculation Sheet
Police Equipment and Gear
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Equipment	1,230	1,233	1,230	1,224	1,218	1,317	1,319	1,325	1,370	1,370
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0028	0.0028	0.0028	0.0028	0.0027	0.0029	0.0029	0.0028	0.0029	0.0029

Niagara Region Service Standard Calculation Sheet
Police Equipment and Gear
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0028
Quality Standard	\$6,332
Service Standard	\$18

Niagara Region Service Standard Calculation Sheet
Police Vehicles
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	20 Year
Forecast Population	121,889
\$ per Capita	\$18
Eligible Amount	\$2,161,092



Niagara Region Service Standard Calculation Sheet
Long-term Care Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Deer Park Villa Long Term Care Home - 150 Central Avenue Grimsby - Leased / Owned Addition	56,941	56,941	56,941	56,941	56,941	56,941	56,941	56,941	56,941	56,941	\$369	\$425
Northland Pointe Long Term Care Home - 2 Fielden Avenue Port Colborne - Leased	98,361	98,361	98,361	98,361	98,361	98,361	98,361	98,361	98,361	98,361	\$486	\$558
Upper Canada Lodge Long Term Care Home - 272 Wellington Street Niagara on the Lake - Owned (Leased Land)	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	\$378	\$440
Rapelje Lodge Long Term Care Home - 277 Plymouth Road Welland - Owned	78,695	78,695	78,695	78,695	78,695	78,695	78,695	78,695	78,695	78,695	\$485	\$556
Linhaven Long Term Care Home - 403 Ontario Street St Catharines - Owned	121,540	121,540	121,540	121,540	121,540	121,540	121,540	121,540	121,540	121,540	\$569	\$651
Gilmore Lodge Long Term Care Home - 50 Gilmore Road Fort Erie - Owned	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	44,000	\$578	\$660
Meadows of Dorchester Long Term Care Home - 6623 Kalar Road Niagara Falls - Owned	78,016	78,016	78,016	78,016	78,016	78,016	78,016	78,016	78,016	78,016	\$490	\$562
Woodlands of Sunset Long Term Care Home - 920 Pelham Street Welland - Owned	75,670	75,670	75,670	75,670	75,670	75,670	75,670	75,670	75,670	75,670	\$298	\$351



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
West Niagara Adult Day Service Long Term Care Home- 18 Livingston Avenue Grimsby - Leased	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	\$354	\$405
Fairhaven Adult Day Service Long Term Care Home - 3568 Montrose Road Niagara Falls - License Agreement	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	0	\$405
T. Roy Adams Regional Centre for Dementia Care - 403 Ontario Street St. Catharines - Owned	18,460	18,460	18,460	18,460	18,460	18,460	18,460	18,460	18,460	18,460	\$569	\$642
Long Term Care Administration Office - 1815 Sir Isaac Brock Way Thorold - Owned	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	3,179	\$472	\$535
Rapelje Lodge Garage	480	480	480	480	480	480	480	480	480	480	\$116	\$142
Linhaven Garage	768	768	768	768	768	768	768	768	768	768	\$176	\$209
Meadows of Dorchester Equipment Storage	162	162	162	162	162	162	162	162	162	162	\$152	\$182
Gilmore Lodge Garage	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	\$204	\$239
Total	628,279	628,279	628,279	628,279	628,279	628,279	628,279	628,279	628,279	623,979		



Niagara Region Service Standard Calculation Sheet
Long-term Care Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	628,279	628,279	628,279	628,279	628,279	628,279	628,279	628,279	628,279	623,979
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	1.4476	1.4394	1.4282	1.4162	1.4028	1.3825	1.3650	1.3484	1.3283	1.3028

Niagara Region Service Standard Calculation Sheet
Long-term Care Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	1.3861
Quality Standard	\$537
Service Standard	\$745

Niagara Region Service Standard Calculation Sheet
Long-term Care Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$745
Eligible Amount	\$44,717,936



Niagara Region Service Standard Calculation Sheet
Long-term Care Vehicles and Equipment
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Pickup Truck	2	2	2	2	2	2	2	2	2	2	\$40,000
Mini Cargo Van	2	2	2	2	2	2	2	2	2	2	\$45,000
Trailer	1	1	1	1	1	1	1	1	1	1	\$20,000
Total	5	5	5	5	5	5	5	5	5	5	



Niagara Region Service Standard Calculation Sheet
Long-term Vehicles and Equipment
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Vehicles and Equipment	5	5	5	5	5	5	5	5	5	5
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001

Niagara Region Service Standard Calculation Sheet
Long-term Care Vehicles and Equipment
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.00001
Quality Standard	\$42,000
Service Standard	\$0.42

Niagara Region Service Standard Calculation Sheet
Long-term Care Vehicles and Equipment
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$0.42
Eligible Amount	\$25,217



Niagara Region Service Standard Calculation Sheet
Child Care Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
St. Catharines Regional Child Care Centre - 179 Carlton Street St. Catharines - Owned	7,030	7,030	7,030	7,030	7,030	7,030	7,030	7,030	7,030	8,922	\$338	\$387
Welland Regional Child Care Centre - 25 Bruce Street Welland - Owned	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410	4,410	\$338	\$387
Branscombe Early Learning & Family Centre - 6271 Glengate St. Niagara Falls - Owned	11,180	11,180	11,180	11,180	11,180	11,180	11,180	11,180	11,180	11,180	\$424	\$482
Fort Erie Regional Child Care Centre - 94 Catharine St. Fort Erie - Owned	4,090	4,090	4,090	4,090	4,090	4,090	4,090	4,090	4,090	4,090	\$338	\$387
Port Colborne Regional Child Care Centre - 214 Steele St. Port Colborne - Leased	2,531	2,531	2,531	2,531	2,531	2,531	2,531	2,531	2,531	2,531	\$396	\$451
Child Care Centres - Headquarters Building - 1815 Sir Isaac Brock Way Thorold - Owned	6,259	6,259	6,259	6,259	6,259	6,259	6,259	6,259	6,259	6,259	\$368	\$420
Portable at St. Catharines Child Care Centre - 179 Carlton St.	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0	0	\$62	\$83
Total	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	35,500	37,392		



Niagara Region Service Standard Calculation Sheet
Child Care Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	35,500	37,392
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0841	0.0836	0.0830	0.0823	0.0815	0.0803	0.0793	0.0783	0.0751	0.0781

Niagara Region Service Standard Calculation Sheet
Child Care Facilities
10-year Average Service Standard

10 Year Average	2012-2021
Quantity Standard	0.0806
Quality Standard	\$419
Service Standard	\$34

Niagara Region Service Standard Calculation Sheet
Child Care Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$34
Eligible Amount	\$2,028,785



Niagara Region Service Standard Calculation Sheet
Ambulance Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Niagara Falls Ambulance-2722 St Paul Ave - Lease	975	975	975	975	975	975	975	975	975	975	\$421	\$479
Skylon Tower	240	240	240	240	0	0	0	0	0	0	\$421	\$479
EMS Administration - 101 Lampman Court NOTL - Leased	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	\$421	\$479
EMS Dispatch - 101 Lampman Court NOTL - Leased	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$421	\$479
EMS Quality Assurance - 101 Lampman Court NOTL - Leased	0	0	0	7,333	7,333	7,333	7,333	7,333	7,333	7,333	\$421	\$479
EMS Dispatch Training Centre - 101 Lampman Court NOTL - Leased	0	0	0	0	0	0	0	0	2,200	2,200	\$421	\$479
Moveable Storage Space - Welland - Rented	480	480	480	0	0	0	0	0	0	0	\$421	\$479
Merrittville Ambulance Base - 3450 Merrittville Hwy . Thorold - Owned	0	0	0	3,470	3,470	3,470	3,470	3,470	3,470	3,470	\$613	\$658
Abbey Rd. Ambulance Base - 655 Niagara St., Welland - Leased	0	0	0	0	1,750	1,750	1,750	1,750	1,750	1,750	\$421	\$479



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Westwood EMS Fleet Centre - 2 Westwood Court, NOTL	0	0	14,892	14,892	14,892	14,892	14,892	14,892	14,892	28,459	\$464	\$526
Westwood EMS Fleet Centre Base - 2 Westwood Court, NOTL	0	0	0	0	0	0	0	0	0	3,000	\$464	\$526
Casino Space	0	0	0	350	350	350	350	350	350	350	\$337	\$386
Total	70,488	70,488	85,380	93,255	94,035	94,035	94,035	94,035	96,235	110,832		



Niagara Region Service Standard Calculation Sheet
Ambulance Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	70,488	70,488	85,380	93,255	94,035	94,035	94,035	94,035	96,235	110,832
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.1624	0.1615	0.1941	0.2102	0.2100	0.2069	0.2043	0.2018	0.2035	0.2314

Niagara Region Service Standard Calculation Sheet
Ambulance Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.1986
Quality Standard	\$465
Service Standard	\$92

Niagara Region Service Standard Calculation Sheet
Ambulance Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$92
Eligible Amount	\$5,548,989



Niagara Region Service Standard Calculation Sheet
Ambulance Vehicles
Number of Vehicles

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Ambulance-Crestline	15	15	15	13	13	4	0	0	0	0	\$319,900
Ambulance Demers	21	21	22	27	28	39	45	45	46	46	\$319,900
ESUB-Super Duty Ford	1	1	1	1	1	1	1	1	1	1	\$105,800
Expeditions -Supervisors	7	7	7	8	8	9	13	13	17	17	\$146,200
F150-Pick-Up	1	1	1	1	1	1	1	1	1	1	\$126,800
ESU-Bus	0	0	0	0	0	0	0	0	0	0	\$267,100
Stock Vehicle -E350	2	2	2	2	2	2	2	2	2	2	\$60,100
CBRN Vehicle-F350	1	1	1	1	1	1	1	1	1	1	\$93,500
Gator	1	1	1	1	1	1	1	1	1	1	\$20,000
Emergency Response Unit	1	1	1	1	1	1	1	1	1	1	\$100,200
Command Vehicles	3	3	3	3	3	3	3	3	3	3	\$146,200
Duty Officer	1	1	1	1	1	1	1	1	1	1	\$146,200
Admin Vehicles	6	6	6	6	6	6	6	6	5	5	\$146,200
Van	0	0	0	0	0	0	0	0	1	1	\$78,200
Total	60	60	61	65	66	69	75	75	80	80	



Niagara Region Service Standard Calculation Sheet
Ambulance Vehicles
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Vehicles	60	60	61	65	66	69	75	75	80	80
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002

Niagara Region Service Standard Calculation Sheet
Ambulance Vehicles
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0002
Quality Standard	\$185,300
Service Standard	\$37

Niagara Region Service Standard Calculation Sheet
Ambulance Vehicles
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$37
Eligible Amount	\$2,225,119



Niagara Region Service Standard Calculation Sheet
Housing Facilities
Number of Housing Units

Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
317 Albany St	Fort Erie	40	40	40	40	40	40	40	40	40	40	\$325,000
132 Idylewilde St	Fort Erie	10	10	10	10	10	10	10	10	10	10	\$325,000
19-31 Bowden	Fort Erie	7	7	7	7	7	7	7	7	7	7	\$325,000
1-17 Bowden	Fort Erie	9	9	9	9	9	9	9	9	9	9	\$325,000
1A Bowden	Fort Erie	12	12	12	12	12	12	12	12	12	12	\$325,000
2-20 Bowden	Fort Erie	10	10	10	10	10	10	10	10	10	10	\$325,000
82 Crooks St	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
84 Crooks St	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
17 Jessie	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
15 Jessie	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
337 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
335 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
333 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
331 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
329 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
327 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
325 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
323 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
321 Highland Ave.	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
88 Crooks St	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
86 Crooks St	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
340 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
338 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
336 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
334 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
332 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
330 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
328 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
326 Highland Ave	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
324 Highland Ave.	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
24 Jessie	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
21 Jessie	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
19 Jessie	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
335 Bowen	Fort Erie	1	1	1	1	1	1	1	1	1	1	\$325,000
67 Leaside Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
11 Leaside Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
44 Leaside Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
50 Mccrae Dr.	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
53 New Leaf Cres	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
22 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
24 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
30 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
32 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
38 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
40 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
46 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
48 Silvan Dr	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
124 Elmview St	Welland	57	57	57	57	57	57	57	57	57	57	\$325,000
140 Elmview St	Welland	28	28	28	28	28	28	28	28	28	28	\$325,000
61 Woodcroft Cres	Welland	30	30	30	30	30	30	30	30	30	30	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
235 Fitch St W	Welland	29	29	29	29	29	29	29	29	29	29	\$325,000
211 King St	Welland	104	104	104	104	104	104	104	104	104	104	\$325,000
235 Fitch St E	Welland	0	67	67	67	67	67	67	67	67	67	\$325,000
292 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
294 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
300 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
302 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
308 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
310 Victory	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
316 Victory	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
318 Victory	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
324 Victory	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
326 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
332 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
334 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
340 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
342 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
348 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
350 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
293 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
295 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
301 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
303 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
309 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
311 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
317 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
319 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
325 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
327 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
333 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
335 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
341 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
343 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
349 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
351 Victory Ave	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
292 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
296 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
300 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
304 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
308 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
312 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
316 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
320 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
324 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
328 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
332 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
336 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
340 Gatfield	Welland	1	1	1	1	1	1	1	1	1	1	\$325,000
219-221 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
215-217 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
211-213 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
207-209 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
203-205 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
199-201 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
195-197 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
191-193 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
187-189 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
183-185 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
179-181 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
175-177 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
218-220 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
214-216 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
210-212 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
206-208 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
202-204 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
198-200 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
194-196 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
190-192 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
186-188 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
182-184 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
178-180 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
174-176 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
170-172 Mclaughlin St	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
272-274 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
262-264 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
252-254 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
242-244 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
232-234 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
222-224 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
212-214 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
202-204 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
301-303 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
291-293 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
281-283 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
271-273 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
261-263 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
251-253 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
241-243 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
231-233 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
221-223 Roach Ave	Welland	2	2	2	2	2	2	2	2	2	2	\$325,000
211-213 Roach Ave	Welland	2	2	2	2	2	2	2	0	0	0	\$325,000
201-203 Roach Ave	Welland	2	2	2	2	2	2	2	0	0	0	\$325,000
24-30 Dundonald St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
14-20 Dundonald Street	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
23 Christopher	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
8 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
16 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
24-30 Christpoher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
32-38 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
40-46 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
48-54 Chistopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
56-62 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
13-19 Dundonald Ave.	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
9-15 Christopher St.	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
17-23 Christopher	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
25-31 Christopher St	St Catharines	4	4	4	4	4	4	4	4	4	4	\$325,000
34 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
32 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
30 Powerview	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
28 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
29 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
27 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
19 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
17 Powerview Ave	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
26 Wallace	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
24 Wallace	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
25 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
23 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
21 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
19 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
17 Galbraith St.	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
15 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
13 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
11 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
9 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
7 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
28 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
26 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
24 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
22 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
20 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
18 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
16 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
14 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
12 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
10 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
8 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
6 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
4 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
2 Galbraith	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
13 Brackencrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
15 Brackencrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
1 Brackencrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
3 Brackencrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
9 Brackenrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
11 Brackenrest	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
69 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
67 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
72 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
70 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
48 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
46 Greenmaple	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
206 St. Augustine Dr.	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
204 St. Augustine Dr	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
190 St Augustine Dr	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
188 St Augustine Dr	St Catharines	1	1	1	1	1	1	1	1	1	1	\$325,000
59 Rykert	St Catharines	120	120	120	120	120	120	120	120	120	120	\$325,000
15 Gale Street	St Catharines	197	197	197	197	197	197	197	197	197	197	\$325,000
14 Centre St	St Catharines	133	133	133	133	133	133	133	133	133	133	\$325,000
45 Manchester	St Catharines	110	110	110	110	110	110	110	110	110	110	\$325,000
479A-CCarlton St	St Catharines	211	211	211	211	211	211	211	211	211	211	\$325,000
10 Old Pine Trails	St Catharines	80	80	80	80	80	80	80	80	80	80	\$325,000
436-442 Scott St	St Catharines	60	60	60	60	60	60	60	60	60	60	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
4520 Huron	Niagara Falls	73	73	73	73	73	73	73	73	73	73	\$325,000
4900 Buckley	Niagara Falls	200	200	200	200	200	200	200	200	200	200	\$325,000
3896-3980 Sinnicks	Niagara Falls	22	22	22	22	22	22	22	22	22	22	\$325,000
3874 Portage	Niagara Falls	120	120	120	120	120	120	120	120	120	120	\$325,000
5130 Portage	Niagara Falls	76	76	76	76	76	76	76	76	76	76	\$325,000
6603-6625 Kiwanis	Niagara Falls	48	48	48	48	48	48	48	48	48	48	\$325,000
6858-6868 Ailanthus	Niagara Falls	86	86	86	86	86	86	86	86	86	86	\$325,000
6938-7032 Ailanthus	Niagara Falls	40	40	40	40	40	40	40	40	40	40	\$325,000
6165 Mcleod Rd	Niagara Falls	27	27	27	27	27	27	27	27	27	27	\$325,000
7775 Jubilee Dr	Niagara Falls	58	58	58	58	58	58	58	58	58	58	\$325,000
6363 Arad	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6375 Arad	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6387 Arad	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6399 Arad	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
6411 Arad	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6362 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6374 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6386 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6398 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6410 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6956 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6966 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
6976 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6986 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7008 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7018 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7028 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7038 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
7062 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7072 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
7082 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7092 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7102 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
7112 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7122 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7132 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7144 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7168 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
7180 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
7194 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6322 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6332 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
6342 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6362 Hawkins St.	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6372 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6382 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6392 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6402 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6412 Hawkins St	Niagara Falls	1	1	1	1	1	1	1	0	0	0	\$325,000
6363 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6375 Skinner	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
6387 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6399 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6411 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6362 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6374 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
6386 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6398 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6410 Skinner	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6361 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6371 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6381 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6391 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6401 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6411 Churchill	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7037 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7047 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7057 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7067 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7077 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
7087 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
7097 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7107 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
7117 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7141 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7151 Dell Ave	Niagara Falls	1	1	1	1	1	1	0	0	0	0	\$325,000
7163 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7173 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7185 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
7195 Dell Ave	Niagara Falls	1	1	1	1	1	1	1	1	1	1	\$325,000
6902-6905 Warden	Niagara Falls	86	86	86	86	86	86	86	86	86	86	\$325,000
30 Robinson	Grimsby	55	55	55	55	55	55	55	55	55	55	\$325,000
4278 Queen	Lincoln	61	61	61	61	61	61	61	61	61	61	\$325,000
45 Ormond St	Thorold	29	29	29	29	29	29	29	29	29	29	\$325,000
557 Steele Street	Port Colborne	40	40	40	40	40	40	40	40	40	40	\$325,000



