

Region of Niagara Development Charge Background Study

Consolidation Report

This report consolidates the April 28, 2017 Background Study, the May 5, 2017 Update Report, the October 4, 2017 Addendum 1 Report, the December 7, 2017 Addendum 2 Report, and the Currently Approved By-law 2017-98

December 6, 2017



Plaza Three
101-2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 **Planning for growth**

Consolidated Report

This report consolidates the April 28, 2017 Background Study, the May 5, 2017 Update Report, the October 4, 2017 Addendum 1 Report, and the December 7, 2017 Addendum 2 Report. The following summarizes the reasons for completing the amendments to the April 28, 2017 Background Study:

May 5, 2017 Update Report – Provides for updated wording in Chapter 7 of the background study to reflect the most recent version of the draft by-law.

October 4, 2017 Addendum 1 - Provides for changes to the April 28, 2017 D.C. Background Study, as corrected May 5, 2017 and as determined at the July 4, 2017 D.C. Taskforce meeting. Subsequently the changes were approved at the July 20, 2017 Council meeting at which time the revised D.C. By-law was passed. These refinements are in relation to:

- a) Reduction of provision for social housing units;
- b) Removal of provisions for social and children's services and police services; and
- c) Updates to policies in the approved by-law.

These refinements formed the basis for by-law (2017-68).

December 7, 2017 Addendum 2 - Provides for changes to the April 28, 2017 D.C. Background Study, as updated May 5, 2017, and amended October 4, 2017. Subsequent changes were discussed at the October 4th, October 18th, October 26th, November 8th and November 16th Council and Committee meetings. The changes were approved at the November 16, 2017 Council meeting at which time the new D.C. By-law was passed. These refinements are in relation to:

a) Removal of the 4+ bedroom category for apartments and resulting update to the calculated 2+ bedroom charge,

b) Correction to the table in the Executive Summary under item 6 and Table 6-6, and

c) Revisions to the policies outlined in the by-law.

These refinements have formed the basis for the currently approved (November 16, 2017) by-law (2017-98).

Changes to the Background Report

Based upon the above, the following revisions are made to the pages within the background study (new pages are inserted throughout this report):

- a. Page (iii) – updated summary of calculated charges to reflect decreased charge and phase-in amounts.
- b. Page (iv) – updated summary of gross capital costs and the net costs to be recovered over the life of the by-law.
- c. Page (vii) and (viii) – updated Table ES-1 and Table ES-2 which provides for only two categories of apartments.
- d. Pages 1-3 and 1-4 – updated Figure 1-1 to include additional key dates in the D.C. process.
- e. Page 5-10 – updated wording to remove provision for social and child services facility space.
- f. Page 5-11 – updated capital infrastructure detail sheet to remove provision for additional social and child services space.
- g. Page 5-15 – updated wording to reflect 50% reduction of provision for additional units.
- h. Page 5-16 – updated capital infrastructure detail sheet to reduce the provision by 50%.
- i. Page 5-29 – updated wording to remove the provision for additional facility space.
- j. Page 5-31 – updated capital infrastructure detail sheet to remove the provision for additional facility space.
- k. Pages 6-1 to 6-5 – updated to remove the 4+ bedroom and 2&3 bedroom categories, replace with 2+ bedroom category for the D.C.s calculated, and

updated D.C. calculation tables for calculation of reduced charges, as noted above.

- l. Page 6-7 – revised Table 6-6 to reflect corrected numbers for costs to be incurred over the life of the by-law with respect to services related to a highway.
- m. Page 7-5 and 7-6 – updated policies to reflect changes in the by-law, as approved, revised reference to schedule F instead of Schedule G, and revised wording regarding the designated exemptions areas outlined in Schedules D and E.
- n. Page C-3 – updated table C-1 to reflect the removal and reduction of the provisions mentioned above.
- o. Page I-4 – updated annualized expenditure amount based on the removal and reduction of the provisions, as mentioned above.
- p. Page I-5 – updated table to reflect removal and reduction of the provisions, as mentioned above.
- q. Appendix J – approved By-law 2017-98.

Amended Pages (Inserted throughout report)

Contents

	Page
Executive Summary	ii
1. Introduction.....	1-1
1.1 Purpose of this Document.....	1-1
1.2 Summary of the Process.....	1-2
1.3 Changes to the Development Charges Act: Bill 73	1-4
1.3.1 Area Rating	1-4
1.3.2 Asset Management Plan for New Infrastructure.....	1-6
1.3.3 60-Day Circulation of D.C. Background Study	1-6
1.3.4 Timing of Collection of Development Charges	1-6
1.3.5 Other Changes.....	1-7
2. Current Region of Niagara Policy	2-1
2.1 Schedule of Charges	2-1
2.2 Services Covered	2-1
2.3 Timing of D.C. Calculation and Payment	2-1
2.4 Indexing	2-2
2.5 Redevelopment Allowance - Demolitions.....	2-2
2.6 Redevelopment Allowance – Conversions.....	2-3
2.7 Exemptions	2-3
2.8 Reductions.....	2-4
3. Anticipated Development in the Region of Niagara	3-1
3.1 Requirement of the Act	3-1
3.2 Basis of Population, Household and Non-Residential Gross Floor Area Forecast	3-1
3.3 Summary of Growth Forecast	3-1
4. The Approach to Calculation of the Charge.....	4-1
4.1 Introduction	4-1
4.2 Services Potentially Involved	4-1
4.3 Increase in the Need for Service.....	4-1
4.4 Local Service Policy.....	4-1
4.5 Capital Forecast.....	4-6
4.6 Treatment of Credits	4-7
4.7 Eligible Debt and Committed Excess Capacity	4-7
4.8 Existing Reserve Funds	4-8
4.9 Deductions.....	4-9
4.9.1 Reduction Required by Level of Service Ceiling	4-9
4.9.2 Reduction for Uncommitted Excess Capacity	4-10
4.9.3 Reduction for Benefit to Existing Development.....	4-10
4.9.4 Reduction for Anticipated Grants, Subsidies and Other Contributions	4-11
4.9.5 The 10% Reduction.....	4-11
5. Development Charge Eligible Cost Analysis by Service	5-1

5.1	Introduction	5-1
5.2	Service Levels and 10-Year Capital Costs for D.C. Calculation.....	5-1
5.2.1	Provincial Offences Act (P.O.A.) Space	5-1
5.2.2	General Government.....	5-4
5.2.3	Long Term Care	5-6
5.2.4	Health	5-8
5.2.5	Social and Child Services	5-10
5.2.6	Emergency Medical Services (E.M.S.).....	5-12
5.2.7	Social Housing	5-15
5.2.8	Waste Diversion	5-17
5.3	Service Levels and 25-Year Capital Costs for Niagara's D.C. Calculation	5-23
5.3.1	Services Related to a Highway	5-23
5.3.3	Police Services.....	5-29
5.4	Service Levels and Urban 25-Year Capital Costs for Niagara's D.C. Calculation	5-34
5.4.1	Water Services.....	5-34
5.4.2	Wastewater Services	5-38
6.	Development Charge Calculation	6-1
7.	Development Charge Policy Recommendations and Development Charge By-law Rules.....	7-1
7.1	Introduction	7-1
7.2	Development Charge By-law Structure.....	7-2
7.3	Development Charge By-law Rules	7-2
7.3.1	Payment in any Particular Case	7-2
7.3.2	Determination of the Amount of the Charge	7-2
7.3.3	Application to Redevelopment of Land (Demolition and Conversion).....	7-3
7.3.4	Exemptions (full or partial)	7-4
7.3.5	Phasing in	7-6
7.3.6	Timing of Collection.....	7-6
7.3.7	Indexing	7-7
7.3.8	The Applicable Areas	7-7
7.4	Other Development Charge By-law Provisions	7-7
7.4.1	Categories of Services for Reserve Fund and Credit Purposes.....	7-7
7.4.2	By-law In-force Date.....	7-8
7.4.3	Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing	7-8
7.5	Other Recommendations	7-8
8.	By-law Implementation	8-1
8.1	Public Consultation Process	8-1
8.1.1	Introduction	8-1
8.1.2	Public Meeting of Council.....	8-1
8.1.3	Other Consultation Activity	8-1
8.2	Anticipated Impact of the Charge on Development.....	8-2
8.3	Implementation Requirements	8-2

8.3.1	Introduction	8-2
8.3.2	Notice of Passage	8-3
8.3.3	By-law Pamphlet	8-3
8.3.4	Appeals	8-4
8.3.5	Complaints	8-4
8.3.6	Credits.....	8-4
8.3.7	Front-Ending Agreements	8-5
8.3.8	Severance and Subdivision Agreement Conditions	8-5
Appendix A – Background Information on Residential and Non-residential Growth ForecastA-1		
Appendix B – Level of Service		B-1
Appendix C – Long Term Capital and Operating Cost Examination.....		C-1
Appendix D – Development Charge Reserve Fund Policy		D-1
Appendix E – Local Service Policy		E-1
Appendix F – Water Servicing Needs – GM BluePlan Engineering Consultants Limited.....		F-1
Appendix G – Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited		G-1
Appendix H – Services Related to a Highway Servicing Needs – IBI Group.....		H-1
Appendix I – Asset Management Plan		I-1
Appendix J – Proposed Development Charge By-law.....		J-1

List of Acronyms and Abbreviations

Acronym	Phrase or word
A.T.	Active Transportation
B.T.E.	Benefit to Existing
D.C.	Development Charge
D.C.A.	Development Charges Act
E.S.A.	Environmentally Sensitive Area
G.F.A.	Gross floor area
M.C.R.	Municipal Comprehensive Review
N.F.P.O.W.	No Fixed Place of Work
O.M.B.	Ontario Municipal Board
O.P.A.	Official Plan Amendment
O.Reg.	Ontario Regulation
P.O.A.	Provincial Offences Act
P.P.C.	Post Period Commitment
P.P.U.	Persons per unit
R.S.O.	Revised Statutes of Ontario
S.D.U.	Single detached unit
S.O.	Statutes of Ontario
s.s.	Subsection
S.W.M.	Stormwater management
sq.ft.	Square footage
W.F.H.	Work from Home

Executive Summary

1. The report provided herein represents the Development Charge Background Study for the Region of Niagara required by the *Development Charges Act, 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 development charge;
 - Chapter 5 – Review of historic service standards and identification of future capital requirements to service growth and related deductions and allocations;
 - Chapter 6 – Calculation of the development charges;
 - Chapter 7 – Development charge policy recommendations and rules; and
 - Chapter 8 – By-law implementation.
2. Development charges (D.C.) provide for the recovery of growth-related capital expenditures from new development. The D.C.A. is the statutory basis to recover these charges. The methodology is detailed in Chapter 4; a simplified summary is provided below:
 - 1) Identify amount, type and location of growth;
 - 2) Identify servicing needs to accommodate growth;
 - 3) Identify capital costs to provide services to meet the needs;
 - 4) Deduct:
 - Grants, subsidies and other contributions;
 - Benefit to existing development;
 - Statutory 10% deduction (soft services);
 - Amounts in excess of 10-year historic service calculation;
 - D.C. reserve funds (where applicable);

- 5) Net costs are then allocated between residential and non-residential benefit; and
 - 6) Net costs divided by growth to provide the D.C. charge.
3. The growth forecast (Chapter 3) on which the Region-wide development charge is based projects the following population, housing and non-residential floor area for the 10-year (2017-2026) and 25-year (2017-2041) periods.

Measure	10 Year 2017-2026	Water 2017-2041	Wastewater 2017-2041	25 Year 2017-2041
(Net) Population Increase	47,982	147,344	147,517	153,086
Residential Unit Increase	24,072	63,382	63,368	65,392
Non-Residential Gross Floor Area Increase (ft ²)	9,810,900	27,914,500	27,914,500	29,062,000

Source: Watson & Associates Economists Ltd. Forecast 2017

4. On July 6, 2012, the Region of Niagara passed By-law 62-2012 under the Development Charges Act, 1997, as amended (D.C.A.). The by-law imposes development charges on residential and non-residential uses. This by-law was amended via by-law 84-2015 to update the maps in Schedule D. The Region is undertaking a development charge public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for June 8, 2017 with adoption of the by-law scheduled for June 29, 2017.
5. The Region's development charges currently in effect are \$10,484 for single detached dwelling units for General Government, Emergency Medical Services, Police Services, Roads Services, Water Services, and Wastewater Services. Non-residential charges are \$12.12 for commercial developments, \$5.43 for industrial developments, \$5.68 for institutional developments, and \$3.65 for hotel/motel developments (per square foot) for the same services noted above. This report has undertaken a recalculation of the charge based on future identified needs (presented in Schedule ES-1 and Schedule ES-2 for residential and non-residential).