Description	Local Area Municipality	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/unit with land)
561 Steele Street	Port Colborne	43	43	43	43	43	43	43	43	43	43	\$325,000
709 King Street	Port Colborne	5	5	5	5	5	5	5	5	5	5	\$325,000
300 Davy Street	Niagara on the Lake	40	40	40	40	40	40	40	40	40	40	\$325,000
527 Carlton Street	St. Catharines	0	0	0	0	0	0	85	85	85	85	\$325,000
6388 Hawkins Street & 7180 Heximer	Niagara Falls	0	0	0	0	0	0	0	0	0	73	\$325,000
Total		2,706	2,773	2,773	2,773	2,773	2,773	2,851	2,835	2,835	2,908	



Niagara Region Service Standard Calculation Sheet
Housing Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Housing Units	\$2,706	\$2,773	\$2,773	\$2,773	\$2,773	\$2,773	\$2,851	\$2,835	\$2,835	\$2,908
Population	\$434,017	\$436,476	\$439,912	\$443,636	\$447,888	\$454,451	\$460,273	\$465,930	\$473,012	\$478,957
Per Capita Standard	0.0062	0.0064	0.0063	0.0063	0.0062	0.0061	0.0062	0.0061	0.0060	0.0061

Niagara Region Service Standard Calculation Sheet
Housing Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0062
Quality Standard	\$323,842
Service Standard	\$2,008

Niagara Region Service Standard Calculation Sheet
Housing Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$2,008
Eligible Amount	\$120,551,521



Niagara Region Service Standard Calculation Sheet
 Provincial Offences Act - Facilities
 Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
St.Catharines POA - 71 King Street St. Catharines - Leased	4,913	4,913	4,913	4,913	4,913	4,913	4,913	4,913	0	0	\$651	\$732
Welland POA - 3 Cross Street Welland - Leased	7,285	7,285	7,285	7,285	7,285	7,285	0	0	0	0	\$651	\$732
Niagara Falls POA - 4635 Queen Street Niagara Falls - Leased	7,024	7,024	7,024	7,024	7,024	7,024	0	0	0	0	\$651	\$732
200 Jarvis Street Fort Erie - Satellite office - License Agreement	2,400	2,400	2,400	2,400	2,400	2,400	0	0	0	0	\$651	\$732
New Welland POA - 445 East Main Street Welland - Owned	0	0	0	0	0	0	20,398	20,398	20,398	20,398	\$757	\$849
Total	21,622	21,622	21,622	21,622	21,622	21,622	25,311	25,311	20,398	20,398		



Niagara Region Service Standard Calculation Sheet
 Provincial Offences Act - Facilities
 Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	21,622	21,622	21,622	21,622	21,622	21,622	25,311	25,311	20,398	20,398
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0498	0.0495	0.0492	0.0487	0.0483	0.0476	0.0550	0.0543	0.0431	0.0426

Niagara Region Service Standard Calculation Sheet
 Provincial Offences Act - Facilities
 10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0488
Quality Standard	\$774
Service Standard	\$38

Niagara Region Service Standard Calculation Sheet
 Provincial Offences Act - Facilities
 Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$38
Eligible Amount	\$2,267,749



Niagara Region Service Standard Calculation Sheet
Public Health Facilities
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
St. Catharines Public Health Sexual Health Centre - 277 Welland Avenue St. Catharines - Leased	5,704	5,704	5,704	5,704	5,704	5,704	5,704	5,704	5,704	5,704	\$354	\$405
Welland Public Health Satellite Office/Sexual Health Centre - 200 Division Street Welland - Owned	18,030	18,030	18,030	18,030	18,030	18,030	18,030	18,030	18,030	18,030	\$422	\$480
Niagara Falls Public Health Satellite Office/Sexual Health Centre - 5710 Kitchener Street Niagara Falls - Leased	7,890	7,890	7,890	7,890	7,890	7,890	7,890	7,890	7,890	7,890	\$339	\$388
Fort Erie Public Health - 1264 Garrison Road Unit 12 - Leased	0	0	0	0	3,417	3,417	3,417	3,417	3,417	3,417	\$354	\$405
Community Mental Health Program - 3550 Schmon Parkway (Units 1 B and 2) Thorold - Leased	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	\$354	\$405
Public Health Main Office - 1815 Sir Isaac Brock Way Thorold - Owned	45,583	45,583	45,583	45,583	45,583	45,583	45,583	45,583	45,583	45,583	\$460	\$522
Niagara Falls Public Health - McLeod Square - Leased	0	0	0	0	0	0	0	0	21,528	21,528	\$315	\$362
Total	84,081	84,081	84,081	84,081	87,498	87,498	87,498	87,498	109,026	109,026		



Niagara Region Service Standard Calculation Sheet
Public Health Facilities
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	84,081	84,081	84,081	84,081	87,498	87,498	87,498	87,498	109,026	109,026
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.1937	0.1926	0.1911	0.1895	0.1954	0.1925	0.1901	0.1878	0.2305	0.2276

Niagara Region Service Standard Calculation Sheet
Public Health Facilities
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.1991
Quality Standard	\$476
Service Standard	\$95

Niagara Region Service Standard Calculation Sheet
Public Health Facilities
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$95
Eligible Amount	\$5,686,483



Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots
Sq.ft. of Building Area

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) - Office	19,896	19,896	19,896	19,896	19,896	19,896	19,896	19,896	19,896	19,896	\$324	\$357
4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) - Plant	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	\$324	\$357
4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) - Scalehouse	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	\$46	\$51
4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) - Starlight facility	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	\$81	\$89
4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) - Glass Storage	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	\$103	\$114



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Building Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Walkers Environmental Organics Facilities: - Receiving Building	19,640	19,640	19,640	19,640	19,640	19,640	19,640	19,640	19,640	19,640	\$324	\$357
Walkers Environmental Organics Facilities: - Composting Pad Building	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	\$324	\$357
Walkers Environmental Organics Facilities: - Composting Operations Office	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	\$324	\$357
Total	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736		
Percentage attributable to Eligible Portion	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Total Eligible Portion of Facilities	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736		



Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Sq.ft.	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.5754	0.5722	0.5677	0.5629	0.5576	0.5495	0.5426	0.5360	0.5280	0.5214

Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.5513
Quality Standard	\$338
Service Standard	\$187

Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$187
Eligible Amount	\$11,203,050



Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots Land
Acres of Land

Description	Property Serviced/ Un-Serviced	Percentage Attributed to Diversion	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Acre)
Humberstone: - Shared Area	Un-Serviced	70%	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	\$100,000
Humberstone: - Asphalt Shingles Pile	Un-Serviced	100%	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	\$100,000
Humberstone: - Wood Chip Pile	Un-Serviced	100%	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	\$100,000
Humberstone: - Reusable Goods Drop-Off Depot	Un-Serviced	100%	0.00	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	\$100,000
Humberstone: - Household Hazardous Waste	Un-Serviced	100%	0.00	0.00	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	\$100,000
Niagara Road 12: Shared Area-Leaf/yard composting	Un-Serviced	100%	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	\$100,000
Niagara Road 12: Shared Area - Drop-Off Depot	Un-Serviced	70%	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	\$100,000
Niagara Road 12: Shared Area - Household Hazardous Waste	Un-Serviced	100%	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	\$100,000
Niagara Road 12: Shared Area - Wood Chip Pile	Un-Serviced	70%	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	\$100,000
Niagara Road 12: Shared Area - Asphalt Shingles Area	Un-Serviced	100%	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	\$100,000
Bridge Street: Shared Area - Leaf/yard composting	Serviced	100%	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	\$200,000
Bridge Street: Shared Area - Recycle Drop off Area	Serviced	70%	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	\$200,000



Description	Property Serviced/ Un-Serviced	Percentage Attributed to Diversion	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Acre)
Bridge Street: Shared Area - Asphalt Shingles Area	Serviced	100%	0.00	0.00	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	\$200,000
Bridge Street: Shared Area - Wood Chip Pile	Serviced	70%	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	\$200,000
Thorold - Household Hazardous Waste	Un-Serviced	100%	0.00	0.00	0.00	0.89	0.89	0.89	0.89	0.89	0.89	0.89	\$100,000
4935 Kent Avenue - Materials Recycling Centre (MRF)	Serviced	100%	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	\$200,000
Walkers Environmental Organics Facilities	Un-Serviced	100%	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.10	\$100,000
Walkers Drop off Depot - Leaf and Yard Drop-off		10%	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$50,000
Walkers Drop off Depot - Recycle Drop-off Area		50%	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	\$50,000
Total		blank	59.77	59.99	59.99	61.40	61.40	61.40	61.40	61.40	61.40	61.40	



Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots Land
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Acre	59.77	59.99	59.99	61.40	61.40	61.40	61.40	61.40	61.40	61.40
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00013	0.00013	0.00013	0.00013

Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots Land
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0001
Quality Standard	\$192,900
Service Standard	\$19

Niagara Region Service Standard Calculation Sheet
Waste Diversion Facilities – Stations/Depots Land
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$19
Eligible Amount	\$1,158,191



Niagara Region Service Standard Calculation Sheet
Waste Diversion Vehicles and Equipment
Number of Vehicles and Equipment

Description	Waste Diversion Share	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Production Rolling Stock Equipment Inventory: Skid Steer Loader	100%	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$80,100
Production Rolling Stock Equipment Inventory: Forklift - 1	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	\$66,700
Production Rolling Stock Equipment Inventory: Rotating Clamp for Forklift	100%	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	\$36,500
Production Rolling Stock Equipment Inventory: Snorkel Lift	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$53,400
Production Rolling Stock Equipment Inventory: Walkie Pallet Lfft	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$13,300
Production Rolling Stock Equipment Inventory: Forklift - Glass Operation	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	\$80,100
Emterra Vehicles: Freightliner - SLSPL	100%	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	0.0	\$124,500
Emterra Vehicles: Freightliner- RLSPL	40%	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	0.0	\$124,500
Emterra Vehicles: Freightliner- RLSPL	40%	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0	\$217,800
GFL Vehicles: Dual Stream Rear Loader - Spare	75%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	\$385,000
GFL Vehicles: Single Stream Rear Loader - Spare	50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	\$385,000
GFL Vehicles: LABRIE LEACH 2R-III - single stream org or garbage	50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	\$385,000
GFL Vehicles: LABRIE LEACH SPLIT - G/O	40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6	\$385,000



Description	Waste Diversion Share	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
GFL Vehicles: LABRIE EXPERT Side Load - recycling carts	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	\$385,000
GFL Vehicles: Heil 25y RL dual stream - REC	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	14.0	\$385,000
GFL Vehicles: 2020 FORD F150 PICKUP - supervisor trucks	75%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	\$60,000
Miller Vehicles: MCNEILUS .Rear Load.Bulk/Leaf and Yard/Organics/Waste	50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5	\$300,000
Miller Vehicles: MCNEILUS .Split Rear Load.Recycling	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	23.0	\$300,000
Miller Vehicles: FANOTECH.Split Rear Load.Waste and Organics/Recycling	40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	\$300,000
Miller Vehicles: SHUPAK.Dual Stream Side Load.Organic/Medical/Diaper	60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2	\$300,000
Miller Vehicles: LABRIE.TL.Multi Residential Recycling	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	\$300,000
Miller Vehicles: MCNEILUS .FEL.Multi Residential Waste/OCC	10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	\$300,000
Miller Vehicles: Supervisor Vehicles	75%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	\$60,000
Walkers Environmental Organics Facilities: Loaders: 2014, Volvo L90G	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$472,900
Walkers Environmental Organics Facilities: Loaders: 2015, Volvo L110H	100%	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	\$497,800
Walkers Environmental Organics Facilities: Tractors: 2010, New Holland T1530	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$80,900
Walkers Environmental Organics Facilities: Tractors: 2020, Hitachi ZW50	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	\$87,100