The proposed charges have been provided on a Region-wide basis for all services noted above, as well as Long-Term Care, Social Housing, P.O.A., Health, Social and Child Services, and Waste Diversion Services. Note that water and wastewater services are only imposed in urban serviced areas. The D.C.s are proposed to be phased-in in two steps; September 1, 2017 to August 31, 2019 and September 1, 2019 to August 31, 2022. The corresponding phase 1 single-detached unit charge is \$15,544. The phase 1 non-residential charges

The corresponding phase 2 single-detached unit charge is \$17,569. The phase 2 non-residential charges are \$11.11 for commercial developments, \$4.63 for industrial developments, \$7.95 for institutional developments (per sq.ft.) and \$7,052 per wind turbine.

6. The *Development Charges Act* 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:

Total gross expenditures planned over the next five years	\$ 653,969,681
Less:	
Benefit to existing development	\$ 299,321,352
Post planning period benefit	\$ 27,327,629
Ineligible re: Level of Service	\$ 170,000
Mandatory 10% deduction for certain services	\$ 5,523,382
Grants, subsidies and other contributions	\$ 54,155,714
Net Costs to be recovered from development charges	\$ 267,471,605

Hence, \$386.5 million (or an annual amount of \$77.3 million) will need to be contributed from taxes and rates, or other sources. Of this amount, \$27.33 million 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 \$653.97 million over the next five years, of which \$267.47 million (41%) is recoverable from development charges. Of this net amount, \$211.20 million is recoverable from residential development and \$56.27 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

7. 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 a 25-year forecast for areas which will receive these services:

- Wastewater Services – Treatment, Pumping, Linear and Wet Weather Reduction; and
- Water Services – Treatment, Pumping, Storage, and Linear.

The following services are calculated based on a 25-year Region-wide forecast:

- General Government;
 - Long Term Care;
 - Provincial Offences Act;
 - Health;
 - Social and Child Services;
 - Emergency Medical Services;
 - Social Housing; and
 - Waste Diversion.
8. A number of changes to the D.C. process need to be address as a result of Bill 73. These changes have been addressed throughout the report and in the updated draft by-law, as necessary. These items include:
- a. Area-rating: Council must consider the use of area specific charges.
 - b. Asset Management Plan for New Infrastructure: The D.C. background study must include an asset management plan that deals with all assets proposed to be funded, in whole or in part, by D.C.s. The asset management plan must show that the assets are financially sustainable over their full lifecycle.
 - c. 60-day Circulation Period: The D.C. background study must be released to the public at least 60-days prior to passage of the D.C. by-law.
 - d. Timing of Collection of Development Charges: The D.C.A. now required D.C.s to be collected at the time of the first building permit.
9. 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 J. These decisions may include:
- adopting the charges and policies recommended herein;
 - considering additional exemptions to the by-law;
 - considering phase-in or transition policies 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-1
Niagara Region
Schedule of Development Charges
September 1, 2017 – August 31, 2019

Service	RESIDENTIAL					NON-RESIDENTIAL			
	Single and Semi-Detached Dwelling	Apartments - 2+ Bedrooms	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units/Rooms	Commercial (per ft² of Gross Floor Area)	Industrial (per ft² of Gross Floor Area)	Institutional (per ft² of Gross Floor Area)	Wind Turbines
Municipal Wide Services:									
Services Related to a Highway	6,297	4,371	2,596	4,587	2,380	4.45	1.85	3.17	6,297
Police Services	376	261	155	274	142	0.27	0.12	0.20	376
General Government	212	147	87	154	80	0.17	0.07	0.13	212
Long Term Care	486	337	200	354	184	0.14	0.06	0.10	-
Provincial Offences Act	35	24	14	25	13	0.03	0.01	0.02	-
Health	107	74	44	78	40	0.04	0.01	0.02	-
Social and Child Services	-	-	-	-	-	-	-	-	-
Emergency Medical Services	121	84	50	88	46	0.03	0.01	0.03	121
Social Housing	274	190	113	200	104	-	-	-	-
Waste Diversion	88	61	36	64	33	0.07	0.04	0.04	-
Total Municipal Wide Services	7,995	5,549	3,295	5,824	3,022	5.20	2.17	3.72	7,005
Urban Services									
Wastewater Services	4,420	3,068	1,823	3,220	1,671	3.18	1.32	2.27	-
Water Services	3,129	2,172	1,290	2,280	1,183	2.25	0.94	1.61	-
Total Urban Services	7,549	5,240	3,113	5,500	2,854	5.43	2.26	3.88	-
GRAND TOTAL RURAL AREA	7,995	5,549	3,295	5,824	3,022	5.20	2.17	3.72	7,005
GRAND TOTAL URBAN AREA	15,544	10,789	6,408	11,324	5,876	10.63	4.43	7.60	7,005

Table ES-2
Niagara Region
Schedule of Development Charges
September 1, 2019 – August 31, 2022

Service	RESIDENTIAL					NON-RESIDENTIAL			
	Single and Semi-Detached Dwelling	Apartments - 2+ Bedrooms	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units/Rooms	Commercial (per ft² of Gross Floor Area)	Industrial (per ft² of Gross Floor Area)	Institutional (per ft² of Gross Floor Area)	Wind Turbines
Municipal Wide Services:									
Services Related to a Highway	6,297	4,371	2,596	4,587	2,380	4.45	1.86	3.18	6,297
Police Services	377	262	155	275	143	0.27	0.12	0.20	377
General Government	212	147	87	154	80	0.19	0.07	0.13	212
Long Term Care	1,212	841	500	883	458	0.34	0.14	0.25	-
Provincial Offences Act	48	33	20	35	18	0.05	0.02	0.03	-
Health	148	103	61	108	56	0.04	0.02	0.03	-
Social and Child Services	-	-	-	-	-	-	-	-	-
Emergency Medical Services	166	115	68	121	63	0.04	0.02	0.03	166
Social Housing	1,199	832	494	873	453	-	-	-	-
Waste Diversion	362	251	149	263	137	0.31	0.12	0.22	-
Total Municipal Wide Services	10,020	6,955	4,130	7,299	3,788	5.68	2.37	4.07	7,052
Urban Services									
Wastewater Services	4,420	3,068	1,823	3,220	1,671	3.18	1.32	2.27	-
Water Services	3,129	2,172	1,290	2,280	1,183	2.25	0.94	1.61	-
Total Urban Services	7,549	5,240	3,113	5,500	2,854	5.43	2.26	3.88	-
GRAND TOTAL RURAL AREA	10,020	6,955	4,130	7,299	3,788	5.68	2.37	4.07	7,052
GRAND TOTAL URBAN AREA	17,569	12,195	7,243	12,799	6,642	11.11	4.63	7.95	7,052

1. Introduction

1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the *Development Charges Act, 1997* (s.10), as amended (D.C.A.) and, accordingly, recommends new development charges and policies for the Region of Niagara.

The Region retained Watson & Associates Economists Ltd. (Watson), to undertake the development charges (D.C.) study process throughout 2016 and 2017. Watson worked with Regional staff as well as engineering consultants (GM BluePlan Engineering Consultants Limited and IBI Group) in preparing the D.C. analysis and policy recommendations.

This development charge background study, containing the proposed development charge 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 development charge 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 J).

In addition, the report is designed to set out sufficient background on the legislation (Chapter 4), Niagara's current D.C. policy (Chapter 2) and the policies underlying the proposed by-law (Chapter 7), 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 8, 2017. 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 development charges.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on April 28, 2017.

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

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

Figure 1-1 outlines the schedule of the D.C. process that has been undertaken and the D.C. public process to be followed, including the by-law adoption process.

Figure 1-1
Schedule of Key Development Charge Process Dates for the Region of Niagara

1. Data collection, staff review, engineering work, D.C. calculations and policy work	August 2016 – April 2017
2. Internal Stakeholder meetings	July - December 2016
3. Regional Development Charges Task Force Meetings	1. January 17, 2017 2. April 11, 2017
4. Local Area Municipalities (Treasurers, Planners, Economic Development Officers, and Chief Building Officials) Meetings	1. October 2016 2. March 2, 2017 3. April 4, 2017 4. April 26, 2017
5. Chief Building Officials Meetings	1. December 2016 2. April 7, 2017
6. Public Information Centres	1. November 30, 2017 2. December 6, 2017 3. December 7, 2017 4. December 8, 2017
7. Non-Governmental Stakeholder Meetings	1. February 14, 2017 2. April 4, 2017 3. April 11, 2017
8. Corporate Services Committee	1. May 10, 2017
9. Public meeting advertisement placed in newspaper(s)	May 4, 2017 (Niagara This Week) and September 7, 2017 (Niagara This Week)
10. Background study and proposed by-law available to public	1. April 28, 2017 (original background study) 2. May 5, 2017 (correction to background study) 3. October 4, 2017 (addendum #1) 4. December 5, 2017 (addendum #2) 5. December 6, 2017 (consolidated report)

11. Public meetings of Council	1. June 8, 2017 2. October 5, 2017*
12. Council/committee considers adoption of background study and passage of by-law	1. June 29, 2017 2. July 20, 2017 (adopted By-law 2017-68) 3. October 18, 2017 4. October 26, 2017 5. November 8, 2017 6. November 16, 2017 (adopted By-law 2017-98)
13. Notice given of by-law passage	By 20 days after passage
14. Last day for by-law appeal	40 days after passage
15. Region makes pamphlet available (where by-law not appealed)	By 60 days after in force date

**Subsequent to passage of By-law 2017-68, staff determined that By-law 2017-68 should be amended based on input from stakeholders*

1.3 Changes to the Development Charges Act: Bill 73

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

1.3.1 Area Rating

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

- 1) Section 2(9) of the Act now requires a municipality to implement area-specific D.C.s for either specific services which are prescribed and/or for specific municipalities which are to be regulated. (Note that at this time, no municipalities or services are prescribed by the Regulations.)
- 2) Section 10(2)c.1 of the D.C.A. requires that, "the development charges background study shall include consideration of the use of more than one development charge by-law to reflect different needs for services in different areas."

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

Presently, the Region's by-law includes area rated charges for water and wastewater services. These charges are for recovery of costs specific to the urban serviced areas that benefit directly from these water and/or wastewater systems. All other Region services are recovered based on a uniform, Region-wide basis. On January 17, 2017, discussions were undertaken with the D.C. Taskforce to consider area rating. At this meeting, Watson provided a report on Region-wide vs. Area-specific D.C.'s outlining general perspectives of both approaches. Several reasons why area-specific charges have not been imposed include:

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 which can be collected from all developing landowners. Section 4(4) of O. Reg. 82/98 provides that "...if a development charge by-law applies to a part of the municipality, the level of service and average level of service cannot exceed that which would be determined if the by-law applied to the whole municipality." Put in layman terms, the average service standard multiplied by the growth within the specific area, would establish an area specific ceiling which would significantly reduce the total revenue recoverable for the Region, hence potentially resulting in D.C. revenue shortfalls and impacts on property taxes.
2. Extending on item 1, attempting to impose an area charge potentially causes equity issues in transitioning from a Region-wide approach to an area specific approach. For example, if all services were now built (and funded) within area A (which is 75% built out) and this was funded with some revenues from areas B and C, moving to an area rating approach would see Area A contribute no funds to the costs of services in Areas B & C. The development charges would be lower in Area A (as all services are now funded) and higher in B and C. As well, funding shortfalls may then potentially encourage the Region to provide less services to B and C due to reduced revenue.
3. Many services which are provided (roads, police, E.M.S., etc.) are not restricted to one specific area and are often used by all residents. For example, a Regional road in St. Catharines may not only be used by residents in the City. Residents from other municipalities in the Region may use this road to travel to and from work, other residents' homes, or businesses in the area, hence usage of any one

of the Regional roads identified in the capital program cannot be solely attributed to one area.

For the reasons noted above and the additional information provided to the D.C. Taskforce in January, 2017, the D.C. Taskforce directed staff and Watson to calculate the D.C. on a Region-wide basis. It is recommended that Council continue the D.C. approach to calculate the charges on a uniform Region-wide basis for all services except water and wastewater which would continue to be calculated on an urban-wide basis.

1.3.2 Asset Management Plan for New Infrastructure

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

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

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

This D.C. study is being provided to the public on April 28, 2017 to ensure the new requirements for release of the study is met.

1.3.4 Timing of Collection of Development Charges

The D.C.A. has been refined by Bill 73 to require that D.C.s are collected at the time of the first building permit. For the majority of development, this will not impact the Region's present process. However, there may be instances where several building

permits are to be issued and either the size of the development or the uses will not be definable at the time of the first building permit. In these instances, the Region may enter into a delayed payment agreement in order to capture the full development.

1.3.5 Other Changes

It is also noted that a number of other changes were made through Bill 73 and O.Reg. 428/15 including changes to the way in which Transit D.C. service standards are calculated, the inclusion of Waste Diversion, and the ability for collection of additional levies. Transit services have not been included in this D.C. background study, however, Waste Diversion services have been included. Transit was not included in this analysis due to the additional engineering information required as a result of Bill 73. The methodology required to include Transit services in the D.C. background study requires forecasts and ridership capacity for all modes of transit over the 10 years, identification of excess capacity which exists at the end of 10 years, identification of whether new ridership is from existing or planned development. This would require additional engineering work and analysis. Further, a review of the Region's inter-municipal transit is currently being undertaken. Therefore, it is suggested that Transit services be analysed in the Region's next D.C. background study process or alternatively, could be considered earlier when the required engineering data is available.

2. Current Region of Niagara Policy

2.1 Schedule of Charges

On July 6, 2012, the Region of Niagara passed By-law 62-2012 under the D.C.A. This by-law was amended via by-law 84-2015 to amend the maps in Schedule D.

This by-law, as amended, imposes development charges for residential and non-residential uses. The table below provides the rates currently in effect, as at September 1, 2016.

Table 2-1
Region of Niagara
Development Charges as at September 1, 2016

Service	Residential				Non-Residential			
	Single Detached	Multiples	Apartments	Per Dwelling Room	Commercial per ft ²	Industrial per ft ²	Institutional per ft ²	Hotel/Motel per ft ²
Roads	5,743	2,957	1,992	1,251	6.34	2.86	2.98	1.91
Police Services	265	192	148	88	0.35	0.15	0.16	0.10
Emergency Medical Services	78	56	44	25	0.03	0.01	0.01	0.01
General Government	83	58	46	27	0.10	0.05	0.05	0.03
Sub-total	6,169	3,263	2,230	1,391	6.82	3.07	3.20	2.05
Wastewater Services	3,349	2,415	1,879	1,097	4.02	1.79	1.88	1.21
Water Services	966	697	542	316	1.28	0.57	0.60	0.39
Total	10,484	6,375	4,651	2,804	12.12	5.43	5.68	3.65

2.2 Services Covered

The following services are covered under By-law 62-2012, as amended:

- Roads;
- General Government;
- Emergency Medical Services;
- Police Services;
- Water Services; and
- Wastewater Services.

2.3 Timing of D.C. Calculation and Payment

Development charges are payable at the time of building permit issuance and are collected by the local tier municipalities. 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.

2.4 Indexing

Rates shall be indexed on the anniversary of the effective date of the D.C. by-law (every September 1st) by the percentage change recorded in the Statistics Canada Quarterly Non-residential Building Construction Price Index (catalogue number 62-007).

2.5 Redevelopment Allowance - Demolitions

If application is made for a building permit in respect of a parcel of land upon which a premise existed within five years prior to the date of such application, but which premise has been demolished or destroyed before the date of such application, then the amount of development charges payable upon issuance of the said building permit shall be reduced to the net amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the demolished or destroyed premise, provided that such reduction shall not exceed the development charges otherwise payable. For purposes of this subsection, “net” means the excess of the development charges for premises constructed, over the development charges for premises demolished or destroyed.

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 premise 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 premise on such parcel has indeed been so demolished (and the particulars of such demolished premise), 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 premise demolished, provided that such reduction shall not exceed the development charges actually paid.

2.6 Redevelopment Allowance – Conversions

If a development includes the conversion of a premise 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.

2.7 Exemptions

The following non-statutory exemptions are provided under By-law 62-2012:

- Granny flats;
- Parking structures;
- Lands and buildings used for agricultural use; notwithstanding this provision, a development charge shall be imposed in relation to agricultural use unless the owner of the fee simple of the land intends to actually use and occupy the land for such respective agricultural use;
- that portion of a place of worship which is used exclusively as a place of worship for religious services and any reception and meeting areas used in connection with, or integral to, the worship space, including hallways, attached meeting rooms and lobbies and excluding, but not limited to, areas such as office, storage buildings, kitchen, classrooms, fellowship hall and library;
- lands and buildings which are used or intended to be used as municipal housing project 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* (No. 34-2004), all as may be amended;
- lands and buildings used for affordable housing projects that receive funding through an agreement with Niagara Regional Housing, provided that the owner of the lands continues to use the lands and buildings for affordable housing. The owner shall be required to enter into an agreement with the Region under section 27 of the Act, in a form satisfactory to the Commissioner of Integrated Community Planning and Director of Legal Services, notice of which the owner shall register on the title to the lands at its sole cost and expense, with the intention that the provisions shall bind and run with title to the lands. If the owner ceases to use the lands and buildings for affordable housing, the development charges shall become immediately due and payable;
- land owned, used and occupied by a charitable institution, provided that the charitable institution continues to own, use and occupy the lands for the relief

of the poor for a period of three (3) years from the date that the development charges would otherwise be payable under this By-law or the Act (the “deferral period”). The charitable institution shall be required to enter into an agreement with the Region under section 27 of the Act, in a form satisfactory to the Commissioner of Integrated Community Planning and Director of Legal Services, notice of which the charitable institution shall register on the title to the lands at its sole cost and expense, with the intention that the provisions shall bind and run with title to the lands. If the charitable institution ceases to own, use or occupy the lands for the relief of the poor within the deferral period, the development charges shall become immediately due and payable; and

- gas station canopies.

2.8 Reductions

- Designated Exemption Areas:
 - The applicable development charge shall be reduced by 50% for any development (other than agricultural) for the following:
 - CIP area developments;
 - Brownfields developments; and
 - Long-term care homes developments.
- The remaining 50% of applicable development charges may be reduced as approved by Council of the Region, where, in the opinion of Council, the development includes three or more of the following features:
 - Intensification of an existing use;
 - Creation of mixed uses;
 - Contribution towards the creation of a walkable neighbourhood character;
 - Creation of a range of housing opportunities and choices;
 - Reduced setbacks from roadways; and
 - Other features and program details in the Smart Growth Program.

3. Anticipated Development in the Region of Niagara

3.1 Requirement of the Act

Chapter 4 provides the methodology for calculating a development charge 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 development charge that may be imposed, it is a requirement of Section 5 (1) of the D.C.A. that “the anticipated amount, type and location of development, for which D.C’s 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 Niagara Region will be required to provide services, over a 10-year and 25-year (2041) time horizon.

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

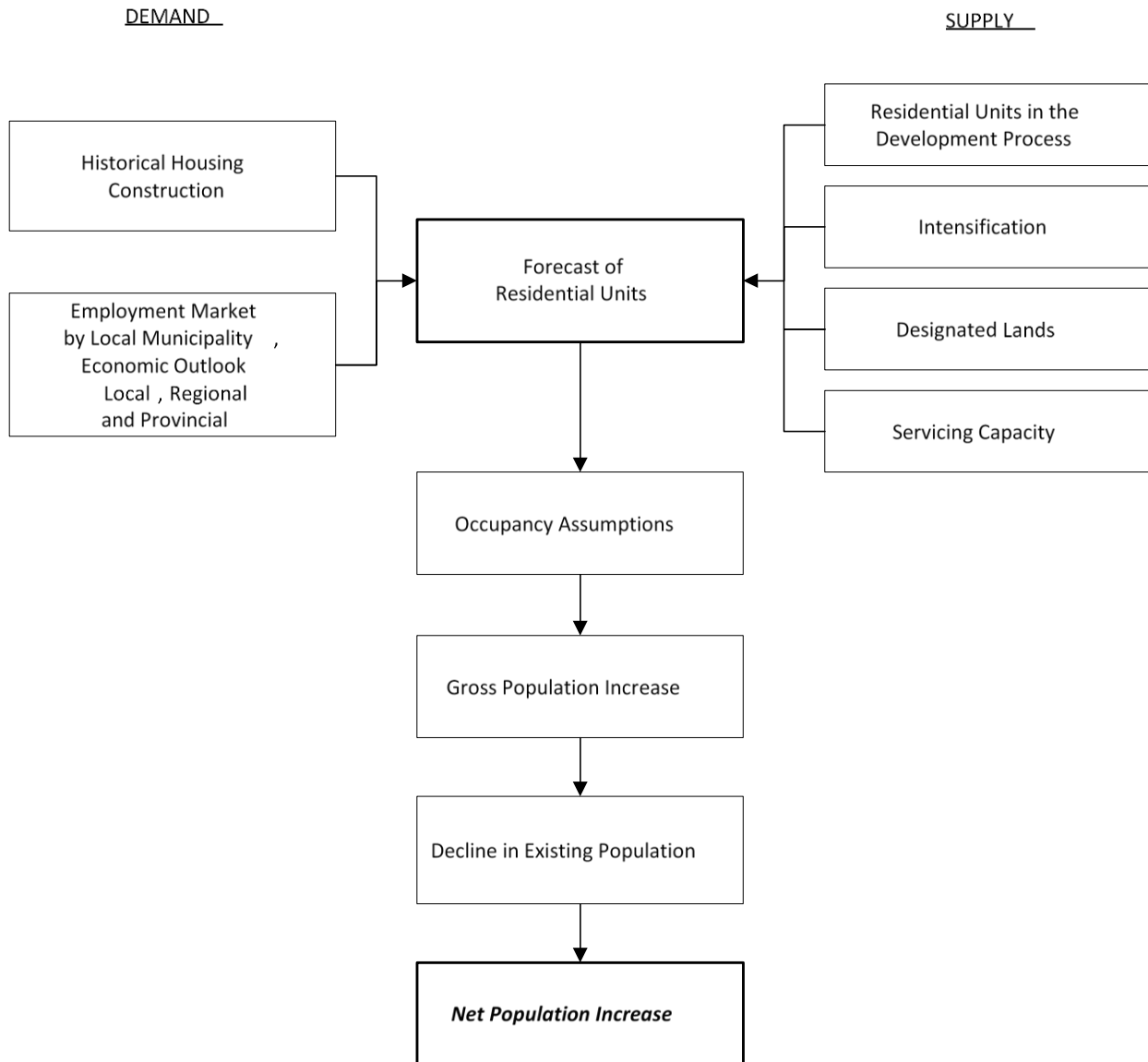
The D.C. growth forecast has been derived from the Draft Niagara Region Municipal Comprehensive Review (M.C.R.) Strategic Growth Option, November 2016. In compiling the growth forecast, the following information sources were also consulted to help assess residential and non-residential development potential for the Region over the forecast period; including:

- A review of Niagara Regions Master Plan Strategy Update regarding Regional water and wastewater capacity;
- A review of historical development activity; and
- Discussions with Regional staff regarding the anticipated residential and non-residential development trends for Niagara Region.

3.3 Summary of Growth Forecast

A detailed analysis of the residential and non-residential growth forecast is provided in Appendix A. 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 herein, with additional details provided in Appendix A.

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



As identified in Table 3-1 and Schedule 1 of Appendix A, the Niagara Region population is anticipated to reach approximately 489,120 by 2027 and 594,220 by 2041. This represents an increase of 47,980 persons and 153,090 persons, respectively, over the 10-year and 25-year forecast periods. The population forecast excludes the net Census undercount, which is estimated at approximately 2.6%. The Census undercount represents the net number of persons missed during Census enumeration. In calculating the D.C. for Niagara Region, the net Census undercount has been excluded from the growth forecast. Accordingly, all references provided herein to the population forecast exclude the net Census undercount.

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

- The forecast unit mix for the Region was derived from the Niagara Region M.C.R. Strategic Growth Option.
- Based on the above, the 25-year (2017-2041) household growth forecast is comprised of a housing unit mix of approximately 49% low density (single detached and semi-detached), 30% medium density (multiples except apartments) and 21% high density (bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments).