Description	Waste Diversion Share	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Walkers Environmental Organics Facilities: Water Truck: 1989, Mack RB688 SerVan	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$155,600
Walkers Environmental Organics Facilities: Slow Speed Shredder: 2019 Doppstadt DW3060K	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	\$995,600
Walkers Environmental Organics Facilities: Screening Plants: 2005 McCloskey 621REHL Screen	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$435,600
Walkers Environmental Organics Facilities: Screening Plants: 2018 McCloskey Screen 628REG	100%	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	\$435,600
Walkers Environmental Organics Facilities: Windrow Turner: 020, Backhus	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	\$840,100
Niagara Region Residential Drop-off Depots: Roll-off Trucks: Trucks used at Landfills	40%	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	\$285,000
Niagara Region Residential Drop-off Depots: Roll-off Containers (40 yard bins): Bridge Street Landfill (Fort Erie)	100%	0.0	0.0	0.0	0.0	0.0	8.0	8.0	8.0	8.0	8.0	\$19,000
Niagara Region Residential Drop-off Depots: Humberstone Landfill (Welland)	100%	0.0	0.0	0.0	0.0	0.0	12.0	12.0	12.0	12.0	12.0	\$19,000
Niagara Region Residential Drop-off Depots: Niagara Road 12 Landfill (West Lincoln)	100%	0.0	0.0	0.0	0.0	0.0	7.0	7.0	7.0	7.0	7.0	\$19,000
Walkers Drop off Depot Contract: Loaders: 2013 CAT 930K	50%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	\$400,000
Walkers Drop off Depot Contract: Roll-off Containers 40 - 60 yard bins	100%	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$19,000



Description	Waste Diversion Share	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/Vehicle)
Total		63.5	64.3	65.3	65.3	65.3	95.3	96.3	97.3	170.7	122.9	

Niagara Region Service Standard Calculation Sheet
Waste Diversion Vehicles and Equipment
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Vehicles and Equipment	63.5	64.3	65.3	65.3	65.3	95.3	96.3	97.3	170.7	122.9
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0004	0.0003

Niagara Region Service Standard Calculation Sheet
Waste Diversion Vehicles and Equipment
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0002
Quality Standard	\$167,100
Service Standard	\$33

Niagara Region Service Standard Calculation Sheet
Waste Diversion Vehicles and Equipment
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$33
Eligible Amount	\$2,006,570



Niagara Region Service Standard Calculation Sheet
Waste Diversion Other
Number of Other Items

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Material Recovery Facility Equipment: Fibre Processing Line: In-Feed Metering Conveyor (M1)	1	1	1	1	1	1	1	1	1	1	\$63,500
Material Recovery Facility Equipment: Fibre Processing Line: Inclined Feed Conveyor (M2)	1	1	1	1	1	1	1	1	1	1	\$125,700
Material Recovery Facility Equipment: Fibre Processing Line: Metering Drum	1	1	1	1	1	1	1	1	1	1	\$49,800
Material Recovery Facility Equipment: Fibre Processing Line: Pre-Sort Area Sort Conveyor (M3)	1	1	1	1	1	1	1	1	1	1	\$94,600
Material Recovery Facility Equipment: Fibre Processing Line: OCC Disc Screen (M4)	1	1	1	1	1	1	1	1	1	1	\$314,900
Material Recovery Facility Equipment: Fibre Processing Line: OCC Unders Collection/Transfer Conveyor to ONP Screen (M5, M6, M7)	1	1	1	1	1	1	1	1	1	1	\$150,600
Material Recovery Facility Equipment: Fibre Processing Line: Fibre Line Secondary Sort Conveyors (M8, M9, M10)	1	1	1	1	1	1	1	1	1	1	\$125,700



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Material Recovery Facility Equipment: Fibre Processing Line: Suspended Magnets (above M9 & M9 conveyors)	0	0	0	0	0	0	1	1	1	1	\$116,600
Material Recovery Facility Equipment: Fibre Processing Line: Fibre Line Secondary Sort Elevated Platforms, Chutes, Stairs/walkways	1	1	1	1	1	1	1	1	1	1	\$189,200
Material Recovery Facility Equipment: Fibre Processing Line: Other - pit plates closing for conveyor, hydraulic bunker doors, etc.	1	1	1	1	1	1	1	1	1	1	\$125,700
Material Recovery Facility Equipment: Fibre Processing Line: Newspaper Sort Conveyor (M205)	1	1	1	1	1	1	1	1	1	1	\$94,600
Material Recovery Facility Equipment: Fibre Processing Line: Reversible OCC/OBB Transfer Conveyor (M218)	1	1	1	1	1	1	1	1	1	1	\$94,600
Material Recovery Facility Equipment: Fibre Processing Line: Newspaper Transfer Conveyor (M208)	1	1	1	1	1	1	1	1	1	1	\$49,800
Material Recovery Facility Equipment: Fibre Processing Line: Newspaper Transfer Conveyors (M206, M207)	1	1	1	1	1	1	1	1	1	1	\$49,800
Material Recovery Facility Equipment: Fibre Processing Line: OCC/OBB Transfer Conveyors (M214, M215, M216, M217)	1	1	1	1	1	1	1	1	1	1	\$125,700



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Material Recovery Facility Equipment: Fibre Processing Line: Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways	1	1	1	1	1	1	1	1	1	1	\$754,200
Material Recovery Facility Equipment: Fibre Processing Line: Electrical Controls	1	1	1	1	1	1	1	1	1	1	\$251,400
Material Recovery Facility Equipment: Fibre Processing Line: Electrical and Mechanical Installation	1	1	1	1	1	1	1	1	1	1	\$628,500
Material Recovery Facility Equipment: Fibre Processing Line: Drum Feeder	0	0	0	0	0	0	0	0	1	1	\$424,600
Fibre Baling System: Inclined Baler Feed Conveyor	1	1	1	1	1	1	1	1	1	1	\$314,900
Fibre Baling System: Baler (Nexgen model 2R-310W-84, 2 ram)	1	1	1	1	1	1	1	1	1	1	\$817,700
Fibre Optical Sorting System: Discharge Conveyor Under OCC Separator & Splitter Roller (C10)	0	0	0	1	1	1	1	1	1	1	\$49,800
Fibre Optical Sorting System: Splitter Conveyor (C20)	0	0	0	1	1	1	1	1	1	1	\$33,600
Fibre Optical Sorting System: Incline Conveyor (C30)	0	0	0	1	1	1	1	1	1	1	\$52,300
Fibre Optical Sorting System: Vibratory Feeder (C40)	0	0	0	1	1	1	1	1	1	1	\$144,400
Fibre Optical Sorting System: Accelerator Conveyor (C50)	1	1	1	1	1	1	1	1	1	1	\$66,000
Fibre Optical Sorting System: Titech Optical Sorter (C60)	0	0	0	1	1	1	1	1	1	1	\$515,200



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Fibre Optical Sorting System: Incline Conveyor (C80)	0	0	0	1	1	1	1	1	1	1	\$47,300
Fibre Optical Sorting System: Vibratory Feeder (C90)	0	0	0	1	1	1	1	1	1	1	\$144,400
Fibre Optical Sorting System: Bollegraaf Air Booster	0	0	0	0	0	0	0	0	2	2	\$71,000
Fibre Optical Sorting System: Accelerator Conveyor (C100)	0	0	0	1	1	1	1	1	1	1	\$66,000
Fibre Optical Sorting System: Titech Optical Sorter (C110)	0	0	0	1	1	1	1	1	1	1	\$515,200
Fibre Optical Sorting System: Discharge Conveyor (C120)	0	0	0	1	1	1	1	1	1	1	\$49,800
Fibre Optical Sorting System: Discharge Conveyor (C130)	0	0	0	1	1	1	1	1	1	1	\$49,800
Fibre Optical Sorting System: Transfer Conveyor (C140)	0	0	0	1	1	1	1	1	1	1	\$83,400
Fibre Optical Sorting System: Transfer Conveyor (C150)	0	0	0	1	1	1	1	1	1	1	\$77,200
Fibre Optical Sorting System: Elevated Platforms, Stairways and Walkways	0	0	0	1	1	1	1	1	1	1	\$125,700
Fibre Optical Sorting System: Electrical Controls	0	0	0	1	1	1	1	1	1	1	\$251,400
Fibre Optical Sorting System: Electrical and Mechanical Installation	0	0	0	1	1	1	1	1	1	1	\$502,800
Air Compressor System for Fibre & Container Optical: S150 Boge Screw Compressors	0	0	0	0	2	2	2	2	2	2	\$125,700



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Air Compressor System for Fibre & Container Opticals: Aircell 600 Desiccant Air Dryer	0	0	0	0	1	1	1	1	1	1	\$18,700
Air Compressor System for Fibre & Container Opticals: Tanks and Filtration	0	0	0	0	1	1	1	1	1	1	\$24,900
Air Compressor System for Fibre & Container Opticals: HVAC Compressor Room Ventilation and Ducting	0	0	0	0	1	1	1	1	1	1	\$63,500
Air Compressor System for Fibre & Container Opticals: Air Lines to Optical Sorters / Compressor Room Installation / Electrical	0	0	0	0	1	1	1	1	1	1	\$150,600
Container Processing Line: Horizontal Feed Conveyor (C15)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Inclined Feed Conveyor (C16)	1	1	1	1	1	1	1	1	1	1	\$125,700
Container Processing Line: Pre-Sort Area Sort Conveyor (C17)	1	1	1	1	1	1	1	1	1	1	\$105,800
Container Processing Line: Container Transfer Conveyor (C18)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Steel Can Transfer Conveyor (C101A)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Cross Belt Ferrous Separator (M101A & M101B)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Glass Breaker Screen (GBS102 A,B & C)	1	1	1	1	1	1	1	1	1	1	\$189,200
Container Processing Line: Glass Cleanup Vacuum System	1	1	1	1	1	1	1	1	1	1	\$62,200



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Container Processing Line: Broken Glass Conveyor (C105)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Plastic Perforator (PP103 A & B)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Fine Disc Screen (DS104)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Container Transfer Conveyor (C106)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Light Suction / Mesh Conveyor (C107)	1	1	1	1	1	0	0	0	0	0	\$94,600
Container Processing Line: Light Transfer Conveyor (C108)	1	1	1	1	1	0	0	0	0	0	\$37,300
Container Processing Line: Container Transfer Conveyor (C109)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Film, Fibre and Metal Sort Conveyor (C110)	1	1	1	1	1	1	1	1	1	1	\$75,900
Container Processing Line: Plastic Bag Air Vacuum	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Optical Speed Conveyor (C111)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Pellenc Optical Sorter (OPT112)	1	1	1	1	1	1	1	1	1	1	\$566,300
Container Processing Line: Split PET & Mixed Plastic QC Conveyor (C113A)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Reversible PET Transfer Conveyor (C114)	1	1	1	1	1	1	1	1	1	1	\$37,300
Container Processing Line: Reversible Mixed Plastic Transfer Conveyor (C115)	1	1	1	1	1	1	1	1	1	1	\$37,300



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Container Processing Line: Transfer Conveyor (C116)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Transfer Conveyor (C117)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Transfer Conveyor (C118)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Container Sorting Conveyor (C119)	1	1	1	1	1	1	1	1	1	1	\$58,000
Container Processing Line: Eddy Current Sort System (C120)	0	0	0	0	0	1	1	1	1	1	\$62,200
Container Processing Line: Eddy Current Rotor (M25A) and Conveyor (M25B)	0	0	1	1	1	1	1	1	1	1	\$150,600
Container Processing Line: Aluminum Silo Blower (AB27)	1	1	1	1	1	1	1	1	1	1	\$63,500
Container Processing Line: Residue Transfer Conveyor (M26)	1	1	1	1	1	1	1	1	1	1	\$49,800
Container Processing Line: Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways	1	1	1	1	1	1	1	1	1	1	\$377,100
Container Processing Line: Electrical Controls	1	1	1	1	1	1	1	1	1	1	\$251,400
Container Processing Line: Electrical and Mechanical Installation	1	1	1	1	1	1	1	1	1	1	\$378,240
Container Processing Line: Drum Feeder	0	0	0	0	0	0	0	0	0	1	\$378,240
Container and OCC Baling System: Reclaim Conveyor	1	1	1	1	1	1	1	1	1	1	\$314,900
Container and OCC Baling System: Inclined Baler Feed Conveyor	1	1	1	1	1	1	1	1	1	1	\$440,600



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Container and OCC Baling System: Elevated Quality Control Sorting Station	1	1	1	1	1	1	1	1	1	1	\$37,300
Container and OCC Baling System: Baler (IPS model TR-1388-LH-200 with pre-compression lid)	1	1	1	1	1	1	1	1	1	1	\$1,257,000
Container and OCC Baling System: Used Dust Collector	0	0	0	0	0	0	0	0	1	1	\$50,000
Container and OCC Baling System: Other - transition chutes, pit plates, etc.	1	1	1	1	1	1	1	1	1	1	\$94,600
Plant Bunker Containment Walls: Polystyrene Densifer System: Feed Conveyor	0	0	0	1	1	1	1	1	1	1	\$75,900
Plant Bunker Containment Walls: Polystyrene Densifer System: Sort Conveyor and Sort Platform	0	0	0	1	1	1	1	1	1	1	\$88,400
Plant Bunker Containment Walls: Polystyrene Densifer System: Crusher	0	0	0	1	1	1	1	1	1	1	\$37,300
Plant Bunker Containment Walls: Polystyrene Densifer System: Blower	0	0	0	1	1	1	1	1	1	1	\$24,900
Plant Bunker Containment Walls: Polystyrene Densifer System: Compactor	0	0	0	1	1	1	1	1	1	1	\$63,500
Glass Processing System: Feed Hopper	1	1	1	1	1	1	1	1	1	1	\$12,400
Glass Processing System: Conveyor C-1 Sort Conveyor	1	1	1	1	1	1	1	1	1	1	\$18,700
Glass Processing System: Sort Platform	1	1	1	1	1	1	1	1	1	1	\$6,300
Glass Processing System: Magnetic Separator	1	1	1	1	1	1	1	1	1	1	\$37,300



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Glass Processing System: Kongskilde Air Separation System	1	1	1	1	1	1	1	1	1	1	\$49,800
Glass Processing System: Primary Grinder	1	1	1	1	1	1	1	1	1	1	\$94,600
Glass Processing System: Conveyor C-2	1	1	1	1	1	1	1	1	1	1	\$18,700
Glass Processing System: 3/4" Trommel Screen	1	1	1	1	1	1	1	1	1	1	\$24,900
Glass Processing System: 3/4" Scalping Screen	1	1	1	1	1	1	1	1	1	1	\$24,900
Glass Processing System: Fluidized Bed and Gas Trane/Heater	1	1	1	1	1	1	1	1	1	1	\$502,800
Glass Processing System: Intersystems Bucket Elevator	0	0	1	1	1	1	1	1	1	1	\$43,600
Glass Processing System: Aspirator	0	0	1	1	1	1	1	1	1	1	\$18,900
Glass Processing System: Cyclone and Airlock	0	0	1	1	1	1	1	1	1	1	\$31,100
Glass Processing System: Fan	1	1	1	1	1	1	1	1	1	1	\$11,300
Glass Processing System: Bucket Elevator	1	1	1	1	1	1	1	1	1	1	\$94,600
Glass Processing System: Five Deck 5x10 Screen	1	1	1	1	1	0	0	0	0	0	\$125,700
Glass Processing System: Gyra-Vib Low Profile Separator	1	1	1	1	1	1	1	1	1	1	\$12,400
Glass Processing System: Gyra-Vib Low Profile Separator	1	1	1	1	1	1	1	1	1	1	\$12,400
Glass Processing System: Vibratory Feeders	3	3	3	3	3	3	3	3	3	3	\$18,700
Glass Processing System: Mini-Aspirator	1	1	1	1	1	1	1	1	1	1	\$12,400



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Glass Processing System: Secondary Grinder	1	1	1	1	1	1	1	1	1	1	\$125,700
Glass Processing System: Five Deck 5x10 Screen	1	1	1	1	1	1	1	1	1	1	\$77,200
Glass Processing System: Dust Collection Unit	1	1	1	1	1	1	1	1	1	1	\$94,600
Glass Processing System: Dust Collection System for Labels	1	1	1	1	1	1	1	1	1	1	\$49,800
Glass Processing System: Supersac Support Stands	1	1	1	1	1	1	1	1	1	1	\$6,300
Glass Processing System: Electric Chain Hoist	1	1	1	1	1	1	1	1	1	1	\$3,700
Glass Processing System: Air Compressor - Piston	1	1	1	1	1	1	1	1	1	1	\$12,600
Glass Processing System: Air Compressor - Screw	1	1	1	1	1	1	1	1	1	1	\$24,900
Glass Processing System: Dryer for Air Compressor	1	1	1	1	1	1	1	1	1	1	\$6,300
Glass Processing System: Packaging Sealer	1	1	1	1	1	1	1	1	1	1	\$12,400
Glass Processing System: Packaging Conveyor	1	1	1	1	1	1	1	1	1	1	\$6,300
Glass Processing System: Packaging Bagger	1	1	1	1	1	1	1	1	1	1	\$18,900
Glass Processing System: Supersac Scale: 36" x 36"	1	1	1	1	1	1	1	1	1	1	\$4,400
Glass Processing System: Supersac Scale: 48" x 48"	1	1	1	1	1	1	1	1	1	1	\$2,500



Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 Value (\$/item)
Glass Processing System: Shrink wrapper	1	1	1	1	1	1	1	1	1	1	\$12,600
Glass Processing System: Elevated Platforms, Chutes, Silos, Stairways and Walkways	1	1	1	1	1	1	1	1	1	1	\$251,400
Glass Processing System: Electrical Controls	1	1	1	1	1	1	1	1	1	1	\$251,400
Glass Processing System: Electrical and Mechanical Installation	1	1	1	1	1	1	1	1	1	1	\$440,600
Total	93	93	97	118	124	122	123	123	127	128	
Percentage attributable to Eligible Portion	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total Eligible Portion of Facilities	93	93	97	118	124	122	123	123	127	128	



Niagara Region Service Standard Calculation Sheet
Waste Diversion Other Items
Per Capita Standard

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Number of Other Items	93	93	97	118	124	122	123	123	127	128
Population	434,017	436,476	439,912	443,636	447,888	454,451	460,273	465,930	473,012	478,957
Per Capita Standard	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003

Niagara Region Service Standard Calculation Sheet
Waste Diversion Other Items
10-year Average Service Standard

10 Year Average	2012 to 2021
Quantity Standard	0.0003
Quality Standard	\$111,467
Service Standard	\$33

Niagara Region Service Standard Calculation Sheet
Waste Diversion Other Items
Forecast D.C. Service Standard Cap

D.C. Amount (before deductions)	10 Year
Forecast Population	60,041
\$ per Capita	\$33
Eligible Amount	\$2,007,771



Appendix C

Long-Term Capital and Operating Cost Examination



Appendix C: Long-Term Capital and Operating Cost Examination

Regional Municipality of Niagara Annual Capital and Operating Cost Impact

As a requirement of the *Development Charges Act, 1997*, as amended, 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 development charge. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost savings attributable to economies of scale or cost sharing where applicable and prorate the cost on a per unit basis (i.e. sq.ft. of building space, per vehicle, etc.). This was undertaken through a review of the Region’s approved 2020 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 lifecycle cost. By definition, lifecycle 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 lifecycle 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:

Table C-1
Regional Municipality of Niagara
Lifecycle Cost Factors and Average Useful Lives

Asset Type	Average Useful Life	Lifecycle Factor
Water and Wastewater Other	80	0.00516
Water and Wastewater Facilities	60	0.00877
Housing Facilities	50	0.01182
Facilities	40	0.01656



Asset Type	Average Useful Life	Lifecycle Factor
Waste Diversion Vehicles and Equipment	25	0.03122
PW Vehicles and Equipment	10	0.09133
Police and Ambulance Vehicles and Equipment	7	0.13451

Table C-2 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-2
Regional Municipality of Niagara
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE/CLASS OF SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1.1 Wastewater Treatment plants & Sewers	810,532,753	20,188,379	25,377,737	45,566,116
2.1 Water Treatment, storage and distribution systems	481,395,915	11,467,530	12,472,843	23,940,373
3.1 Services Related to a Highway - Roads and Related	756,578,961	27,390,056	12,917,904	40,307,960
4.1 Public Works Facilities and Fleet - Services Related to a Highway	11,370,000	519,353	1,389,424	1,908,777
4.2 Public Works Facilities and Fleet - Water Services	1,770,000	187,188	216,296	403,484
4.3 Public Works Facilities and Fleet - Wastewater Services	1,770,000	187,188	216,296	403,484
5.1 Policing Services - Facilities, vehicles and equipment, small equipment and gear	20,593,841	807,329	46,691,464	47,498,793
6.1 Growth Studies - Policing Services	232,100	0	0	0
6.2 Growth Studies - Services Related to a Highway	855,300	0	0	0
6.3 Growth Studies - Public Works	231,900	0	0	0
6.4 Growth Studies - Public Health	226,500	0	0	0
6.5 Growth Studies - P.O.A. including by-law Enforcement Services	226,500	0	0	0
6.6 Growth Studies - Ambulance Services	228,900	0	0	0
6.7 Growth Studies - Long-term Care Services	237,300	0	0	0
6.8 Growth Studies - Housing Services	242,700	0	0	0
6.9 Growth Studies - Child Care and Early Years Programs and Services	226,500	0	0	0
6.10 Growth Studies - Waste Diversion Services	227,900	0	0	0
6.11 Growth Studies - Water Supply Services	1,205,800	0	0	0
6.12 Growth Studies - Wastewater Services	1,288,200	0	0	0
7.1 Long-term Care Services - Facilities, vehicles and equipment	40,296,674	1,005,284	14,235,258	15,240,542
8.1 Public Health Services - Facilities	0	0	0	0



SERVICE/CLASS OF SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
9.1 Provincial Offences Act - Facilities	0	0	0	0
10.1 Ambulance Services - Ambulance facilities, vehicles and equipment	63,301,227	2,641,185	8,099,196	10,740,381
11.1 Housing Services - Facilities	70,096,475	1,970,979	1,136,798	3,107,777
12.1 Waste Diversion - Waste diversion facilities, vehicles, equipment and other	6,357,662	380,686	4,242,634	4,623,320
Total	2,269,493,109	66,745,157	126,995,850	193,741,007



Appendix D

D.C. Reserve Fund Policy



Appendix D: D.C. Reserve Fund Policy

D.1 Legislative Requirements

The *Development Charges Act, 1997*, as amended (D.C.A.) requires development charge (D.C.) collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the D.C.A. 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, however, allows services to be grouped into categories of services for reserve fund (and credit) purposes, and for classes of services to be established.
- The municipality shall pay each D.C. 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) 2-7).
- 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 used as an interim financing source for capital undertakings for which D.C.s 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 asset's 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 D.C.s, 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 the beginning of the year, given in the year, and outstanding at the end of the year by the 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.

Recent changes arising from Bill 109 (More Homes for Everyone Act, 2022) provide that the Council shall make the statement available to the public by posting the statement on the website or, if there is no such website, in the municipal office and that other posting requirements may be provided in the regulations. As of April 24, 2022 no regulations have been provided.

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 7 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 D.C. may be spent.



Figure 1
Niagara Region
Annual Treasurer's Statement of Development Charge Reserve Funds

Description	Services to which the Development Charge Relates													Total	
	Services Related to a Highway	Public Works (Facilities and Fleet)	Water Services	Wastewater Services	Policing Services	Growth Studies	Long-term Care Services	Child Care and Early Years Programs	Provincial Offences Act	Public Health Services	Ambulance Services	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	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	0	0	0
Closing Balance, December 31, _____	0	0	0	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
Niagara Region**

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			Other Reserve/Reserve Fund Draws	Tax Supported Operating Fund Contributions	Rate Supported Operating Fund Contributions	Debt Financing	Grants, Subsidies Other Contributions
		D.C. Reserve Fund Draw	D.C. Debt Financing	Grants, Subsidies Other Contributions	Post-Period Benefit/ Capacity Interim Financing	Grants, Subsidies Other Contributions						
Services Related to a Highway												
Capital Cost A												
Capital Cost B												
Capital Cost C												
Sub-Total - Services Related to Highways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Services												
Capital Cost D												
Capital Cost E												
Capital Cost F												
Sub-Total - Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wastewater Services												
Capital Cost G												
Capital Cost H												
Capital Cost I												
Sub-Total - Wastewater	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Amount Transferred to Operating (or Other) Funds - Operating Fund Transactions

Operating Fund Transactions	Annual Debt Repayment Amount	D.C. Reserve Fund Draw		Post D.C. Forecast Period			Non-D.C. Recoverable Cost Share		
		Principal	Interest	Principal	Interest	Source	Principal	Interest	Source
Services Related to a Highway									
Capital Cost J									
Capital Cost K									
Capital Cost L									
Sub-Total - Services Related to a Highway	\$0	\$0	\$0	\$0	\$0		\$0	\$0	
Water Services									
Capital Cost M									
Capital Cost N									
Capital Cost O									
Sub-Total - Water	\$0	\$0	\$0	\$0	\$0		\$0	\$0	
Wastewater Services									
Capital Cost P									
Capital Cost Q									
Capital Cost R									
Sub-Total - Wastewater	\$0	\$0	\$0	\$0	\$0		\$0	\$0	



Attachment 2
Niagara Region
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

Water and Wastewater Services

The following guideline sets out, in general, the range of infrastructure for water and wastewater services that constitutes a development charge project vs. sub-divider/developer responsibilities.

1) Watermains

(i) Related to a specific development(s)

Watermains internal to a specific development(s), as well as external watermains (generally less than 400 mm in size) to be connected to an existing local/regional main are considered to be the developer's responsibility through a development agreement with the local municipality.

(ii) Unrelated to a specific development (transmission mains, regional distribution mains and inter-municipal mains)

Regional trunk watermains are transmission mains intended to primarily connect a well or treatment facility with a storage reservoir (generally 400 mm in size or greater). Occasionally, Regional mains (usually less than 400 mm in size) perform as an inter-municipal main or distribution mains, resulting from a joint venture project with a local municipality. All such mains, when not constructed for a specific development(s), are considered to be development charge projects in whole or part.

2) Booster Stations and Reservoirs

(i) Related to a specific development(s)

Temporary or permanent water booster pumping stations servicing a specific development(s) are considered to be the developer's responsibility through a development agreement with the local municipality.



(ii) Unrelated to a specific development (associated with a Regional reservoir operation)

Water booster pumping stations not servicing a specific development(s) and relating to the operation of a reservoir facility are considered to be development charge projects.

3) Chlorination Facilities

New or upgraded chlorination facilities will be considered to be development charge projects.

4) Wastewater Mains

(i) Related to a specific development(s)

Wastewater mains internal to a specific development(s), as well as external sewers with an ultimate capacity of less than 170 l/s peak dry weather flow (generally less than 600 mm in size) to connect a development to an existing local/regional main are considered to be the developer's responsibility through a development agreement with the local municipality.

(ii) Unrelated to a specific development(s)

Regional trunk wastewater mains having a peak dry weather flow capacity of 170 l/s or greater (generally 600 mm in size or greater) or 85 l/s for inter-municipal mains, are considered to be development charge projects.

5) Lift Stations

(i) Related to a specific development(s)

Temporary or permanent lift stations intended to service a specific development(s) or Secondary Plan with an ultimate capacity of less than 170 l/s peak dry weather flow and fed by wastewater mains that are the responsibility of the developer(s), are considered to be the developer's responsibility through a development agreement with the local municipality (not Regional development charge projects).



(ii) Unrelated to a specific development

New or upgraded lift stations are considered to be development charge projects.

6) Noise and Odour Control Abatement Measures

(i) Related to a specific development(s)

All noise and odour control abatement measures to comply with M.O.E.C.P. requirements and/or other engineering design standards are considered to be the developer's responsibility through an agreement with the local municipality and/or provisions of the Planning Act.

(ii) Unrelated to a specific development(s)

New or upgraded noise and/or odour control facilities unrelated to a specific development are considered to be development charge projects.

7) Treatment Facilities

New or upgraded water or wastewater treatment facilities are considered to be development charge projects.

8) Land Acquisition

(including right-of-way, utility easements and building setbacks)

(i) Related to a specific development(s)

a) All land acquisition associated with providing access right-of-ways and utility easements to new or existing Regional facilities, as well as property intended to accommodate the necessary building setbacks from Regional facilities, as per M.O.E.C.P. requirements and/or other engineering design standards, are considered to be the developer's responsibility through the Planning Act and/or development agreement with the local municipality.



- b) Land acquisitions deemed excessive are considered to be development charge projects (normally included as part of the capital works project).

(ii) Unrelated to a specific development(s)

Land acquisition for Regional facilities and utilities unrelated to a specific development(s) will be considered to be development charge projects.

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regard to, among other factors, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, changes in policy regarding Regional and local municipality responsibility and subsection 59(2) of the D.C.A.

Services Related to a Highway

The following guideline sets out, in general, the range of infrastructure for Services Related to a Highway that constitutes development charge projects.