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

- *Schedule 2* summarizes the anticipated amount, type and location of development for Niagara Region by development location. The percentage of forecast housing growth between 2017 and 2041 by urban serviced area and remaining rural area is summarized below.
 - Serviced - 97%
 - Unserviced - 3%

Table 3-1
Region of Niagara
Residential Growth Forecast Summary

Year		Population (Excluding Census Undercount)	Population (Including Census Undercount) ¹	Housing Units					
				Singles & Semi- Detached	Multiple Dwellings ²	Apartments ³	Other	Total Households	Person Per Unit (PPU)
Historical	<i>Mid 2001</i>	410,574	421,480	122,770	12,375	26,425	845	162,415	2.53
	<i>Mid 2006</i>	427,421	438,770	124,025	15,860	28,445	1,170	169,500	2.52
	<i>Mid 2011</i>	431,346	442,800	128,795	16,695	28,285	915	174,690	2.47
Forecast	<i>Early 2017</i>	441,135	452,850	134,188	19,009	29,497	915	183,608	2.40
	<i>Early 2027</i>	489,117	502,110	145,488	26,393	34,884	915	207,680	2.36
	<i>Mid 2041</i>	594,221	610,000	166,008	38,479	43,599	915	249,000	2.39
Incremental	Mid 2001 - Mid 2006	16,847	17,290	1,255	3,485	2,020	325	7,085	
	Mid 2006 - Mid 2011	3,925	4,030	4,770	835	-160	-255	5,190	
	Mid 2011 - Early 2017	9,789	10,050	5,393	2,314	1,212	0	8,918	
	Early 2017 - Early 2027	47,982	49,260	11,300	7,384	5,387	0	24,072	
	Early 2017 - Mid 2041	153,086	157,150	31,820	19,470	14,102	0	65,392	

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Census Undercount estimated at approximately 2.6%. Note: Population including the net Census undercount has been rounded.
2. Includes townhomes and apartments in duplexes.
3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

3. Planning Period

- Short- and longer-term time horizons are required for the D.C. process. The D.C.A. limits the planning horizon for certain services, such as E.M.S., waste diversion and social and child services, to a 10-year planning horizon. Police Services and Services Related to a Highway utilize a 25-year forecast period.

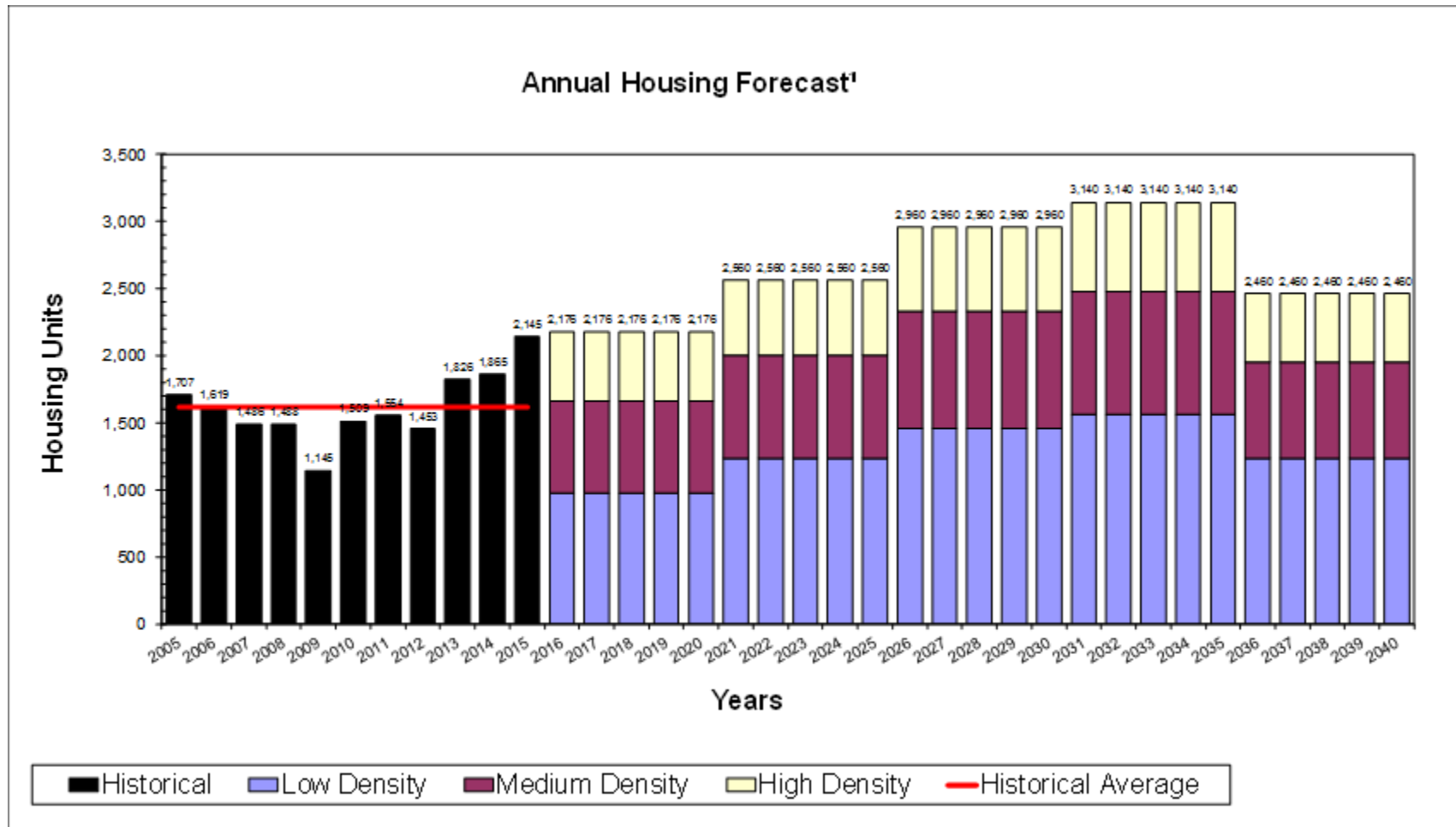
4. Population in New Units (Appendix A - Schedules 2 through 5)

- The number of housing units to be constructed in Niagara Region during the short-term and long-term periods are presented on Figure 3-2. Over the 25-year forecast periods, the Region is anticipated to average 2,616 new housing units per year.
- Population in new units is derived from Schedules 3, 4 and 5, which incorporate historical development activity, anticipated households (see household mix discussion) and average persons per unit by dwelling type for new units.
- Schedule 7 summarizes the average number of persons per unit (P.P.U.) for the new housing units by age and type of dwelling, based on 2011 custom Census data for the Region. The forecast average P.P.U. for new households over the 25-year forecast period is:
 - Low density: 2.91
 - Medium density: 2.12
 - High density: 1.62

5. Existing Units and Population Change (Appendix A - Schedules 2, 3, 4, and 5)

- Existing households as of 2017 have been derived from the Niagara Region M.C.R. Strategic Growth Option, plus recent housing development activity since 2015.
- The decline in average occupancy levels for existing housing units is calculated in Schedules 2 through 5, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2017 to 2041 forecast period is estimated at approximately 3,460.

Figure 3-2



6. Employment (Appendix A, Schedules 9a through 9d)

- Employment projections 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 from home (W.F.H.), which are considered individually below.
- The estimated 2017 employment base for Niagara Region has been derived from the Niagara Region M.C.R. Strategic Growth Option.
- The estimated 2017 employment base for Niagara Region by place of work is outlined in Schedule 9a. The 2017 employment base is comprised of the following sectors:
 - 3,945 primary (approx. 2%);
 - 12,700 W.F.H. employment (approx. 7%);
 - 40,049 industrial (approx. 22%);
 - 84,396 commercial/population-related (approx. 46%); and
 - 41,093 institutional (approx. 23%).
- The estimated 2017 employment base for Niagara Region by usual place of work, including W.F.H., is approximately 182,180 jobs. An additional 22,400 jobs have been identified for Niagara Region as having No Fixed Place of Work (N.F.P.O.W.).¹ The total employment including N.F.P.O.W. in 2017 is approximately 204,580.
- 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. calculation. W.F.H. and N.F.P.O.W. are not captured in the non-residential gross floor area (G.F.A.) calculation. Total employment for Niagara Region (excluding W.F.H. and N.F.P.O.W. employment) is anticipated to reach approximately 185,190 by 2027 and 218,330 by 2041. This represents an employment increase of 15,707 and 48,846 additional jobs over the 10-year and 25-year forecast periods, respectively.

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."

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

- Square footage estimates were calculated in Schedule 9b based on the following employee density assumptions:¹
 - 1,200 sq.ft. per employee for industrial;
 - 500 sq.ft. per employee for commercial/population-related; and
 - 700 sq.ft. per employee for institutional employment.
- The Region-wide incremental non-residential G.F.A. increase is anticipated to be approximately 9,810,900 sq.ft. over the 10-year forecast period and 29,060,000 sq.ft. over the 25-year forecast period.
- In terms of percentage growth, the 25-year incremental G.F.A. forecast by sector is broken down as follows:
 - industrial – approx. 18.66%;
 - commercial/population-related – approx. 58.77%; and
 - institutional – approx. 22.57%.

¹ Based on Watson & Associates Economists Ltd. employment surveys.

4. The Approach to Calculation of the Charge

4.1 Introduction

This chapter addresses the requirements of s.s.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 service categories which are provided within the Region.

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

4.3 Increase in the Need for Service

The development charge 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, s.s.5(1)3, which requires that Regional 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.

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.

Figure 4-1
The Process of Calculating a Development Charge under the D.C.A.

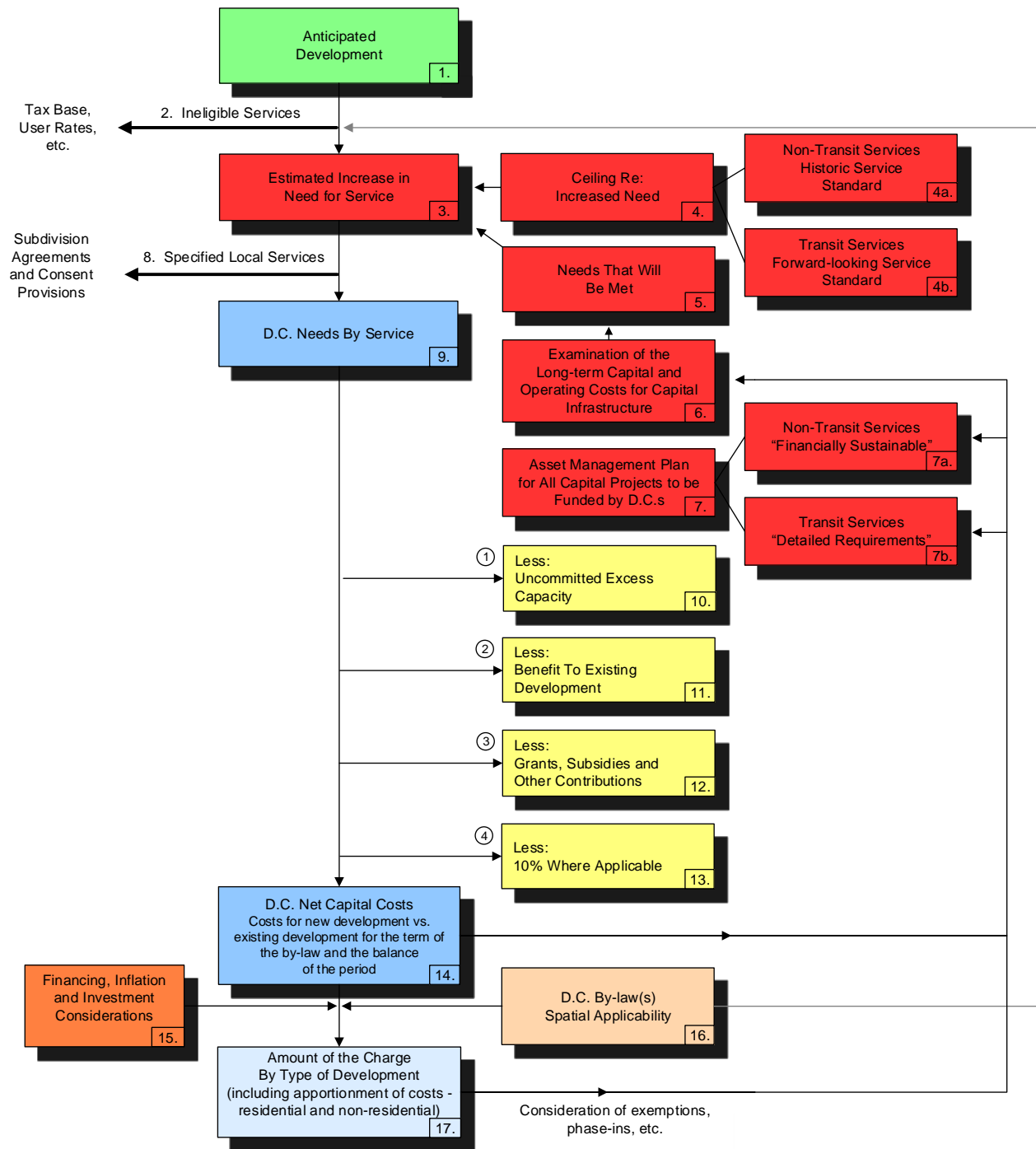


Table 4-1
Categories of Municipal Services to be Addressed as Part of the Calculation