ROAD RELATED WORKS

1) Arterial, Collector and Other Roads

(i) Related to a Specific Development(s)

- a) All new roads, other than arterials internal to a development, as well as those primarily acting as a connection serving a development, are considered to be the developer's responsibility through a development agreement with the local municipality.
- b) New or upgraded Regional arterial and collector roads necessitated by abutting or nearby development(s) are considered to be the developer's responsibility through an agreement with the Region.



(ii) Unrelated to a Specific Development(s)

New or upgraded arterial and collector Regional roads necessitated by increased traffic volumes and unrelated (and not abutting) to a specific development are considered to be development charge projects.

2) Traffic Signals and Intersection Improvements

(i) Related to a Specific Development(s)

Intersection improvements to and/or signalization of all roads, private entrances or entrances to specific developments necessitated by abutting or nearby development(s) and relating to Regional arterial or collector roads are considered to be the developer's responsibility through an agreement with the Region.

(ii) Unrelated to a Specific Development(s)

Intersection improvements to and/or signalization of Regional arterial or collector roads, necessitated by increased traffic volumes, are considered to be development charge projects.

3) Streetlights

(i) Related to a Specific Development(s)

- a) Streetlights on all new roads within a specific development are considered to be the developer's responsibility through a development agreement with the local municipality.
- b) Streetlights at new or existing intersections of Regional arterial or collector roads necessitated by a specific development (with or without intersection improvements) are considered to be the developer's responsibility through an agreement with the local municipality and/or Region.



(ii) Unrelated to a Specific Development(s)

- a) Streetlights on Regional arterial or collector roads are considered to be the mandated responsibility of the local municipality.
- b) Streetlights at intersections along Regional arterial or collector roads, necessitated by increased traffic volumes or safety concerns and unrelated to new development(s), are considered to be development charge projects.

4) Sidewalks

(i) Related to a Specific Development(s)

- 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 a development agreement with the local municipality.
- b) Sidewalks external to a development, whether on local or Regional roads, which are necessary to connect the development to public spaces and/or existing sidewalks, are considered to be the developer's responsibility through a development agreement with the local municipality.

(ii) Unrelated to a Specific Development(s)

Sidewalks on Regional arterial or collector roads are considered to be the mandated responsibility of the local municipality.

5) Bike Lanes/Bike Paths

(i) Related to a Specific Development(s)

- a) Bike paths/lanes within and outside road allowances within a specific development are considered to be the developer's responsibility through a development agreement with the local municipality.



- b) Bike paths/lanes external to a development, which are necessary to connect the development to public spaces and/or other bike infrastructure, are considered to be the developer's responsibility through a development agreement with the local municipality.

(ii) Unrelated to a Specific Development(s)

Bike paths/lanes within Regional road allowances located separate from or combined with the road pavement are considered to be development charge projects.

6) Noise Abatement Measures

(i) Related to a Specific Development(s)

Noise abatement measures internal to a development, related or unrelated to Regional arterial and collector roads, are considered to be the developer's responsibility through a development agreement with the local municipality.

(ii) Unrelated to a Specific Development(s)

Noise abatement measures unrelated to a specific development(s) on Regional arterial or collector roads are considered to be development charge projects.

7) Traffic Control Systems

(i) Related to a Specific Development(s)

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 with the Region.

(ii) Unrelated to a Specific Development(s)

On Regional arterial or collector 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.

8) Transportation Studies (traffic studies, master plans, secondary corridor studies)

(i) Related to a Specific Development(s)

Traffic studies undertaken for the benefit of a specific development(s) are considered to be the responsibility of the developer.

(ii) Unrelated to a Specific Development(s)

Master plans and secondary corridor studies are considered to be development charge projects.

9) Land Acquisition (including right-of-ways and utility easements)

(i) Related to a Specific Development(s)

- a) Land acquisition to upgrade Regional arterial or collector 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 arterial roads or other excessive needs beyond normal dedication requirements are considered to be development charge projects (normally included as part of the capital works project).

(ii) Unrelated to a Specific Development(s)

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 works project).



STORM WATER MANAGEMENT WORKS

1) Storm Drainage Works

(i) Related to a Specific Development(s)

(storm sewers, culverts, ditching, outfalls)

- a) All storm drainage works related to a specific development(s) and not providing a benefit to Regional property or infrastructure are considered to be the developer's responsibility through a development agreement with the local municipality.
- b) All Regional costs associated with over-sizing of storm drainage works by a developer are considered to be development charge projects for which an agreement will be required between the Region and developer and/or the local municipality.

(ii) Unrelated to a Specific Development(s)

- a) All storm drainage works relating to future Regional road construction, are considered to be development charge projects (normally included as part of the capital works project).
- b) Storm drainage works relating to road maintenance best practises may be considered as development charge projects in whole or part.

2) Storm Water Management

(retention/detention storage, erosion remediation)

(i) Related to a Specific Development(s)

All storm water management works related to a specific development(s) and not providing a benefit to Regional property and/or infrastructure are considered to be the developer's responsibility through a development agreement with the local municipality.



(ii) Unrelated to a Specific Development(s)

All Regional costs associated with the construction of storm water management works unrelated to a specific development, including downstream erosion works control measures are considered to be development charge projects (normally included as part of the capital works project).

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regard to, among other factors, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, changes in policy regarding Regional and local municipality responsibility and subsection 59(2) of the D.C.A.

Front Ending Policy

The development charge calculations incorporate the growth-related capital requirements that have been identified in accordance with the policies outlined more fully in this Background Study. The Region may require a developer(s) to enter into front-end financing or related agreements as part of the planning application approval process in order to fund specific capital projects that are required to service their development in the following circumstances:

- 1) Where a specific development(s) requires Regional budget approval for a capital project that has been included within the development charge calculation in advance of the project timing determined as outlined in the Region's Annual Capital Budget and Forecasting process.
- 2) Where a specific development(s) requires Regional budget approval for a capital project that has not been included within the development charge calculation but has been deemed to be a development charge project (as opposed to a subdivider responsibility under the Local Servicing Policy).

These front-end financing and related agreements will ensure that the complete infrastructure requirements based on Master Planning processes, phasing strategy, and



other studies are provided for, and that the Region's design criteria requirements, as well as Regional and local service standards, are maintained in the project delivery. These agreements will provide for landowner financing of the full project cost where required, with repayment terms to the landowner(s) acceptable to the Region based on a supporting financial plan.

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regards to, among other factors, the Niagara Regional Policy Plan, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, and subsection 59(2) of the D.C.A.



Appendix F

Water and Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited



Appendix F: Water and Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

F.1 Water

D.C. Calculation Planning Period

2022 - 2051

Service Coverage and Capital Program

Coverage:

The Regional Municipality of Niagara is responsible for water treatment, transmission mains, storage facilities, and booster pumping stations.

Capital Program:

The capital program, which covers the period 2022-2051, is comprised of:

- 1) Growth related works from the Region's 2022 Water and Wastewater Master Servicing Plan;
- 2) The portion of previously constructed, unfunded projects. When the previous studies were completed, the post period time frame generally included the period pre-2051. As that time period is now being fully incorporated into the 2022 D.C. calculation period, the full post period capacity amount for those projects can be recovered over the forecast growth.
- 3) Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.
- 4) Future Master Plan Study Updates (as provided for in Chapter 5).



Local Service and Developer Contribution Policy

The Region's local service policy for water projects is documented in Appendix E and indicates the type of works to be funded directly by developers.

Level of Service Measurement

The provision of potable water within the Region is governed by Provincial regulations and sound engineering practice. Further detail regarding the Region's design criteria is provided in Niagara's 2022 Master Servicing Plan.

Benefit to Existing Development Deduction (B.T.E.)

The benefit to existing development deductions for water are summarized in the following table. No B.T.E. deductions are applicable for credits or recovery of the P.P.C. share of already constructed projects, as these shares are already net of B.T.E., etc.

Project Type	Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
Treatment	50% Includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
Pumping Station	50% Includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
Storage	50% Includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
Distribution and Transmission	50% Includes system looping and security of supply	20% addresses pipe age, condition or performance and level of service	10%	0%



Project Type	Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
Decommissioning	70% Addresses existing system performance	N/A	N/A	N/A
Exceptions	May require unique B.T.E. allocation based on type, location, or timing of project	N/A	N/A	N/A

Post Period/Excess Capacity Deduction

Deductions are made for post 2051 servicing capacity where explicit oversizing is provided for. The following table sets out the rationale for determining the deductions. The percentages shown are applied to the total project cost. No deduction is applicable for already-constructed (but not fully D.C. funded) projects, as the recovery period now extends to 2051.

Project Type	Strategically Sized by Additional Future Capacity	Sized for Bylaw Planning Period with Some Strategic Additional Capacity	Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity	Sized for Bylaw Planning Period Only
Treatment	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Pumping Station	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Storage	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%



Project Type	Strategically Sized by Additional Future Capacity	Sized for Bylaw Planning Period with Some Strategic Additional Capacity	Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity	Sized for Bylaw Planning Period Only
Distribution and Transmission	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Decommissioning	N/A	N/A	N/A	N/A
Exceptions	May require unique P.P.B. allocation based on type, location or timing of project	N/A	N/A	N/A

Provision for Grants, Subsidies and Other Contributions

No grants, subsidies or other contributions are anticipated for most of the Master Servicing Plan projects. For all projects, the gross cost shown for credits and previously constructed works are already net of any grant or contribution received.

10% Statutory Deduction

Not applicable.

Use of Existing Reserve Funds

The December 31, 2021 uncommitted D.C. reserve fund balance has been netted in making the D.C. calculation for water works.

Residential and Non-Residential Split

The Residential and Non-Residential cost share of all projects is based on the incremental population and employment forecast in the serviced area from 2022 to 2051 for the Region.



Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work at Home (W.A.H.) employment categories have been included.

N.F.P.O.W. is defined as persons who work at various work locations or job sites and do not report to a headquarters or depot before starting work each day. N.F.P.O.W. employees are recognized to contribute to water demands and wastewater flows in both residential and employment properties but do not reflect new demands and flows already projected across residential and employment lands.

W.A.H. employees are recognized to generate water and wastewater use already accounted for in the overall residential use.

To appropriately apportion the N.F.P.O.W. and W.A.H. within the Residential and Non-Residential cost share, 50% of N.F.P.O.W. employment is assigned to residential and employment growth each, and W.A.H. employment is assigned to residential growth. This approach is completed for D.C. calculation purposes and does not impact the water and wastewater flow projections.

The resultant residential/non-residential split calculations are as follows:

Residential Category	Residential Amount	Non-residential Category	Non-residential Amount	Total
Population Growth	189,299	Employment Growth	61,906	n/a
WAH	+5,923	WAH	-5,923	n/a
50% NFPOW	+4,432	50% NFPOW	-4,432	n/a
Total	199,654	Total	51,551	251,205
Allocation	79%	Allocation	21%	100%



F.2 Wastewater

D.C. Calculation Planning Period

2022-2051

Service Coverage and Capital Program

Coverage:

The Regional Municipality of Niagara is responsible for wastewater treatment, trunk sewers, and pumping stations.

Capital Program:

The capital program, which covers the period 2022-2051, is comprised of:

- 1) Growth related works from the Region's 2022 Water and Wastewater Master Servicing Plan;
- 2) The portion of previously constructed, unfunded projects. When the previous studies were completed, the post period time frame generally included the period pre-2051. As that time period is now being fully incorporated into the 2022 D.C. calculation period, the full post period capacity amount for those projects can be recovered over the forecast growth.
- 3) Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.
- 4) Future Master Plan Study Updates (as provided for in Chapter 5).

Local Service and Developer Contribution Policy

The Region's local service policy for wastewater is documented in Appendix E and indicates the types of works to be funded directly by developers.



Level of Service Measurement

The provision of wastewater services within the Region is governed by Provincial regulations and sound engineering practice. Further detail on the Region's design criteria is found in Niagara's 2022 Master Servicing Plan.

Benefit to Existing Development Deduction (B.T.E.)

The benefit to existing development deductions for wastewater are summarized in the following table. No B.T.E. deductions are applicable for credits or recovery of the P.P.C. share of already constructed projects, as these shares are already net of B.T.E., etc.

Project Type	Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
Treatment	50% Includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
Pumping Station	50% Includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
Collection and Conveyance	50% Includes system twinning and security of conveyance	20% addresses facility age, condition or performance and level of service	10%	0%
Decommissioning	70% Addresses existing system performance	N/A	N/A	0%
Wet Weather Management Program	50% Addresses current deficiency in level of service, improvements located in existing service areas	N/A	N/A	N/A



Project Type	Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
Exceptions	May require unique B.T.E. allocation based on type, location, or timing of project	N/A	N/A	N/A

Post Period/Excess Capacity Deduction

Deductions are made for post 2051 servicing capacity where explicit oversizing is provided for. The following table sets out the rationale for determining the deductions. The percentages shown are applied to the total project cost. No deduction is applicable for already-constructed (but not fully DC funded) projects, as the recovery period now extends to 2051, with the exception of several recently constructed expansion projects which provide for growth post 2051.

Project Type	Strategically Sized by Additional Future Capacity	Sized for Bylaw Planning Period with Some Strategic Additional Capacity	Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity	Sized for Bylaw Planning Period Only
Treatment	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Pumping Station	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Collection and Conveyance	50% Includes strategic cost-effective additional capacity	20% Some planning for future capacity	10%	0%
Decommissioning	N/A	N/A	N/A	N/A



Project Type	Strategically Sized by Additional Future Capacity	Sized for Bylaw Planning Period with Some Strategic Additional Capacity	Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity	Sized for Bylaw Planning Period Only
Wet Weather Management Program	N/A	N/A	N/A	N/A
Exceptions	May require unique B.T.E. allocation based on type, location, or timing of project	N/A	N/A	N/A

Provision for Grants, Subsidies and Other Contributions

No grants, subsidies or other contributions are anticipated for any of the Master Servicing Plan projects. In the case of C.S.O. control projects on the "Region-wide" schedule, the local municipal share has been excluded from the gross project cost.

10% Statutory Deduction

Not applicable.

Use of Existing Reserve Funds

The December 31, 2021 uncommitted D.C. reserve fund balance has been deducted from the D.C. calculation for wastewater works.

Residential and Non-Residential Split

The Residential and Non-Residential cost share of all projects is based on the incremental population and employment forecast in the serviced areas from 2022 to 2051 for the Region.

Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work at Home (W.A.H.) employment categories have been included.

N.F.P.O.W. is defined as persons who work at various work locations or job sites and do not report to a headquarters or depot before starting work each day. N.F.P.O.W.



employees are recognized to contribute to water demands and wastewater flows in both residential and employment properties but do not reflect new demands and flows already projected across residential and employment lands.

W.A.H. employees are recognized to generate water and wastewater use already accounted for in the overall residential use.

To appropriately apportion the N.F.P.O.W. and W.A.H. within the Residential and Non-Residential cost share, 50% of N.F.P.O.W. employment is assigned to residential and employment growth each, and W.A.H. employment is assigned to residential growth. This approach is completed for D.C. calculation purposes and does not impact the water and wastewater flow projections.

The resultant residential/non-residential split calculations are as follows:

Residential Category	Residential Amount	Non-residential Category	Non-residential Amount	Total
Population Growth	190,771	Employment Growth	61,906	n/a
WAH	+5,923	WAH	-5,923	n/a
50% NFPOW	+4,432	50% NFPOW	-4,432	n/a
Total	201,126	Total	51,551	252,677
Allocation	80%	Allocation	20%	100%



Appendix G

Services Related to a Highway Servicing Needs – WSP Global Inc. and HDR Corporation



Appendix G: Services Related to a Highway Servicing Needs – HDR Corporation

G.1 Introduction

The recommended 2041 transportation network identified through the Transportation Master Plan Update forms the basis of the roads and roads-related capital program for Niagara Region's Development Charge (D.C.).

The Region has prepared a separate Transportation Background Report which provides for the details of the level of service calculations and sets out the capital needs. This report documents the approach to the deductions, allocations and costs for the Services Related to a Highway capital program for input to the Development Charge Background Study for the update of the Region's D.C. By-law.

G.2 Deductions

G.2.1 Benefit-to-Existing Development Deduction

A benefit-to-existing development deduction is applied when the proposed improvement provides a significant benefit to existing development. A percentage allocation representing the extent to which the improvement benefits existing development or new growth was determined for nine categories of improvements as described below. Some categories are new for the 2022 D.C. background study; these changes are provided in the 2022 D.C. Policy Report available on the Region's D.C. webpage.

1. **Capacity Improvement – New Roads:** The extension of road or construction of new road corridors that are required to provide connection to a new sub-division or provide additional capacity for the population and employment growth to address growing demand.
2. **Capacity Improvements Widening:** Projects that add capacity to the network by providing additional vehicular lanes (i.e., road widening) are considered to be primarily growth-related as the need for the improvement is to address growing demand.
3. **Capacity Improvements Active Transportation:** Active Transportation Infill Projects, identified as part of the Region's Strategic Cycling Network, have been



assigned a 75% benefit to existing share which reflects the proportion of existing and new development growth in Niagara. Other A.T. facilities that may be constructed as part of a road capital project are considered to be a road capacity improvement project.

4. **Intersection Improvements** – Traffic signal installation, addition of turn lanes, roundabouts and other intersection improvements that add capacity to the road network are primarily growth-related. Reconstruction of existing intersections and operational improvements at existing intersections provide benefits to both existing and new development.
5. **Road Reconstruction / Improvements** – An existing road that undergoes major reconstruction, even without increasing the vehicular lanes, may include additional active transportation facilities (e.g., bicycle lanes, sidewalk, multi-use path) to support increased demand related to growth within or supporting existing or urban growth areas, providing benefit to both existing and new development. May include, but not limited to, reconstruction of existing general-purpose lanes, structural design, geometric improvements, and improvements to shoulder widths.
6. **Structure Reconstruction / Improvements** – Bridge or culvert reconstruction projects may increase capacity, provide additional active transportation facilities, may provide benefit to both existing and new development.
7. **Illumination and Traffic Signals** – Installation of lighting and traffic signals are considered to primarily provide a benefit to existing roadways.
8. **Miscellaneous Road Properties** – Land acquisitions for various types of projects, such as intersection improvements, road widening, or new roadways.
9. **Transportation Studies and Annual Traffic Counts** – The Transportation Studies includes transportation master plans, environmental assessments, road widening studies, and other studies that assess the impact of a proposed change to the transportation network. The Annual Traffic Counts is conducted to collect traffic counts on Regional Roads to assess the transportation conditions and future transportation studies.



The Region’s Road Resurfacing Program and other maintenance-related annual programs are funded entirely from existing development and no cost is charged to growth even though new development incurs a small benefit from the improved condition of the road.

Category	Benefit to Existing %	Remarks
Capacity Improvements - New Roads/ Missing Link	0%	<p>Includes new roads, associated structures, and other infrastructure. New arterial roads are identified to support Greenfield and provincially designated development areas. Typically, in many developing communities the existing arterial road functions as a main street through the Hamlet. To service the transportation needs of these new communities, new roads are constructed to serve as arterials to traverse the community. In many incidences, the new arterial road is designed as a by-pass to distribute traffic away from existing nodes and villages. However, the new roads provide additional capacity to the transportation network as they provide additional capacity directly and “free up” capacity on existing roads for those existing trips. 0% BTE is allocated to new roads as the new corridors are strictly required to address the future travel demands (this policy is in line with municipalities in the GTA such as Halton Region, City of Mississauga and York Region). New for 2022.</p>
Capacity Improvements - Road Widening	15%	<p>Includes road widening, structure widening/improvements as part of road projects. 15% benefit to existing is based on cost of resurfacing the existing segment in cases of road widening, or the marginal road use benefit to existing users in the case of new road sections.</p>



Category	Benefit to Existing %	Remarks
Capacity Improvements - Active Transportation	75%	<p>Active Transportation Infill Projects, identified as part of the Region's Strategic Cycling Network, have been assigned 75% BTE to reflect the proportion of existing and new development growth in Niagara.</p> <p>Other A.T. facilities that are constructed as part of a capital road project are considered to be a road capacity improvement.</p>
Intersection Improvements - Additional Capacity	0%	<p>Signals and intersection improvements are associated with projects that add capacity to the road network to accommodate growth.</p>
Intersection Improvements - Others	50%	<p>Reconstruction, minor capacity improvements, or operational improvements to increase capacity and improve traffic flow at an existing intersection.</p>
Road Reconstruction / Improvements - No Capacity Improvement	100%	<p>Road reconstruction with no capacity improvement or intersection improvements on a roadway not commonly used for heavy trucks serving new development.</p>
Road Reconstruction / Improvements - Minor Capacity Improvement	90%	<p>Road reconstruction with minor capacity improvement (<10%) with a paved shoulder to accommodate cyclists and minor intersection improvements (5% of project cost) on a roadway occasionally used by heavy trucks serving new development.</p>



Category	Benefit to Existing %	Remarks
Road Reconstruction / Improvements - Moderate Capacity Improvement	75%	Road reconstruction with moderate capacity improvement (10-50%) and moderate intersection improvements (5-10% project cost), and/or accommodation of pedestrians and cyclists (with sidewalk, bicycle lane, or multiuse path) on a roadway commonly used by heavy trucks serving new development.
Road Reconstruction / Improvements - Significant Capacity Improvement	60%	Road reconstruction with significant capacity improvement (>50%) and significant intersection improvements (>10% project cost), and/or accommodation of pedestrians and cyclists (with sidewalk, bicycle lane or multiuse path) on a roadway frequently used by heavy trucks serving new development, and/or conversion to an urbanized (complete street) cross-section from a rural cross-section.
Structure Reconstruction / Improvements	Based on the % increase in net deck width/area	Structure replacement or rehabilitation to existing width, or provide a wider cross-section to allow for greater capacity and/or accommodation of pedestrians and cyclists. New for 2022.
Structure - New Grade Separation	10%	New rail/road grade separation structure to replace an existing at-grade rail crossing.
Structure Construction - New Structure	0%	New structure for system expansion and accommodation of pedestrians and cyclists. New for 2022.
Illumination and Traffic Signals	90%	Install lighting and traffic signals. New for 2022.



Category	Benefit to Existing %	Remarks
Miscellaneous Road Properties	15%	Acquire land for various projects. 15% BTE is allocated as property is required/purchased for a future new road or road widening/improvement program. New for 2022.
Transportation Studies and Annual Traffic Counts	10%	Transportation Studies assess impacts to the transportation network and annual traffic data collection required for future transportation improvements. New for 2022.

G.2.2 Post-Planning Period Capacity Deduction

The capital road program identified in the T.M.P. accommodates growth to 2041. It is not the intention to over-build the road network, however, some excess capacity may exist in 2041 that could accommodate a portion of future growth beyond 2041.

A post-planning period capacity deduction of 25% has been allocated to capacity improvement projects between 2032 to 2036 and a 50% deduction has been made for projects occurring between 2037 and 2041.

For capacity improvement projects in the earlier phases of the D.C. planning period, the need for the capacity improvement is driven by growth within the planning period, and thus a post-period deduction was not applied to projects identified for implementation in the first 10 years (2022 to 2031).

No post-planning period capacity deduction has been applied to the intersection improvement program, road rehabilitation program, or other annual programs where cost has been estimated based on annual capital expenditure.

G.2.3 Grants, Subsidies, Contributions and Previous Funding

Deductions for grants, subsidies and contributions are project-specific and applied only where funds from area developers, local area municipalities, provincial or federal governments are anticipated to be collected by Niagara Region. Prior funding that the Region has already collected have also been identified on a project-specific basis.



G.3 Residential vs Non-residential Cost Allocation

The growth-related costs for transportation projects are split between residential and non-residential uses generally based on the proportion of residential and non-residential growth forecasted through the D.C. planning period with adjustments for Work at Home and No Fixed Place of Work Employment as described below.

Work at Home (W.A.H.)

For work-at-home, the employment use is physically located in a residential unit, but to allocate the impacts of work-at-home employment to non-residential would increase the non-residential cost share but not the associated non-residential floor area to which the development charge could be applied. Additionally, the work-at-home designation implies that the individual works from home on a regular basis and it would be reasonable to assume that travel demands related to “work” would be based out of the home location. Thus, for the consideration of residential / non-residential split, the work at-home employment is included under residential.

There was also discussion on whether a work-at-home worker makes more or less trips than a worker with a non-home usual place of work. While the commute to work trip (and the return trip) is eliminated, many work-from-home worker still generates work related trips (i.e. travel to meet with clients) or attract work-related trips (i.e. clients meeting at worker’s home office, business- related deliveries, etc.). To account for the reduced trip making for work-from-home, a 50% factor was applied.

No Fixed Place of Work (N.F.P.O.W.)

In the case of no-fixed-place-of-work, the worker travels to a number of different locations for work, such as a construction site, a client’s office, an employer’s office, field locations, etc., without first reporting to a headquarters or depot at the start of each workday. The issue with allocating no-fixed-place-of-work employment to non-residential is the increase of non-residential share without the ability to increase the associated floor area to which the development charge could be applied. However, to allocate no-fixed place-of-work employment fully to residential would ignore the fact that these workers have an employer with headquarters, offices or other types of non-residential buildings, which “generate” the work for the worker. These headquarters may or may not be located in Niagara Region.



Thus, for the consideration of residential / non-residential split, the no-fixed-place-of-work employment is included under residential uses, to capture the commute to work trip. To account for the portion of the worker's trips that are not home-based, a 50% factor was applied.

Residential Category	Residential Amount	Non-residential Category	Non-residential Amount	Total
Population Growth	121,899	Employment Growth	40,337	n/a
50% WAH	+2,145	WAH	-4,290	n/a
50% NFPOW	+3,143	NFPOW	-6,286	n/a
Total	127,177	Total	29,761	156,938
Allocation	81%	Allocation	19%	100%

G.4 Capital Expenditure Plan

The capital expenditure plan for the proposed improvements for the 2041 transportation system is presented in Chapter 5 of this report.



Appendix H

Asset Management Plan



Appendix H: Asset Management Plan

The recent changes to the Development Charges Act, 1997, as amended (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:

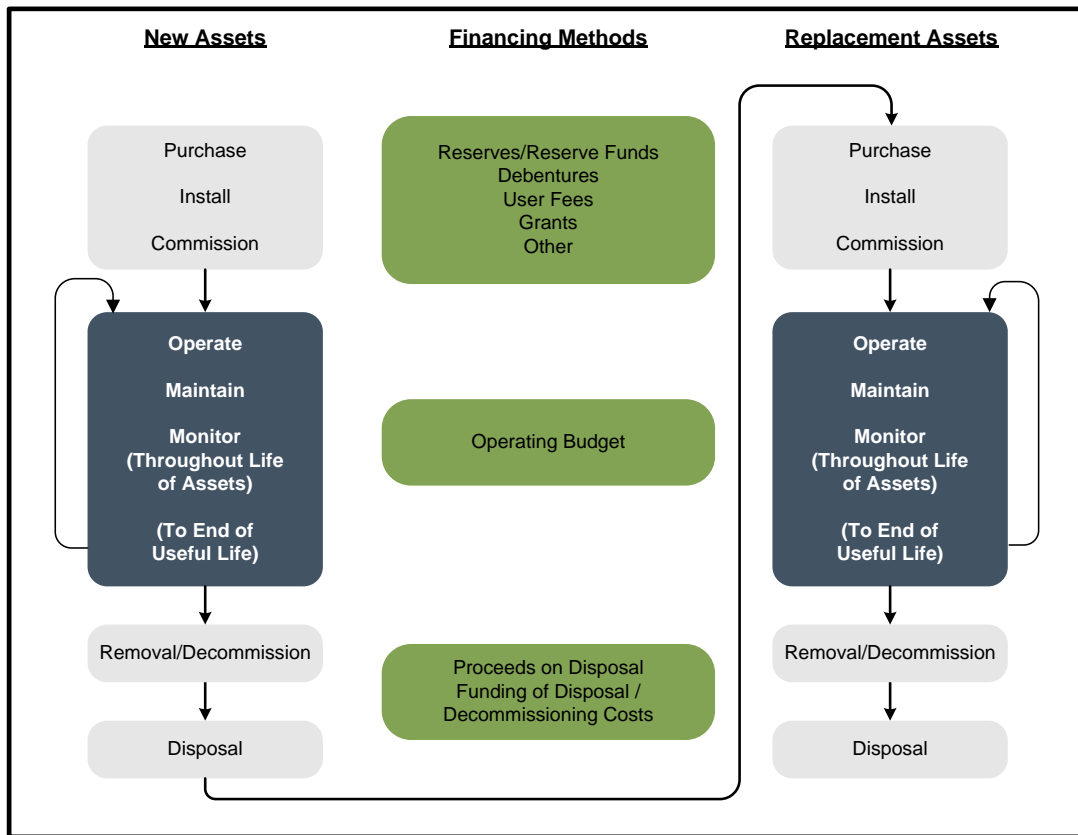
“The asset management plan shall,

- (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 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 in 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 development charge (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 2022 for core municipal services and 2024 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.

In accordance with the Infrastructure for Jobs and Prosperity Act (I.J.P.A.) the Region completed an Asset Management Policy in 2019. The Region is currently undertaking an update to their Asset Management Plan to meet the requirements of Infrastructure for Jobs and Prosperity Act; however, the updated plan is not complete as at the time of writing this background study. 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 2022 \$) 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 that 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 2022 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 approximately \$327.53 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 \$147.39 million. This amount, totalled with the existing operating revenues of \$1.08 billion, provide annual revenues of \$1.23 billion by the end of the period.