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 No Yes No Yes Yes Yes	1.1 Arterial roads 1.2 Collector roads 1.3 Bridges, Culverts and Roundabouts 1.4 Local municipal roads 1.5 Traffic signals 1.6 Sidewalks and streetlights 1.7 Active Transportation	100 100 100 0 100 100 100
2. Other Transportation Services	No No n/a n/a Yes Yes n/a n/a	2.1 Transit vehicles & facilities 2.2 Other transit infrastructure 2.3 Municipal parking spaces - indoor 2.4 Municipal parking spaces - outdoor 2.5 Works Yards 2.6 Rolling stock ¹ 2.7 Ferries 2.8 Airport	90 90 90 90 100 100 90 90
3. Stormwater Drainage and Control Services	n/a n/a n/a	3.1 Main channels and drainage trunks 3.2 Channel connections 3.3 Retention/detention ponds	100 100 100
4. Fire Protection Services	n/a n/a n/a	4.1 Fire stations 4.2 Fire pumpers, aerials and rescue vehicles 4.3 Small equipment and gear	100 100 100
5. Outdoor Recreation Services (i.e. Parks and Open Space)	Ineligible n/a n/a n/a n/a n/a	5.1 Acquisition of land for parks, woodlots and E.S.A.s 5.2 Development of area municipal parks 5.3 Development of district parks 5.4 Development of Region-wide parks 5.5 Development of special purpose parks 5.6 Parks rolling stock ¹ and yards	0 90 90 90 90 90

¹with 7+ year life time

*same percentage as service component to which it pertains
 computer equipment excluded throughout

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
6. Indoor Recreation Services	n/a	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	90
	n/a	6.2 Recreation vehicles and equipment ¹	90
7. Library Services	n/a	7.1 Public library space (incl. furniture and equipment)	90
	n/a	7.2 Library Vehicles ¹	90
	n/a	7.3 Library materials	90
8. Electrical Power Services	Ineligible	8.1 Electrical substations	0
	Ineligible	8.2 Electrical distribution system	0
	Ineligible	8.3 Electrical system rolling stock ¹	0
9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	9.1 Cultural space (e.g. art galleries, museums and theatres)	0
	Ineligible	9.2 Tourism facilities and convention centres	0
10. Wastewater Services	Yes	10.1 Treatment plants	100
	Yes	10.2 Sewage trunks	100
	Yes	10.3 Lining Stations	100
	n/a	10.4 Local systems	0
	No	10.5 Vehicles and equipment	100
11. Water Supply Services	Yes	11.1 Treatment plants	100
	Yes	11.2 Distribution systems	100
	Yes	11.3 Pumping Stations	100
	Yes	11.4 Storage	100
	n/a	11.5 Local systems	0
	No	11.6 Vehicles and equipment	100
12. Waste Management Services	Yes	12.1 Collection, transfer vehicles and equipment related to waste diversion	90
	Ineligible	12.2 Collection, transfer vehicles and equipment related to landfills and incineration	0

¹with 7+ year life time

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
	Ineligible Yes Yes	12.3 Landfills and incineration facilities 12.4 Other waste diversion facilities 12.5 Waste diversion containers	0 90 90
13. Police Services	Yes Yes Yes	13.1 Police detachments 13.2 Police rolling stock ¹ 13.3 Small equipment and gear	100 100 100
14. Long-term Care	Yes	14.1 Long-term Care facility space	90
15. Health	Yes No	15.1 Health department space 15.2 Health department vehicles ¹	90 90
16. Social Housing	Yes	16.1 Social Housing space	90
17. Provincial Offences Act (P.O.A.)	Yes	17.1 P.O.A. facility space	90
18. Social and Child Services	Yes	18.1 Social and Child Services facility space	90
19. Ambulance	Yes Yes	19.1 Ambulance station space 19.2 Vehicles ¹	90 90
20. Hospital Provision	Ineligible	20.1 Hospital capital contributions	0
21. Provision of Head-quarters for the General Administration of Municipalities and Area Municipal Boards	Ineligible Ineligible Ineligible	21.1 Office space 21.2 Office furniture 21.3 Computer equipment	0 0 0

¹with 7+ year life time

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
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

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.

4.5 Capital Forecast

Paragraph 7 of s.s.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 development charge background study.

In order for an increase in need for service to be included in the D.C. calculation, Regional Council must indicate "...that it intends to ensure that such an increase in need will be met" (s.s.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 s.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 para. 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." s.s.17 para. 4 of the same Regulation indicates that "...the value of the credit cannot be recovered from future development charges," if the credit pertains to an ineligible service. This implies that a credit for eligible services can be recovered from future development charges. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs. Outstanding credit obligations included in the 2012 D.C. background study have been funded, hence there are no existing credits to be included in the current D.C. calculations.

4.7 Eligible Debt and Committed Excess Capacity

Section 66 of the D.C.A., states that, for the purposes of developing a development charge by-law, a debt incurred with respect to an eligible service may be included as a capital cost, subject to any limitations or reductions in the Act. Similarly, s.18 of O.Reg. 82/98 indicates that debt with respect to an ineligible service may be included as a capital cost, subject to several restrictions.

In order for such costs to be eligible, two conditions must apply. First, they must have funded excess capacity which is able to meet service needs attributable to the anticipated development. Second, the excess capacity must be "committed," that is, either before or at the time it was created, Council must have expressed a clear intention that it would be paid for by development charges or other similar charges; for

example, this may have been done as part of previous development charge processes. It is noted that projects which have been debentured to-date and to which the principal and interest costs need to be recovered are included within the capital detail sheets. It is also noted that there are a number of water, wastewater, and road projects that have been completed in past years but have yet to be fully funded from D.C.s. The outstanding growth-related funding of these projects has been included in the D.C. calculation.

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 8 of subsection 5(1).”

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

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

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

The Region’s Development Charge Reserve Fund Balance by service at December 31, 2016 is as follows:

¹ Reserve balance to be combined with Administration Studies.

Service	Totals
Roads	\$26,221,009
Police Services	(\$73,926)
Administration	\$651,551
Ambulance	\$734,936
Wastewater Services	\$19,112,554
Water Services	\$14,774,128
Total	\$61,420,252

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 as follows:

4.9.1 Reduction Required by Level of Service Ceiling

This is designed to ensure that the increase in need included in 4.3 does “...not include an increase that would result in the level of service (for the additional development increment) exceeding the average level of the service provided in the Municipality over the 10-year period immediately preceding the preparation of the background study...” O.Reg. 82.98 (s.4) goes further to indicate that “...both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service.”

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

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 s.s.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" (discussed above in 4.6).

"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

This step involves a further reduction in the need, by the extent to which such an increase in service would benefit existing development. The level of services cap in 4.4 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 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 recreation facilities, services related to a highway, health, social, and child services, etc., the service is typically provided on a municipal-wide system basis. For example, facilities of the same type may provide different services (i.e. leisure pool vs. competitive pool), different programs (i.e. hockey vs. figure skating) and different time availability for the same service (i.e. leisure skating available on Wednesday in one arena and Thursday in another). As a result, residents will travel to different facilities to access the services they want at the times they wish to use them,

and facility location generally does not correlate directly with residence location. Even where it does, displacing users from an existing facility to a new facility frees up capacity for use by others and generally results in only a very limited benefit to existing development. Further, where an increase in demand is not met for a number of years, a negative service impact to existing development is involved for a portion of the planning period.

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 s.6).

4.9.5 The 10% Reduction

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

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

5. Development Charge Eligible Cost Analysis by Service

5.1 Introduction

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

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

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

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

New services have been incorporated into the D.C. study when compared to the previous D.C. study. The 10-year services included in the previous study were; E.M.S, and General Government. The additional 10-year services included in this background study are Provincial Offences Act, Long Term Care, Health Services, Social and Child Services, Social Housing, and Waste Diversion.

5.2.1 Provincial Offences Act (P.O.A.) Space

The Region currently provides facility space totalling 21,622 sq.ft. for P.O.A. space. Over the historical 10-year period, this space equates to 50 sq.ft. of space per 1,000 residents or \$29 per capita. This level of investment provides the Region with \$1,403,474 for eligible future D.C. funding over the 10-year forecast period.

It has been identified that additional space will be required in the future to provide P.O.A. services required for growth. The Region has identified a new P.O.A. facility to be constructed in Welland which will provide approximately 20,400 sq.ft. of space. The total cost identified is \$12.4 million. As this new facility will replace facilities in Welland,

Niagara Falls, and Fort Erie, which currently have a combined total of 16,709 sq.ft. of space, approximately \$10.16 million is attributable to existing benefit. A further deduction of \$1.23 million has been applied for the amount that is attributable to growth post 2026. Further, a provision of \$390,000 has been identified to expand service space in other areas of the Region to service the anticipated growth over the forecast period. Therefore, the amount, after the 10% mandatory deduction, that has been included in the D.C. calculations is \$1,259,820.

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

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Provincial Offences Act Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share 75%	Non- Residential Share 25%
	2017-2026												
1	New Welland POA - 445 East Main Street Welland - Owned	2017	12,400,000	1,234,200		11,165,800	10,156,000		1,009,800	100,980	908,820	684,687	224,133
2	Provision for Additional Space	2022-2026	390,000	-		390,000	-		390,000	39,000	351,000	264,436	86,564
	Total		12,790,000	1,234,200	-	11,555,800	10,156,000	-	1,399,800	139,980	1,259,820	949,123	310,697

5.2.2 General Government

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

- Official plan;
- Peer Street Study;
- Waste Diversion Long Term Strategic Plans;
- Police Master Plan;
- Inter-Municipal Transit Plan;
- Development Charges Studies; and
- Other development related studies.

The gross capital cost of these studies is approximately \$7.5 million, of which \$1.07 million is attributable to existing benefit and 1.2 million benefits growth in the post 10 year forecast period. Other deductions in the amount of \$210,000 have been made from the waste diversion studies to account for the amount of the studies related to landfill and incineration of waste. The net growth-related capital cost, after the mandatory 10% deduction and the application of the existing reserve balance of \$651,551, is \$5,527,199 and has been included in the development charge.

These costs have been allocated 75% residential and 25% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: General Government

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2017-2026											75%	25%
1	Development Related Studies	2017-2021	1,610,000	-		1,610,000	-		1,610,000	161,000	1,449,000	1,091,647	357,353
2	Development Related Studies	2022-2026	1,610,000	-		1,610,000	-		1,610,000	161,000	1,449,000	1,091,647	357,353
3	Official Plan	2018	3,000,000	-		3,000,000	750,000		2,250,000	225,000	2,025,000	1,525,594	499,406
4	Peer Street Study (Social Services)	2017	250,000	-		250,000	-		250,000	25,000	225,000	169,510	55,490
	Waste Diversion:												
5	Long Term Strategic Plan	2017-2019	400,000	-	140,000	260,000	-		260,000	26,000	234,000	176,291	57,709
6	Long Term Strategic Plan Update	2024	200,000	-	70,000	130,000	-		130,000	13,000	117,000	88,145	28,855
7	Police Master Plan	2017-2026	50,000	-		50,000	25,000		25,000		25,000	18,834	6,166
8	Provision for Additional Growth Studies related to EMS, Health, Long Term Care, POA, & Social Housing	2017-2026	300,000	-		300,000	-		300,000	30,000	270,000	203,413	66,587
9	Inter - Municipal Transit Service Plan	2021-2041	1,675,000	1,200,000		475,000	47,500		427,500	42,750	384,750	289,863	94,887
10	Reserve Fund Adjustment						651,551		(651,551)		(651,551)	(490,865)	(160,686)
	Total		9,095,000	1,200,000	210,000	7,685,000	1,474,051	-	6,210,949	683,750	5,527,199	4,164,080	1,363,119

5.2.3 Long Term Care

With respect to Long Term Care homes, there are currently 16 facility spaces provided by the Region. In total the Region has 628,279 sq.ft. of building space. The facilities have provided residents with space equating to 1.45 sq.ft. or \$613 per capita over the historical 10-year period. This level of investment provides the Region with \$29,423,522 for eligible future D.C. funding over the 10-year forecast period.

The Region has identified a long-term care home redevelopment which will replace three existing facilities in Niagara-on-the-Lake, St. Catharines, and Fort Erie. The total cost of the redevelopment is estimated at \$117,435,000. The square footage of the new facility has not been identified at this time, however, an estimate has been calculated based on the construction value and average cost per sq.ft. of facilities provided in the service standard. A deduction for existing benefit of \$84.97 million and a post period benefit of \$50,000 have been applied for the replacement of the existing facilities and the amount that benefits growth outside of the forecast period. Further, it is anticipated that the Region will receive approximately \$3 million in grant funding from the Province. After the above deductions, and the 10% mandatory deduction, \$26.47 million has been included in the D.C. calculation.