6. In consideration of the above, the capital plan is deemed to be financially sustainable.

Regional Municipality of Niagara
Asset Management – Future Expenditures and Associated Revenues
2022\$

Future Expenditures and Associated Revenues	2041 (Total)
Annual Debt Payment on Non-Growth Related Capital ¹	121,771,984
Annual Debt Payment on Post Period Capital ²	12,008,865
Annual Lifecycle - Region-wide Services	\$66,745,157
Incremental Operating Costs (for D.C. Services)	\$126,995,850
Total Expenditures	\$327,521,856
Total Existing Revenue ³	\$1,083,045,062
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$147,385,432
Total Revenues	\$1,230,430,494

1 Non-Growth Related component of Projects

2 Interim Debt Financing for Post Period Benefit

3 As per Sch. 10 of FIR



Appendix I

Proposed D.C. By-law



THE REGIONAL MUNICIPALITY OF
NIAGARA BY-LAW NO. 2022-XX
A BY-LAW TO ESTABLISH DEVELOPMENT
CHARGES FOR THE REGIONAL MUNICIPALITY OF
NIAGARA AND REPEAL BY-LAW 2017-98

WHEREAS subsection 2(1) of the *Development Charges Act, 1997, as amended c. 27* (hereinafter called “the Act”) provides that the council of a municipality may pass By-laws for the imposition of development charges against land for increased capital costs required because of the need for services arising from development in the area to which the By-law applies;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara has given Notice on JUNE 9, 2022 according to section 12 of the *Development Charges Act, 1997, as amended*, of its intention to pass a By-law under Section 2 of the Act;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara has heard all persons who applied to be heard no matter whether in objection to, or in support of, the development charge proposal at a public meeting held on June 30, 2022;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara had before it a report entitled Development Charge Background Study dated MAY 19, 2022 and updated MAY 30, 2022 prepared by Watson & Associates Economists Ltd., wherein it is indicated that the development of any land within The Regional Municipality of Niagara will increase the need for services as defined herein;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara on July 21, 2022 approved the applicable Development Charge Background Study, inclusive of the growth, development and capital estimates therein, in which certain recommendations were made relating to the establishment of a development charge policy for The Regional Municipality of Niagara pursuant to the *Development Charges Act, 1997, as amended*;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara on July 21, 2022 determined that no additional public meeting was required to be held as part of the approval process;

NOW THEREFORE the Council of The Regional Municipality of Niagara enacts as follows:

DEFINITIONS

1. **In this By-law:**



"Act" means the *Development Charges Act, 1997*, S.O. 1997, c. 27, as amended;

"agricultural use" means use or intended use for bona fide farming purposes

(a) including (but not limited to):

- (i) cultivation of crops, whether on open land or in greenhouses, including (but not limited to) fruit, vegetables, herbs, grains, field crops, marijuana, sod, trees, shrubs, flowers, and ornamental plants;
- (ii) raising of animals, including (but not limited to) cattle, horses, pigs, poultry, livestock, fish; and
- (iii) agricultural animal husbandry, dairying, equestrian activities, horticulture, fallowing, pasturing, and market gardening;

(b) but excluding:

- (i) retail sales activities; including but not limited to restaurants, banquet facilities, hospitality facilities and gift shops;
- (ii) services related to grooming, boarding, or breeding of household pets; and
- (iii) marijuana processing or production facilities.

"ancillary" means a use, building, or structure that is normally incidental and/or subordinate and is exclusively devoted to a main use and/or a building and/or structure, and is located on the same lot therewith.

"apartment dwelling" means any residential building containing seven or more dwelling units where the units are connected by an interior corridor, but does not include a special care/special dwelling unit/room, or dormitories;

"archeological site" means an assessment under the relevant Act carried out by a consultant archeologist when the land is known to have an archeological site on it, or has the potential to have archaeological resources;

"back-to-back townhouse dwelling" means a building containing more than two dwelling units separated vertically by a common wall, including a rear common wall, that do not have rear yards;

"bedroom" means a habitable room including a den, study, or other similar area that is larger than eight square metres, but does not include a living room, dining room, kitchen or bathroom.



“board of education” means a board as defined in the *Education Act*, R.S.O. 1990, c. E.2, as amended;

“brownfield” means land located within the urban areas as defined from time to time in the Regional Official Plan, upon which there has been previous agricultural, industrial, institutional, or commercial or open lands use or other use as prescribed under the *Environmental Protection Act*, R.S.O. 1990, c.E.19 and Ontario Regulation 153/04 thereto, each as amended from time to time, and for which site remediation is required in accordance with a Phase 2 Environmental Site Assessment, and for which a Record of Site Condition has been filed on the Province’s Brownfields Environmental Site Registry pursuant to the *Environmental Protection Act*, R.S.O. 1990, c.E.19 and Ontario Regulation 153/04 thereto, each as amended from time to time;

"building permit" means a permit pursuant to the *Building Code Act, 1992*, S.O. 1992, c. 23, as amended;

“class” means a grouping of services combined to create a single service for the purposes of this By-law and as provided in Section 7 of the Development Charges Act. Also referred to as class of service or classes of services.

“commercial purpose” means any building or structure used, designed or intended for use for or in connection with the purchase and/or sale and/or rental of commodities; the provision of services for a fee; or the operation of a business office, including but not limited to:

- (a) Accommodations including but not limited to hotels and motels, bed and breakfast, or short-term rentals;
- (b) personal or self-storage facilities;
- (c) non-residential agricultural use;
- (d) Wholesale trade;
- (e) Retail trade;
- (f) Auto repair shops;
- (g) Car sales/dealers;
- (h) Warehousing of goods where manufacturing, producing, and processing of the goods is not completed on site;
- (i) Food Services;
- (j) Parking structures not used exclusively by a residential structure.

“development” means the construction, erection or placing of one or more buildings or structures on land or the making of an addition or alteration to a building or structure that has the effect of increasing the size or usability thereof, and includes redevelopment; notwithstanding the foregoing, development does not include temporary structures, including but not limited to, seasonal hoop structures, seasonal fabric structures, tents, or produce sales stands;



“dwelling room” means each bedroom used, designed or intended for use by one or more persons living together in a lodging home, dormitories, or special care/special dwelling;

“dwelling unit” means one or more rooms used, designed or intended to be used by one or more persons as a residence and which has access to culinary and/or sanitary facilities.

“existing industrial building” means an industrial building or industrial buildings existing on a site in the Regional Municipality of Niagara as of July 21, 2022 or the industrial buildings or industrial structures constructed and occupied on a vacant site pursuant to site plan approval under section 41 of the Planning Act, R.S.O. 1990, c. P.13 (the “Planning Act”) subsequent to July 6, 2012 for which development charges were exempted or paid for;

“gross floor area” means the total floor area, measured between the outside of exterior walls, virtual walls or between the outside of exterior walls or virtual walls and the centre line of party walls dividing the building from another building, of all floors and mezzanines, above and below the average level of finished ground adjoining the building at its exterior walls;

“group home” means a dwelling for the accommodation of three to eight residents, supervised by agency staff and funded wholly or in part by any government or its agency and approved or supervised by the Province of Ontario under any Act.

“hospice” means a building or portion of a mixed-use building designed and intended to provide palliative care and emotional support to the terminally ill in a home or homelike setting so that quality of life is maintained, and family members may be active participants in care.

“industrial use” means land, buildings or structures used for or in connection with manufacturing by:

- (a) manufacturing, producing, and processing goods for a commercial purpose, as well as storing and/or distribution of goods manufactured, produced or processed on site;
- (b) research or development in connection with manufacturing, producing or processing good for a commercial purpose;
- (c) retail sales by a manufacturer, producer or processor of goods they manufactured, produced or processed, if the retail sales are at the site where the manufacturing, production or processing takes place;
- (d) office or administrative purposes, if it is:



- (i) carried out with respect to manufacturing, producing, processing, storage or distributing of something; and
- (ii) in or attached to the building or structure used for that manufacturing, producing, processing, storage or distribution;

“institutional” means lands, buildings or structures used or designed or intended for use by an organized body, society or religious group for promoting a public or non-profit purpose and offices where such uses are accessory to an institutional use which includes but is not limited to:

- (a) Federal government public administration;
- (b) Provincial government public administration;
- (c) Local, municipal and regional public administration;
- (d) Aboriginal public administration;
- (e) Day care facility excluding in home day care;
- (f) Administrative offices owned and used by a non-profit or charitable entity;
- (g) Medical doctor office or hospital;
- (h) Places of worship excluding space that is designed for a commercial use.

“live/work unit” means a unit which contains separate residential and non-residential areas intended for both residential and non-residential uses concurrently, and shares a common wall or floor with direct access between the residential and non-residential areas.

“local board” means a municipal service board, transportation commission, public library board, board of health, police services board, planning board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the affairs or purposes of one or more local municipalities or the Region, including Niagara Regional Housing, but excluding a board of education, a conservation authority, any municipal services corporation that is not deemed to be a local board under O. Reg. 599/06 made under the *Municipal Act, 2001*, S.O. 2001, c.25, as amended.



“local municipality” means any one of the municipalities of the Town of Fort Erie, Town of Grimsby, Town of Lincoln, City of Niagara Falls, Town of Niagara-on-the-Lake, Town of Pelham, City of Port Colborne, City of St. Catharines, City of Thorold, Township of Wainfleet, City of Welland, and the Township of West Lincoln;

“lodging home” means a boarding, lodging, or rooming house in which lodging is provided for more than four persons in return for remuneration or for the provision of services, or for both, and in which the lodging rooms do not have both bathrooms and kitchen facilities for the exclusive use of individual occupants.

“long term care home” means homes, nursing homes or homes for the aged where the Ministry of Health and Long Term Care funds the care provided in such homes and application for accommodation is made through a Community Care Access Centre.

“mezzanine” means an intermediate floor assembly between the floor and ceiling of any room or story and includes an interior balcony;

“mixed-use building” means a building or structure used for both residential and non-residential use;

“multiplex dwelling” means a residential building containing three or more dwelling units, each of which unit a separate entrance to grade has;

“municipal housing project facilities” has the same meaning as that specified in the Region’s Municipal Housing Facility By-law (No. 34-2004), as may be amended;

“non-profit Housing Development” means development of a building or structure intended for use as residential premises by,

- (i) 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;
- (ii) 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
- (iii) a non-profit housing co-operative that is in good standing under the Co-operative Corporations Act, or any successor legislation.

"non-residential building" means a building or structure used exclusively for non-residential use;

“non-residential use” means use or intended use for any purpose other than human habitation and includes, but is not limited to, an institutional use, an industrial use, and a commercial use;



“other multiple” means all residential units other than a single detached dwelling, semi-detached dwelling, apartment dwelling or a special care/ special dwelling room, including, but not limited to, row dwellings, multiplex dwelling, back-to-back townhouse dwelling, stacked townhouse dwelling, apartment buildings containing less than 7 units and the residential component of live/work units;

"Region" means The Regional Municipality of Niagara;

“Regulation” means O. Reg. 82/98 under the Act, as amended;

“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;

"residential building" means a building used exclusively for residential use, including but not limited to a single detached dwelling, a semi-detached dwelling, a row dwelling, stacked townhouse dwelling, back-to-back townhouse dwelling, a multiplex dwelling, an apartment dwelling, a dwelling room; or the residential component of a live/work unit;

“residential use” means use or intended use for human habitation and ancillary purposes, and includes such use related to agricultural use, including farm help houses, but does not include a hotel/motel use; for purposes of this definition “ancillary purposes” includes (but is not limited to) vehicle storage and equipment storage;

"row dwelling" means a residential building containing three or more dwelling units separated by vertical division, each of which units has a separate entrance to grade;

"semi-detached dwelling" means a dwelling unit in a residential building consisting of two dwelling units separated by vertical division each of which units has a separate entrance to grade;

"single detached dwelling" means a residential building containing one dwelling unit and not attached to another structure. Where it is attached to another structure by footings or below grade walls only, it shall be considered a single detached dwelling for the purposes of this By-law;

“site” means a parcel of land which can be legally conveyed pursuant to Section 50 of the Planning Act and includes a development having two or more lots consolidated under one identical ownership.

“special care/special dwelling unit/room” means a residence (not including a farm help house)

- (a) containing two or more dwelling rooms, which rooms have common entrance from street level; and
- (b) where the occupants have the right to use in common with other



occupants, halls, stairs, yards, common room and accessory buildings;
and

- (c) that is designed to accommodate persons with specific needs, including but not limited to, independent permanent living arrangements; and where support services, such as meal preparation, grocery shopping, laundry, housing, nursing, respite care and attending services are provided at various levels; and includes but is not limited to retirement homes or lodges, group homes, dormitories, and hospices.

“stacked townhouse dwelling” means a building containing two or more dwelling units where each dwelling unit is separated horizontally and/or vertically from another dwelling unit by a common wall or floor;

“use” means either residential use or non-residential use.

“wind turbine” means a part of a system that converts energy into electricity, and consists of a wind turbine, a tower and associated control or conversion electronics. A wind turbine and energy system may be connected to the electricity grid in circuits at a substation to provide electricity off-site for sale to an electrical utility or other intermediary, where there is a rated output of more than 3 kilowatts.

RULES

- 2. For the purposes of complying with section 6 of the Act:
 - (a) The rules for determining if a development charge is payable in any particular case and for determining the amount of the charge shall be in accordance with sections 4 through 8, and 20 and 21.
 - (b) The rules for determining exemptions, relief, credits and adjustments shall be in accordance with sections 9 through 19.
 - (c) The rules for determining the indexing of development charges shall be in accordance with sections 20 and 21.
 - (d) The rules respecting the redevelopment of land shall be in accordance with sections 10 and 11.

LANDS AFFECTED

- 3. This By-law applies to all lands in the geographic area of the Region, being all



of the lands shown on Schedule “A”.

APPROVALS FOR DEVELOPMENT

4.

- (a) Development charges under this By-law shall be imposed against all development if the development requires:
 - (i) the passing of a zoning By-law or of an amendment to a zoning By-law under section 34 of the *Planning Act*, R.S.O. 1990, c. P.13, as amended;
 - (ii) approval of a minor variance under section 45 of the *Planning Act*;
 - (iii) a conveyance of land to which a By-law passed under subsection 50(7) of the *Planning Act* applies;
 - (iv) the approval of a plan of subdivision under section 51 of the *Planning Act*;
 - (v) a consent under section 53 of the *Planning Act*;
 - (vi) the approval of a description under section 50 of the *Condominium Act*, 1998, S.O. 1998, c. 19, as amended; or
 - (vii) The issuing of a permit under the *Building Code Act* in relation to a building or structure.
- (b) That nothing in this By-law prevents Council from requiring, in an agreement under section 51 of the *Planning Act* or as a condition of consent or an agreement respecting same under section 53 of the *Planning Act*, that the owner, at his or her own expense, install such local services related to or within the area to which a plan of subdivision or consent relates, as Council may require, in accordance with the Region’s applicable local service policy in the effect at the time.

DESIGNATION OF SERVICES/ CLASSES OF SERVICES

5. A development charge shall include:

- (a) a charge in respect of growth studies, policing services, ambulance



services, public health services, provincial offences court services, long-term care, social housing, waste diversion, public works and services related to a highway;

- (b) if water service is available, a charge in respect of water; and
- (c) If wastewater service is available, a charge in respect of wastewater.

AMOUNT OF CHARGE

Amount of Charge – Residential

- 6. For development for residential purposes, development charges shall be imposed on all residential development, including a dwelling unit accessory to a non-residential development and the residential component of a mixed-use building, including the residential component of a live/work unit, according to the number and type of dwelling units on the lands as set out in Schedule “C” as applicable.

Amount of Charge – Non-residential

- 7. For development for non-residential purposes, development charges shall be imposed on all non-residential development and, in the case of a mixed-used building, on the non-residential component of the mixed-use building, including the non-residential component of a live/work unit, according to the type and gross floor area of the non-residential component as set out in Schedule “C” as applicable.

TIMING AND CALCULATION AND PAYMENT

- 8.
 - (a) The development charges under this By-law shall be calculated and payable as of the date of the issuance of the first building permit with respect to the development.
 - (b) No Chief Building Official of any local municipality shall issue a building permit in respect of a development for which a development charge is payable pursuant to this By-law, until such development charge is paid.
 - (c) The Region may, by agreement pursuant to section 38 of the Act, permit an owner to perform work that relates to a service to which this



By-law applies in lieu of the payment of all or any portion of a development charge. The Region will give the owner who performed the work a credit towards the development charge in accordance with the agreement and subject to the requirements of the Act. In addition, the Region may, in the case of development located outside of the existing service area, require payment of an appropriate share of the costs of the required infrastructure within the existing service area, in addition to the costs external to the service area.

- (d) Notwithstanding Sections 8 (a), 8 (b), or 8 (c), development charges for rental housing and institutional developments are due and payable in 6 equal annual payments commencing with the first instalment payable on the date of occupancy, and each subsequent instalment, including interest at the interest rate as provided in the Regional Policy CSD 49-2020, as may be revised from time to time.
- (e) Notwithstanding Sections 8 (a), 8 (b), 8 (c), or 8 (d), development charges for non-profit housing developments are due and payable in 21 equal annual payments commencing with the first instalment payable on the date of occupancy, and each subsequent instalment, including interest at the interest rate as provided in the Regional Policy CSD 49-2020, as may be revised from time to time.
- (f) Where the development of land results from the approval of a site plan or zoning by-law amendment application received on or after January 1, 2020, and the approval of the application occurred within two years of building permit issuance, the development charges under Sections 6 and 7 shall be calculated on the rates set out in Schedule "C" on the date of the planning application, including interest. Where both site plan and zoning by-law amendment applications apply, development charges under Sections 6, 7, and 8 (a) through 8 (f) shall be calculated on the rates, including interest at the interest rate as provided in the Regional Policy CSD 49-2020, as may be revised from time to time, as set out in Schedule "C" on the date of the later planning application.

EXEMPTIONS

- 9. The following are exempt from the payment of development charges under this By-law by reason of section 3 of the Act and section 6.1 of the Ministry of Training, Colleges and Universities Act:
 - (a) lands and buildings owned by and used for the purposes of any local



municipality or the Region or any local board unless such buildings or parts thereof are used, designed or intended for use primarily for or in connection with any commercial purpose; and

- (b) land and buildings owned by and used for the purposes of a board of education unless such buildings or parts thereof are used, designed or intended for use primarily for or in connection with any commercial purpose.
- (c) Land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education, if the development in respect of which development charges would otherwise be payable is intended to be occupied and used by the university.

Rules With Respect to Redevelopment – Demolitions

10.

- (a) If application is made for a building permit in respect of a parcel of land upon which a building/structure existed within five years prior to the date of such application, then the amount of the development charges payable shall be the excess of the development charges for the building/structure constructed, less the development charges for building/structure demolished or destroyed. This calculation is based on the development charge rates as of the date the charges are calculated and payable for the new building/structure.
- (b) If, at the time of payment of development charges in respect of a parcel of land, the owner of the said land provides written notification of his/her intention to demolish (within five years) a building/structure existing on that parcel at the time of such payment, then upon the subsequent assurance by the Treasurer of the relevant local municipality (or his or her designate) to the Region's Treasurer, within five years after such payment, that such building/structure on such parcel has indeed been so demolished (and the particulars of such demolished building/structure), the Region shall refund to such owner a reduction in the development charges paid, which reduction is the amount, calculated pursuant to this By-law or a predecessor By-law of the Region, at the development charge rates in effect at the time of such payment, that would have been payable as development charges



in respect of the building/structure demolished, provided that such reduction shall not exceed the development charges actually paid.

- (c) Where demolition takes place on a brownfield or an archaeological site, the above conditions apply however, an application may be made to the Regional Treasurer for an extension of time for the redevelopment credit of up to three additional years if the redevelopment has not been able to proceed due to delays in completing the remediation works. This application must be received prior to the expiry of the initial five-year period as provided in section 10(a) of this By-law. This application will be considered by Regional Council for approval.
- (d) Where the first use of a building/structure would be exempt from development charges, as set out in section 9 of this by-law, the reduction available under 10(a), 10(b), and 10(c) above shall be determined by assessing the first use of the building/structure at the Institutional rate set forth in Schedule “C”, as applicable, to this By-law.

Rules With Respect to Redevelopment – Conversions

11.

- (a) If a development includes the conversion of a building/structure from one use (the “first use”) to another use, then the amount of development charges payable shall be reduced by the amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the first use, provided that such reduction shall not exceed the development charges otherwise payable.
- (b) Where the first use of a building/structure would be exempt from development charges, as set out in section 9 of this by-law, the reduction available under the above shall be determined by assessing the first use of the building/structure at the Institutional rate set forth in Schedule “C”, as applicable, to this By-law.

Rules with Respect to Exemptions for Intensification of Existing and New Housing

12. Pursuant to the Act, no development charge is payable if the development is only the enlargement of an existing dwelling unit.



13. Pursuant to the Act and Regulation, no development charge is payable if the development is to:
- (a) permit the creation of one or two additional Dwelling Units in an existing single detached dwelling or a prescribed ancillary residential dwelling structure to the existing residential building;
 - (b) permit the creation of additional dwelling units equal to the greater of one Dwelling Unit or one percent of the existing Dwelling Units in existing Rental Housing or a prescribed ancillary residential dwelling structure to the existing residential building;
 - (c) permit the creation of one additional dwelling unit in any other existing residential building already containing at least one Dwelling Unit or prescribed ancillary residential dwelling structure to the existing residential building; or
 - (d) permit the creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including residential dwelling structures ancillary to dwellings, subject to the following restrictions:

Item	Name of Class of Proposed New Residential Buildings	Description of Class of Proposed New Residential Buildings	Restrictions
1	Proposed new detached dwellings	Proposed new residential buildings that would not be attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new detached dwelling must only contain two dwelling units. The proposed new detached dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
2	Proposed new semi-detached dwellings or row dwellings	Proposed new residential buildings that would have one or two vertical walls, but no other parts, attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new semi-detached dwelling or row dwelling must only contain two dwelling units. The proposed new semi-detached dwelling or row dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
3	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling and that are permitted to contain a single dwelling unit.	The proposed new detached dwelling, semi-detached dwelling or row dwelling, to which the proposed new residential building would be ancillary, must only contain one dwelling unit. The gross floor area of the dwelling unit in the proposed new residential building must be equal to or less than the gross floor area of the detached dwelling, semi-detached dwelling or row dwelling to which the proposed new residential building is ancillary.

14. Notwithstanding section 13 above, Development Charges shall be imposed if the total Gross Floor Area of the additional one or two dwelling units exceeds the Gross Floor Area of the existing Single Detached Dwelling Unit.
15. Notwithstanding section 13 above, Development Charges shall be imposed if the additional Dwelling Unit(s) has a Gross Floor Area greater than:



- (a) In the case of a Semi-detached Dwelling Unit or Townhouse Dwelling Unit, the Gross Floor Area of the existing Dwelling Unit; and
 - (b) In the case of any other Residential Building, the Gross Floor Area of the smallest Dwelling Unit contained in the said residential Building
16. The exemption to Development Charges in Section 12 above shall only apply to the first instance of intensification in an existing or new dwelling.
17. Subject to sections 14, 15, and 16 above, any exemption under section 13 above shall apply to the smallest dwelling unit, as determined by applicable rates under this by-law.

Rules with Respect to Exemptions for Industrial Enlargement and Industrial Grant Program

- 18.
- (a) Pursuant to the Act, and notwithstanding any other provision of this By-law, there shall be an exemption from the payment of development charges for one or more enlargements of existing industrial buildings on a site, up to a maximum of fifty percent of the gross floor area before the first enlargement for which an exemption from the payment of development charges was granted pursuant to the Development Charges Act or this section. The development need not be an attached addition or expansion of an existing industrial building, but rather may be a new standalone structure, provided it is located on the same parcel of land. Development charges shall be imposed in accordance with this By-law with respect to the amount of floor area of an enlargement that results in the gross floor area of the industrial building on the site being increased by greater than fifty per cent of the gross floor area of all the existing industrial buildings on the site.
 - (b) If the gross floor area is enlarged by more than 50 percent, the amount of the development charge in respect of the enlargement is the amount of the development charge that would otherwise be payable multiplied by the fraction determined as follows:
 - (i) Determine the amount by which the enlargement exceeds 50 percent of the gross floor area before the enlargement.
 - (ii) Divide the amount determined under paragraph i by the



amount of the enlargement.

DISCRETIONARY EXEMPTIONS

19. Notwithstanding any other provision of this By-law, no development charge is imposed under this By-law respecting non-residential lands and buildings used for agricultural use.

INDEXING

20. The amounts of development charges imposed pursuant to this By-law, as set out in Schedule “C”, as applicable, shall be adjusted annually without amendment to this By-law, in accordance with the prescribed index in the Act.
21. For greater certainty, on January 1 of each year, the annual indexation adjustment shall be applied to the development charge as set out in Schedule “C”, as applicable, plus the accumulated annual indexation adjustments from previous years, if any.

REMITTANCE TO THE UPPER-TIER

22. Pursuant to section 29 of the Act:
 - (a) The Treasurer of the upper-tier municipality shall certify to the treasurer of the area municipality that the charge has been imposed, the amount of the charge, the manner in which the charge is to be paid and when the charge is payable;
 - (b) The Treasurer of the area municipality shall collect the charge when it is payable and shall, unless otherwise agreed by the upper-tier municipality, pay the charge to the Treasurer of the upper-tier municipality on or before the 25th day of the month following the month in which that charge is received by the area municipality;
 - (c) If the charge is collected by the upper-tier municipality, the Treasurer of the upper-tier municipality shall certify to the Treasurer of the area municipality that the charge has been collected.

GENERAL

23. The following schedules to this By-law form an integral part of this By-law:

Schedule "A" – Map of the Regional Municipality of Niagara



Schedule "B" – Components of Services Designated in Section 5

Schedule "C" – Development Charges September 1, 2022 – August 31, 2027

24. This By-law shall come into force and effect on September 1, 2022.
25. Pursuant to the Act, and unless it is repealed earlier, this By-law shall expire at 11:59 PM on August 31, 2027.
26. Each of the provisions of this By-law is severable and if any provision hereof should, for any reason, be declared invalid by the Ontario Land Tribunal or a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.
27. By-law 2017-98 is hereby repealed effective September 1, 2022.

READ A FIRST AND SECOND TIME THIS 21 DAY OF JULY, 2022.

READ A THIRD TIME AND FINALLY PASSED THIS 21 DAY OF JULY, 2022.

THE CORPORATION OF THE REGIONAL MUNICIPALITY OF NIAGARA

Regional Chair

Regional Clerk



Schedule "A"
To By-law 22-____
Map of the Regional Municipality of Niagara

Niagara Region  **Map of Regional Municipality of Niagara**
Schedule A





**Schedule “B”
To By-law 22-____
Components of Services and Classes of Services Designated in Section 5**

D.C.-Eligible Services:

Services Related to a Highway

Roads and Related Infrastructure

Policing Services

Police Facilities

Police Vehicles

Police Small Equipment and Gear

Long-term Care Services

Long-term Care Facilities

Long-term Care Vehicles and Equipment

P.O.A. including by-law Enforcement Services

P.O.A. Facilities

Public Health Services

Public Health Facilities

Ambulance Services

Ambulance Facilities

Ambulance Vehicles

Housing Services

Housing Facilities

Waste Diversion Services

Waste Diversion Facilities

Waste Diversion Vehicles and Equipment

Waste Diversion Land

Waste Diversion Containers

Wastewater Services

Treatment, Trunk Sewers, and Pumping Stations

Water Services

Treatment, Transmission, Storage, and Booster Pumping Stations



**Schedule “B”
To By-law 21-____
Components of Services and Classes of Services Designated in Section 5**

D.C.-Eligible Classes:

Public Works

Facilities

Vehicles and Equipment

Growth Studies

Services Related to a Highway

Policing Services

Water Services

Wastewater Services

Services Related to Public Health

Ambulance Services

Long-term Care Services

Housing Services

Waste Diversion Services

P.O.A. including by-law Enforcement Services

Child Care and Early Years Programs and Services



**Schedule “C”
To By-law 22-____
Schedule of Development Charges**

Service/Class of Service	Single and Semi-Detached Dwelling	Other Multiples	Apartments 2+ Bedrooms	Apartments 1 Bedroom	Special Care/Special Dwelling Units & Dwelling Rooms	Commercial (per sq.ft.)	Industrial (per sq.ft.)	Institutional (per sq.ft.)	Wind Turbines
Services Related to a Highway	9,883	7,062	6,718	4,096	3,712	6.78	2.23	5.08	9,883
Public Works (Facilities and Fleet)	286	204	194	119	107	0.26	0.09	0.21	286
Policing Services	297	212	202	123	112	0.28	0.09	0.21	297
Growth Studies	84	60	57	35	32	0.06	0.02	0.04	84
Long-term Care Services	1,241	887	844	514	466	0.60	0.20	0.38	0
Provincial Offences Act	0	0	0	0	0	0.00	0.00	0.00	0
Public Health Services	0	0	0	0	0	0.00	0.00	0.00	0
Ambulance Services	266	190	181	110	100	0.14	0.04	0.08	266
Housing Services	2,039	1,457	1,386	845	766	0.00	0.00	0.00	0
Waste Diversion	176	126	120	73	66	0.04	0.01	0.03	0
Sub-total Region-wide Services/Class of Services	14,272	10,198	9,702	5,915	5,361	8.16	2.68	6.03	10,816
Wastewater Services	7,486	5,349	5,089	3,103	2,811	5.24	2.21	3.87	0
Water Services	4,027	2,878	2,737	1,669	1,512	2.95	1.24	2.17	0
Sub-total Urban Services	11,513	8,227	7,826	4,772	4,323	8.19	3.45	6.04	0
Total Rural Area	14,272	10,198	9,702	5,915	5,361	8.16	2.68	6.03	10,816
Total Urban Area	25,785	18,425	17,528	10,687	9,684	16.35	6.13	12.07	10,816