An allocation of 90% residential and 10% non-residential has been attributed to services related to Long Term Care Homes.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Space: Long Term Care Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2017-2026											90%	10%
1	LTC Home Redevelopment	2019-2025	117,435,000	50,000		117,385,000	84,970,000	3,000,000	29,415,000	2,941,500	26,473,500	23,826,150	2,647,350
	Total		117,435,000	50,000	0	117,385,000	84,970,000	3,000,000	29,415,000	2,941,500	26,473,500	23,826,150	2,647,350

5.2.4 Health

Health services are provided from 6 facilities located throughout the Region with a total of 87,498 sq.ft. of facility space. Over the 10-year historical period, these facilities provided for an average of 0.20 sq.ft./capita, equating to an investment of \$75 per capita. This level of service provides the Region with \$3,602,009 for eligible future D.C. funding over the 10-year forecast period.

The Region has provided for the capital cost to lease additional space in Niagara Falls. The gross capital cost of the project is \$6 million of which approximately \$2.2 million is attributable to existing development based on the replacement of existing facilities. A further deduction of \$188,000 has been applied to recognize the amount related to growth post-2026. The Region anticipates grant funding of approximately \$1 million. Additionally, a provision for additional facility space at a cost of \$1,000,000 has been provided to service growth anticipated over the forecast period. After the mandatory 10% deduction, \$3,232,800 has been included in D.C. calculation.

While health services are predominately residential-based, there is some use of the service by non-residential users. To acknowledge this, the growth-related capital costs have been allocated 90% residential and 10% non-residential.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Health Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non- Residential Share
	2017-2026											90%	10%
1	Niagara Falls Public Health - McLeod Square - Leased	2016-2017	6,000,000	188,000		5,812,000	2,220,000	1,000,000	2,592,000	259,200	2,332,800	2,099,520	233,280
2	Provision for Additional Space	2022-2026	1,000,000	-		1,000,000	-	-	1,000,000	100,000	900,000	810,000	90,000
Total			7,000,000	188,000	0	6,812,000	2,220,000	1,000,000	3,592,000	359,200	3,232,800	2,909,520	323,280

5.2.5 Social and Child Services

Social and Child Services are currently provided in a combination of owned and leased spaces totalling 121,465 sq.ft. of space. These facilities provide for 0.28 sq.ft. per capita, equating to \$99 per capita. This level of service provides the Region with \$4,740,142 for eligible future D.C. funding over the 10-year forecast period.

The Region is currently undergoing a Peer Street Study which is anticipated to be completed in 2017 which will identify more detailed needs for facility space expansion. Therefore, capital needs will be identified in future development charge studies.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Social & Child Services Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2017-2026											90%	10%
1	Capital needs to be identified in future development charge studies			-	-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	-	-	-	-	-	-

5.2.6 Emergency Medical Services (E.M.S.)

Currently, E.M.S. is provided throughout the Region with various facilities that have a combined total of 94,035 sq.ft. of space. Over the past ten years, the average level of service was 0.17 sq.ft. of space per capita or an investment of \$61 per capita. Based on this service standard, the Region would be eligible to collect approximately \$2,926,422 from D.C.s for ambulance facility space (over the 10-year period).

The Region of Niagara has identified the need for an E.M.S. Central Hub and Training Facility in Niagara-on-the-Lake. Currently, the design of the facility has not been completed, therefore it is unclear if this space may include replacement of other existing space. Future D.C. background studies may reflect a different growth component once project details are finalized. The gross capital cost identified is approximately \$30.5 million. Part of the facility will provide a training centre at an estimated cost of \$3.5 million. A deduction for benefit to existing in the amount of \$2.59 million has been made to recognize the portion of the training facility that will benefit the current population. A post period benefit of \$25.01 million has also been applied as the facility is anticipated to service the 25-year growth. Additionally, a provision for additional facility space in the amount of \$760,000 has been included to service growth over the forecast period. A reserve adjustment of \$734,936 has been included. After the 10% mandatory deduction, the net growth-related amount included in the D.C. calculation is \$2,554,961.

The Region currently has 55 ambulances. Over the past ten years, the average level of service was 0.1 vehicle per 1,000 population or an investment of \$25 per capita. Based on this service standard, the Region would be eligible to collect approximately \$1,184,196 from D.C.s for ambulance vehicles (over the 10-year period).

Based on the medium growth model identified in a recent staff report, eight additional vehicles have been provided at a cost of \$2.056 million has been identified with \$1.204 million deducted for the anticipated growth post 2026. Further, a provision for additional vehicles has also been provided at a cost of \$330,000 to service growth over the forecast period. After the 10% mandatory deduction, the net recoverable amount included in the D.C. calculations is \$1,063,800.

The growth costs have been allocated 90% residential and 10% non-residential based on the incremental growth in population to employment, for the 10-year forecast period. Population has been weighted by multiplying the figure by three to reflect the higher use of this service by residents as compared to employees based on additional time spent in the Region and age-related requirements.

Niagara Region
Service: E.M.S. Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2017-2026											90%	10%
1	Provision for EMS Central Hub and Training Facility - N.O.T.L.	2017-2020	30,500,000	25,010,000		5,490,000	2,594,559		2,895,441	289,544	2,605,897	2,349,523	256,374
2	Provision for additional facility space	2022-2026	760,000	-		760,000	-		760,000	76,000	684,000	616,707	67,293
3	Reserve Fund Adjustment						734,936		(734,936)		(734,936)	(662,631)	(72,305)
	Total		31,260,000	25,010,000	-	6,250,000	3,329,495	-	2,920,505	365,544	2,554,961	2,303,598	251,362

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non- Residential Share
	2017-2026											90%	10%
1	Purchase of additional ambulances (8)	2017-2026	2,056,000	1,204,000		852,000	-		852,000	85,200	766,800	691,361	75,439
2	Provision for additional vehicles	2022-2026	330,000	-		330,000	-		330,000	33,000	297,000	267,781	29,219
	Total		2,386,000	1,204,000	-	1,182,000	-	-	1,182,000	118,200	1,063,800	959,141	104,659

5.2.7 Social Housing

Social Housing currently provides 301 locations which include over 2,700 residential units throughout the Region for residents in need. In total these units provide approximately 2.30 million sq.ft. of facility space. These facilities provide for 5.16 sq.ft./capita or \$966 per capita on average over the historical 10-year period. This level of service provides the Region with approximately \$46.37 million for eligible future D.C. funding over the 10-year forecast period.

The capital program identified for the D.C. includes providing for an additional 85 units on Carleton Street and 64 units on Hawkins/Dell 149 units over the forecast period to accommodate existing needs as well as growth needs. The total gross capital cost for these units is \$25.86 million. It has been recognized that 30% of the costs related to the Hawkins/Dell units is a benefit to existing due to 10 existing houses that have been sold and 9 additional houses which will be demolished to allow for the new facility. This results in a benefit to existing deduction of \$843,100. The Region anticipated receiving funding in the amount of approximately \$19 million towards these projects. Further, a provision for additional units has been included at a cost of \$20.19 million to service growth over the forecast period. The net amount for inclusion in the D.C., after the mandatory 10% deduction, is \$23,563,710.

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

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non- Residential Share
	2017-2026											100%	0%
1	527 Carleton Street (85 Additional Units)	2017-2018	14,500,000	-		14,500,000	-	10,500,000	4,000,000	400,000	3,600,000	3,600,000	-
2	Hawkins/Dell (56 Apartment Units & 8 Townhouse Units)	2018	11,360,000	-		11,360,000	843,100	8,520,000	1,996,900	199,690	1,797,210	1,797,210	-
3	Provision for Additional Units	2022-2026	20,185,000			20,185,000	-	-	20,185,000	2,018,500	18,166,500	18,166,500	-
	Total		46,045,000	-	-	46,045,000	843,100	19,020,000	26,181,900	2,618,190	23,563,710	23,563,710	-

5.2.8 Waste Diversion

With respect to Waste Diversion, the Region provides a total of 249,736 sq.ft. of eligible waste diversion space (excluding land). Over the past 10 years, the average level of service was 0.58 sq.ft. of space per capita or an investment of \$157 per capita. Based on the service standard over the past ten years, the Region would be eligible to collect a total of \$7,537,492. Further, the Region provides approximately 61.4 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 0.1 acres per 1,000 population or an average investment of \$11 per capita. Based on this, the Region would be eligible to collect an additional \$518,206 from development charges.

The Region has identified the need for improvements to two drop off depots. The total gross capital cost of these works is approximately \$1.365 million. Deductions have been provided for benefit to existing development in the amount of \$361,500 and \$60,000 for the portion related to landfill, which is D.C. ineligible. Additionally, a provision for additional facilities has been included at a cost of \$7.1 million to service growth to 2026. After the 10% mandatory deduction, the net growth related capital cost included in the D.C. is \$7,239,150.

The Region has an inventory of waste diversion vehicles totaling 66. These vehicles include Loaders, forklifts, tractors, and contracted vehicles. Over the past ten years, the average level of service was 0.1 items per 1,000 population or an investment of \$16 per capita. Based on this service standard, the Region would be eligible to collect \$763,394 from D.C.s for waste diversion vehicles (over the 10-year period).

Based on the projected growth over the 10-year forecast period (2017-2026), a provision of \$760,000 for additional vehicles has been identified for future capital. The net growth related capital cost to be included in the D.C. is \$684,000 (after the mandatory 10% deduction).

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 of approximately \$6.3 million in containers. Over the historical 10-year period the average service level was 1.15 containers per capita or an investment of \$13 per capita. Based on the anticipated 10-year growth, the Region is eligible to collect \$641,040.

Based on the projected growth over the 10-year forecast period (2017-2026), a provision of \$640,000 for additional containers has been identified for future capital. The net growth related capital cost to be included in the D.C. is \$576,000 (after the mandatory 10% deduction).

Waste Diversion equipment is utilized by the Region at various facilities. In total, there are currently 120 pieces of equipment with a total value of approximately \$13 million. Over the past 10 years the average service level was 0.2 items of equipment per 1,000 population or an average investment of \$22 per capita. Based on the anticipated growth over the 10-year forecast period the Region is eligible to collect \$1,036,411.

A provision for additional equipment has been provided in the amount of \$1,030,000. After the 10% mandatory deduction, the net growth related cost included in the D.C. calculation is \$927,000.

The costs associated with waste diversion have been allocated 75% residential and 25% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Vehicles & Equipment

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 75%	Non-Residential Share 25%
	2017-2026												
1	Provision for Vehicles and Equipment	2017-2026	760,000	-		760,000	-		760,000	76,000	684,000	515,312	168,688
	Total		760,000	-	-	760,000	-	-	760,000	76,000	684,000	515,312	168,688

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Containers

Prj .No	Increased Service Needs Attributable to Anticipated Development 2017-2026	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 75%	Non-Residential Share 25%
1	Provision for Additional Containers	2017-2026	640,000	-		640,000	-		640,000	64,000	576,000	433,947	142,053
	Total		640,000	-	-	640,000	-	-	640,000	64,000	576,000	433,947	142,053

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Other Equipment

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share 75%	Non-Residential Share 25%
	2017-2026												
1	Provision for Additional Equipment	2017-2026	1,030,000	-		1,030,000	-		1,030,000	103,000	927,000	698,383	228,617
	Total		1,030,000	-	-	1,030,000	-	-	1,030,000	103,000	927,000	698,383	228,617

5.3 Service Levels and 25-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with 25-year capital costs.

5.3.1 Services Related to a Highway

Niagara owns and maintains 1,732 lane km of arterial and collector roads. The replacement cost utilized includes the cost to replace a "total street", which includes sidewalks, streetlights, curbs, etc., however, it does not include costs associated with land, bridges and culverts, or the Regional component of interchanges. Over the historical 10-year period, the average service level was 3.9 lane km of roads per 1,000 population or an average level of investment of \$6,702 per capita, resulting in a D.C.-eligible recovery amount of \$1.026 billion over the 25-year forecast period.

The Region operates their Public Works service out of a number of facilities. Currently, the facilities provide 80,557 sq.ft. of building area. Over the past 10 years, the average level of service was 0.19 sq.ft. per capita or \$40 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 25-year forecast period of \$6,131,094.

The Public Works service has a variety of vehicles and major equipment totalling approximately \$18.83 million. Over the historical 10-year period, the inventory provides for a service level of 1.2 vehicles and equipment per 1,000 population or a per capita standard of \$42. Over the forecast period, the D.C.-eligible amount for vehicles and equipment is \$6,443,390.

With respect to future needs, the identified service related to highways program was developed as part of the Transportation Master Plan undertaken by IBI Group and totals \$1,271 million. The capital projects include various works related to unfunded works previously constructed, adding capacity to the highway system including road improvements/expansions, intersection improvements, a road rehabilitation program, and other annual programs run by the Region. Expansion of both facilities and vehicles have also been identified to service the 25-year growth forecast. Of the total gross cost, \$74.96 million has been previously funded on various projects, resulting in an updated gross total of \$1.20 billion. From this adjusted gross total, the reserve fund balance of \$26,221,009 has been applied to net-down the capital program. A deduction for existing benefit of \$691.2 million has been made, along with a deduction of \$42.49 million for works that benefit development post-2041. Funding amounts have also been

identified resulting in a deduction of \$17.15 million for grants and other funding. The resulting D.C. eligible amount of \$445,670,494 which has been included in the D.C. calculations to be recovered over the current forecast period (2017-2041).

The residential/non-residential allocation for all services related to a highway is 76% residential and 24% based on the forecast population to employment anticipated over the forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix H).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

Prj. No	Increased Service Needs Attributable to Anticipated Development	Corridor	Section	Timing (year)	Gross Capital Cost Estimate (2017\$)	Less:	Adjusted Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost		
						Prior Funding				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
	2017-2041													
Already Constructed														
		Fourth Ave	Third St to Vancsickle		2,669,751		2,669,751		2,669,751			2,669,751	2,029,011	640,740
		Thorold Stone Rd	Stanley Ave to Victoria		2,173,491		2,173,491		2,173,491			2,173,491	1,651,853	521,638
		Old Hwy 20	Station St to Hwy 406		3,805,169		3,805,169		3,805,169			3,805,169	2,891,929	913,241
		Woodlawn Rd	Gram Rd to Rice Rd.		1,150,930		1,150,930		1,150,930			1,150,930	874,707	276,223
		Hwy 406	New Interchange at First/Third		172,953		172,953		172,953			172,953	131,445	41,509
Sub-total Already Constructed					9,972,296		9,972,296	-	9,972,296	-	-	9,972,296	7,578,945	2,393,351
Projects in Capital Budget														
1	Capacity Improvement	Casablanca Blvd	QEW to Livingston Ave	2017-2021	7,448,000	850,000	6,598,000	-	6,598,000	989,700	-	5,608,300	4,262,308	1,345,992
2	Capacity Improvement	East Main St	Hwy 140 to Moyer Rd	2022-2031	2,970,000	-	2,970,000	-	2,970,000	445,500	-	2,524,500	1,918,620	605,880
3	New Road & Capacity Improvement	Merritt Rd	Rice Rd to Niagara St & Niagara St to Hwy 406	2017-2021	8,610,000	-	8,610,000	-	8,610,000	1,291,500	-	7,318,500	5,562,060	1,756,440
4	Capacity Improvement	Martindale Rd	QEW to Vancsickle Rd, Vancsickle Rd to Fourth Ave & Bridge widening over Hwy 406	2017-2021	31,461,000	3,210,000	28,251,000	-	28,251,000	3,922,650	2,100,000	22,228,350	16,893,546	5,334,804
5	Capacity Improvement	McLeod Rd	Phase 1 - Montrose Rd, Pin Oak Dr to Hydro Canal	2017-2021	14,392,000	9,650,000	4,742,000	-	4,742,000	711,300	-	4,030,700	3,063,332	967,368
6	Capacity Improvement	McLeod Rd	Phase 2 - Hydro Canal to Wilson Cr	2017-2021	4,312,000	350,000	3,962,000	-	3,962,000	564,300	200,000	3,197,700	2,430,252	767,448
7	Capacity Improvement	McLeod Rd	Phase 3 - Wilson Cr to Stanley Ave	2022-2031	3,640,000	-	3,640,000	-	3,640,000	501,000	300,000	2,839,000	2,157,640	681,360
8	Capacity Improvement	Rice Rd	Old Hwy 20 to Merritt Rd	2017-2021	9,828,000	900,000	8,928,000	-	8,928,000	1,264,200	500,000	7,163,800	5,444,488	1,719,312
9	Capacity Improvement	Rice Rd	Merritt Rd to Quaker Rd & Quaker Rd to Thorold Rd	2017-2021	16,200,000	-	16,200,000	-	16,200,000	2,430,000	-	13,770,000	10,465,200	3,304,800
10	Capacity Improvement	Niagara Stone Rd	Concession 6 Rd to Line 2 Rd & Penner St (Line 1 Rd) to East and West Line	2017-2021	12,528,000	1,600,000	10,928,000	-	10,928,000	1,526,700	750,000	8,651,300	6,574,988	2,076,312
11	Capacity Improvement	Collier Rd	Hwy 58 to Beaverdams Rd	2022-2031	5,616,000	-	5,616,000	-	5,616,000	842,400	-	4,773,600	3,627,936	1,145,664
12	New Road	Thorold Stone Rd	Extension east of Stanley Ave to Gale Centre	2017-2021	11,088,000	8,300,000	2,788,000	-	2,788,000	418,200	-	2,369,800	1,801,048	568,752
13	New Road	Thorold Stone Rd	Phase 2 - Gale Centre to Victoria Ave	2022-2031	11,200,000	-	11,200,000	-	11,200,000	1,680,000	-	9,520,000	7,235,200	2,284,800
14	Capacity Improvement	Glendale Ave	Interchange at QEW (1/3 contribution)	2022-2031	3,333,000	1,000,000	2,333,000	-	2,333,000	349,950	-	1,983,050	1,507,118	475,932
15	Capacity improvement	Montrose Road	Charnwood to McLeod	2017-2021	1,904,000	-	1,904,000	-	1,904,000	285,600	-	1,618,400	1,229,984	388,416
16	Highway Improvement	Hwy 406 Interchange	At Third Ave Louth (1/3 contribution)	2022-2031	13,333,000	1,450,000	11,883,000	-	11,883,000	1,782,450	-	10,100,550	7,676,418	2,424,132
17	New Road	Livingston Ave	Main St to Casablanca Blvd	2022-2031	8,456,000	250,000	8,206,000	-	8,206,000	1,200,900	200,000	6,805,100	5,171,876	1,633,224
18	New Road	South Niagara East-West Arterial	South Niagara East-West Arterial (1/3 contribution)	2022-2031	16,275,000	500,000	15,775,000	-	15,775,000	2,366,250	-	13,408,750	10,190,650	3,218,100
19		Canadian Motor Speedway Infrastructure Improvements		2017-2021	2,625,000	-	2,625,000	-	2,625,000	393,750	-	2,231,250	1,695,750	535,500
Subtotal - Projects in Capital Budget					185,219,000	28,060,000	157,159,000	-	157,159,000	22,966,350	4,050,000	130,142,650	98,908,414	31,234,236

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Services Related to a Highway - Roads

Prj. No	Increased Service Needs Attributable to Anticipated Development	Corridor	Section	Timing (year)	Gross Capital Cost Estimate (2017\$)	Less:	Adjusted Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost		
						Prior Funding				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2017-2041												76%	24%
Additional Projects Identified in TMP														
20	New Road & Capacity Improvement	Bartlett Avenue extension & Escarpment Crossing Improvement	Muscat Dr to NE Crossing (1/3 contribution) & Bartlett St Extension to Mud St (1/3 contribution)	2022-2031	38,733,000	2,200,000	36,533,000	7,763,263	28,769,738	5,479,950	-	23,289,788	17,700,239	5,589,549
21	New Road	Highway 20 Smithville Bypass	Smithville (1/3 contribution)	2022-2031	9,834,000	-	9,834,000	-	9,834,000	1,475,100	-	8,358,900	6,352,764	2,006,136
22	Capacity Improvement	Hwy 20	Kottmeier Rd to Davis Rd/Allanport Rd (1/3 contribution)	2032-2041	25,019,000	-	25,019,000	10,633,075	14,385,925	3,752,850	-	10,633,075	8,081,137	2,551,938
23	Capacity Improvement	Schisler Rd	Moyer Rd to Montrose Rd	2032-2041	23,179,000	-	23,179,000	9,851,075	13,327,925	3,476,850	-	9,851,075	7,486,817	2,364,258
24	Capacity Improvement	Lyons Creek Rd	Montrose Rd to Stanley Ave	2032-2041	17,337,000	-	17,337,000	3,684,113	13,652,888	2,600,550	-	11,052,338	8,399,777	2,652,561
25	Capacity Improvement	Lyons Creek Rd	Stanley Ave to Sodom Rd	2022-2031	25,251,000	-	25,251,000	-	25,251,000	3,787,650	-	21,463,350	16,312,146	5,151,204
26	Capacity Improvement	Niagara Stone Rd	Airport Road to Concession 6	2022-2031	7,180,000	-	7,180,000	-	7,180,000	1,077,000	-	6,103,000	4,638,280	1,464,720
27	Protect for New Crossing	Carlton Street	Martindale Rd to Ontario St	2032-2041	-	-	-	-	-	-	-	-	-	-
28	New Road	Glendale Ave	York Rd to Queenston Rd	2032-2041	13,732,000	-	13,732,000	2,918,050	10,813,950	2,059,800	-	8,754,150	6,653,154	2,100,996
29	Capacity Improvement	Airport Road	Niagara Stone Road to York Road	2022-2031	9,871,000	-	9,871,000	-	9,871,000	1,480,650	-	8,390,350	6,376,666	2,013,684
30	Capacity Improvement	Montrose Rd	Lyons Creek Rd to Schisler Rd	2032-2041	8,917,000	-	8,917,000	3,789,725	5,127,275	1,337,550	-	3,789,725	2,880,191	909,534
31	Capacity Improvement	Montrose Rd	Chippawa Creek Rd to Lyons Creek Rd	2032-2041	18,113,000	-	18,113,000	3,849,013	14,263,988	2,716,950	-	11,547,038	8,775,749	2,771,289
32	Capacity Improvement	Stanley Ave	Ferry St to Murray St	2022-2031	5,897,000	-	5,897,000	-	5,897,000	884,550	-	5,012,450	3,809,462	1,202,988
33	Capacity Improvement	Stanley Ave	Marineland Pkwy to Lyons Creek Rd	2022-2031	41,871,000	-	41,871,000	-	41,871,000	6,280,650	-	35,590,350	27,048,666	8,541,684
34	Capacity Improvement	Sodom Rd	Lyons Creek Rd to Netherby Rd	2022-2031	27,879,000	-	27,879,000	-	27,879,000	4,181,850	-	23,697,150	18,009,834	5,687,316
35	Highway Improvement	Hwy 405 interchange	Concession 6 Rd (1/3 contribution)	2022-2031	3,333,000	-	3,333,000	-	3,333,000	499,950	-	2,833,050	2,153,118	679,932
36	Highway Improvement	Hwy 406 Extension	E Main St to NGTA corridor	2032-2041	-	-	-	-	-	-	-	-	-	-
37	Highway Improvement	QEW - Garden City Skyway	Bunting Road to York Rd	2022-2031	-	-	-	-	-	-	-	-	-	-
38	Highway Improvement	QEW	York Rd to Hwy 405	2022-2031	-	-	-	-	-	-	-	-	-	-
39	Highway Improvement	QEW	Hwy 405 to Mountain Rd	2022-2031	-	-	-	-	-	-	-	-	-	-
40	Highway Improvement	QEW	Hamilton to Hwy 406 (HOV Lanes)	2022-2031	-	-	-	-	-	-	-	-	-	-
41	Highway Improvement	NGTA (Mid-Peninsula) corridor	Hwy 403 to Hwy 406 extension	2032-2041	-	-	-	-	-	-	-	-	-	-
42	Highway Improvement	NGTA East Area corridor	Hwy 406 extension to QEW	2032-2041	-	-	-	-	-	-	-	-	-	-
43	Capacity Improvement	Concession 6 Rd	York Rd to Warner Rd	2022-2031	4,991,000	-	4,991,000	-	4,991,000	748,650	-	4,242,350	3,224,186	1,018,164
44	Capacity Improvement	Mewburn Rd	Warner Rd to Mountain Rd	2022-2031	1,885,000	-	1,885,000	-	1,885,000	282,750	-	1,602,250	1,217,710	384,540
45	New structure	Mewburn Rd bridge	Bridge over CN Rail	2022-2031	1,625,000	-	1,625,000	-	1,625,000	243,750	-	1,381,250	1,049,750	331,500
46	Protect for New Crossing	Morrison St	New Crossing of QEW	2032-2041	-	-	-	-	-	-	-	-	-	-
47	Protect for New Crossing	Future Road	New Crossing of Welland River	2032-2041	-	-	-	-	-	-	-	-	-	-
48	New Road	Queenston Road realignment	Queenston Rd to York Rd	2022-2031	4,045,000	-	4,045,000	-	4,045,000	606,750	-	3,438,250	2,613,070	825,180
49	Capacity Improvement	West St. Catharines Grade Separation	Louth St / Vansickle Rd / First St Louth	2022-2031	20,500,000	500,000	20,000,000	-	20,000,000	-	-	20,000,000	15,200,000	4,800,000
50		AT Strategic Network Grant Program	Strategic Network	2017-2026	10,000,000	-	10,000,000	-	10,000,000	7,500,000	-	2,500,000	1,900,000	600,000
51		AT Infill Projects	Strategic Network	2017-2021	7,900,000	-	7,900,000	-	7,900,000	5,925,000	-	1,975,000	1,501,000	474,000
52		AT Infill Projects	Strategic Network	2022-2026	7,900,000	-	7,900,000	-	7,900,000	5,925,000	-	1,975,000	1,501,000	474,000
Subtotal - Additional Projects Identified in TMP					334,992,000	2,700,000	332,292,000	42,488,313	289,803,688	62,323,800	-	227,479,888	172,884,715	54,595,173

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

Prj. No	Increased Service Needs Attributable to Anticipated Development	Corridor	Section	Timing (year)	Gross Capital Cost Estimate (2017\$)	Less:	Adjusted Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost			
						Prior Funding				Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share	
2017-2041															
Intersection Improvement Program															
53	Left turning lane	Thorold Stone Rd	@ Cardinal Drive	2017-2026	1,500,000	-	1,500,000	-	1,500,000	-	-	1,500,000	1,140,000	360,000	
54	Two way traffic reversion - Cost Sharing	Geneva St	@ St. Paul	2017-2026	7,000,000	1,500,000	5,500,000	-	5,500,000	1,650,000	2,200,000	1,650,000	1,254,000	396,000	
55	Traffic signal and turning lane	Niagara Stone Rd	@ Airport Road and Concession 4	2017-2026	3,000,000	-	3,000,000	-	3,000,000	3,000,000	-	-	-	-	
56	Possible joint contract with NF	McLeod Road	@ Drummond	2017-2026	2,000,000	-	2,000,000	-	2,000,000	1,000,000	-	1,000,000	760,000	240,000	
57	New Signal and modifications	Four Mile Creek Rd	@ York Rd	2017-2026	1,400,000	-	1,400,000	-	1,400,000	700,000	-	700,000	532,000	168,000	
58	Turning lanes and signal mod	Falls Ave / Bender Intersection Improvements		2017-2026	900,000	900,000	-	-	-	-	-	-	-	-	
59	New signal and turning lane	Victoria Avenue	@ RR63 Canboro Rd	2017-2026	1,650,000	-	1,650,000	-	1,650,000	1,650,000	-	-	-	-	
60	Roundabouts EA & Design & Imprv for new school	Int. Imprv. - Regional Road 20 between Townline Road & South Grimsby Rd 6		2017-2026	1,100,000	1,100,000	-	-	-	-	-	-	-	-	
61	Roundabout and urbanization	Regional Road 20	Phase 1 - South Grimsby Rd 6 to Griffin	2017-2026	4,250,000	650,000	3,600,000	-	3,600,000	3,400,000	200,000	-	-	-	
62	Roundabout and urbanization	Regional Road 20	Phase 2 - Industrial Pard Rd to Townline Road	2017-2026	3,800,000	300,000	3,500,000	-	3,500,000	3,300,000	200,000	-	-	-	
63	Cost Sharing for intersection improvement	King Street	@ Main Street and Ninetenth Street	2017-2026	2,400,000	-	2,400,000	-	2,400,000	2,400,000	-	-	-	-	
64	Modifications and NB right Turn Lane	Fourth Ave	@ First	2017-2026	600,000	-	600,000	-	600,000	300,000	-	300,000	228,000	72,000	
65		Intersection Improvement Program - 2027-2041			2027-2041	33,825,000	-	33,825,000	-	33,825,000	16,912,500	-	16,912,500	12,853,500	4,059,000
Subtotal - Intersection Improvement Program						63,425,000	4,450,000	58,975,000	-	58,975,000	34,312,500	2,600,000	22,062,500	16,767,500	5,295,000
Road Rehabilitation Program															
66	Embankment stabilization	Canoboro Rd	@ Warner	2017-2021	5,090,000	5,090,000	-	-	-	-	-	-	-	-	
67	Reconstruction - Urban	Main Street	Cabernet to Baker Rd & Nelles to Orchard	2022-2031	7,560,000	500,000	7,060,000	-	7,060,000	5,904,000	500,000	656,000	498,560	157,440	
68	Rehabilitation	York Road	Reg Rd 55 to Airport	2017-2021	1,890,000	250,000	1,640,000	-	1,640,000	1,640,000	-	-	-	-	
69	Reconstruction/ streetscaping	Old Hwy. 8	Vinehaven Trail to 23rd Street	2017-2021	5,270,000	470,000	4,800,000	-	4,800,000	1,920,000	1,600,000	1,280,000	972,800	307,200	
70	Reconstruction - Urban - 2 Lane	Ontario Street	Lakeshore Road to Linwell Road	2017-2021	8,532,000	500,000	8,032,000	-	8,032,000	5,428,800	2,000,000	603,200	458,432	144,768	
71	Reconstruction and intersection Imprv	St. Paul Street West	Burgoyne Bridge to CNR Tracks	2022-2031	9,180,000	-	9,180,000	-	9,180,000	8,262,000	-	918,000	697,680	220,320	
72	Reconstruction - urban- 2 lane / GS	Louth Street	Between RR 81 (St. Paul W) & Crestcomb	2017-2021	6,156,000	-	6,156,000	-	6,156,000	3,273,600	700,000	2,182,400	1,658,624	523,776	
73	Rehabilitation c/w bike lanes	Lakeshore Rd	Townline Rd to Four Mile Creek Rd	2017-2021	8,500,000	1,750,000	6,750,000	-	6,750,000	6,750,000	-	-	-	-	
74	Rd Reconstruction / City WM	Main Street West	Prince Charles Drive to Niagara Street	2017-2021	4,104,000	-	4,104,000	-	4,104,000	3,804,000	300,000	-	-	-	
75	Upgrades to Storm Pumping Station	McLeod Road Storm P.S	@ Stanley Ave and CNR	2017-2021	1,250,000	-	1,250,000	-	1,250,000	1,250,000	-	-	-	-	
76	Road Reconstruct & Widening	Glendale Ave	Tremont Drive to Burleigh Hill	2017-2021	9,396,000	1,500,000	7,896,000	-	7,896,000	3,537,600	2,000,000	2,358,400	1,792,384	566,016	
77	Road Reconstruct / Download	Riverside Drive	Prince Charles Drive to Lincoln Street	2017-2021	5,778,000	250,000	5,528,000	-	5,528,000	4,480,200	550,000	497,800	378,328	119,472	
78	Reconstruction - urban-2 lane	Lakeshore Rd Phase 3	Lake St to Geneva & Bradmon Dr to O'Mara	2017-2021	8,046,000	7,450,000	596,000	-	596,000	357,600	-	238,400	181,184	57,216	
79	Cost Share with City	Bridge Street	Victoria Ave to Erie	2017-2021	575,000	-	575,000	-	575,000	575,000	-	-	-	-	
80	Reconstruction	Lakeshore Rd West	Third Street to Seventh Street	2017-2021	5,778,000	1,500,000	4,278,000	-	4,278,000	4,278,000	-	-	-	-	
81	Embankment stab & Road Recon	Canborough Road	Baldwin Road to Coffey Bridge	2017-2021	3,277,800	500,000	2,777,800	-	2,777,800	2,777,800	-	-	-	-	
82	Reconstruction	Pelham Road Phase 2	Effingham Rd to Wessel Drive	2017-2021	9,828,000	800,000	9,028,000	-	9,028,000	8,125,200	-	902,800	686,128	216,672	
83	Reconstruction	Pelham Road Phase 3	Wessell Drive to Centre	2017-2021	4,320,000	500,000	3,820,000	-	3,820,000	3,438,000	-	382,000	290,320	91,680	
84	Reconstruction	Pelham Road Phase 4	Centre to 8th	2017-2021	3,240,000	-	3,240,000	-	3,240,000	2,916,000	-	324,000	246,240	77,760	
85	Reconstruction - Urban - 2 Lane	Niagara St	Carlton to Scott	2017-2021	7,344,000	-	7,344,000	-	7,344,000	6,609,600	-	734,400	558,144	176,256	

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

Prj. No	Increased Service Needs Attributable to Anticipated Development	Corridor	Section	Timing (year)	Gross Capital Cost Estimate (2017\$)	Less:		Adjusted Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost		
						Prior Funding					Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2017-2041													76%	24%
86	Reconstruction - Urban - 2 Lane	St. David's Road	Hwy 406 to Collier Road	2017-2021	5,290,000	-		5,290,000	-	5,290,000	4,311,000	500,000	479,000	364,040	114,960
87	Reconstruction - Urban - 2 Lane	Dominion Road	Helena to Lakeshore Rd	2017-2021	7,587,000	1,125,000		6,462,000	-	6,462,000	5,320,800	550,000	591,200	449,312	141,888
88	Reconstruction rural - 2 Lane / Town WM	King Street	Durham Rd to Lincoln Avenue	2017-2021	6,669,000	375,000		6,294,000	-	6,294,000	5,304,600	400,000	589,400	447,944	141,456
89	Culvert replacement	Dick's Creek crossing	@ Glendale Ave	2017-2021	750,000	750,000		-	-	-	-	-	-	-	-
90	Road Rehabilitation	Regional Road 20	Griffin St South to Industrial Park Road	2017-2021	2,268,000	-		2,268,000	-	2,268,000	1,951,200	100,000	216,800	164,768	52,032
91	EA Study, Bridge Replacement & Rd Rehab	Creek Road	RR 4 (Wellandport Rd) to RR 63 Canborough	2017-2021	405,000	375,000		30,000	-	30,000	27,000	-	3,000	2,280	720
92	Road Rehab - 2 Phases, incl Bridge Replacement	Creek Road	RR 4 to RR7 & RR7 to RR63	2017-2021	15,552,000	1,400,000		14,152,000	-	14,152,000	12,736,800	-	1,415,200	1,075,552	339,648
93	Road Rehabilitation	Dominion Road	Burleigh Road to Buffalo Road	2017-2021	10,179,000	9,425,000		754,000	-	754,000	678,600	-	75,400	57,304	18,096
94	Road Rehabilitation	Main Street	Locke Street to Ann Street	2017-2021	4,158,000	-		4,158,000	-	4,158,000	3,742,200	-	415,800	316,008	99,792
95	Road Rehabilitation	Glendale Ave	Welland Canal to Homer Road	2017-2021	3,780,000	200,000		3,580,000	-	3,580,000	3,222,000	-	358,000	272,080	85,920
96	Reconstruction rural 2 lane	Townline Road	McLeod Road to Lundy's Lane	2022-2031	6,480,000	-		6,480,000	-	6,480,000	5,832,000	-	648,000	492,480	155,520
97	Reconstruction rural 2 lane	Stewart Road	Lakeshore Road to Carlton Street	2022-2031	7,560,000	-		7,560,000	-	7,560,000	6,804,000	-	756,000	574,560	181,440
98	Reconstruction rural 2 lane	Effingham Street	Webber Rd to River Road	2017-2021	4,914,000	-		4,914,000	-	4,914,000	4,422,600	-	491,400	373,464	117,936
99	Reconstruction and Drainage Improvements	Canborough Road	RR27 Wellandport Rd to Community Centre	2017-2021	3,996,000	200,000		3,796,000	-	3,796,000	3,416,400	-	379,600	288,496	91,104
100	Cost Sharing with City CIP and W/M	Lundy's Lane	Highland Ave to Montrose Road	2017-2021	3,450,000	-		3,450,000	-	3,450,000	3,105,000	-	345,000	262,200	82,800
101	Cost Sharing with City Storm Sewer Works	Burleigh Hill	Glendale Ave to St. Davids	2017-2021	2,000,000	-		2,000,000	-	2,000,000	1,800,000	-	200,000	152,000	48,000
102	Reconstruction - Urban - 2 Lane	Main Street Old Hwy 8	Oakes Road North to Casablanca Blvd	2017-2021	5,670,000	-		5,670,000	-	5,670,000	4,833,000	300,000	537,000	408,120	128,880
103	Reconstruction - Rural - 2lane	Twenty Mile Road	RR24 Victoria Ave to Mountain Rd	2017-2021	8,856,000	200,000		8,656,000	-	8,656,000	7,790,400	-	865,600	657,856	207,744
104	Cost Sharing on MTO project	St. David's Road	@ Hwy 406 Interchange	2017-2021	2,000,000	-		2,000,000	-	2,000,000	600,000	1,000,000	400,000	304,000	96,000
105	Reconstruction	Townline Road	Stanley Ave to Four Mile Creek Road	2017-2021	2,052,000	-		2,052,000	-	2,052,000	1,846,800	-	205,200	155,952	49,248
106	Reconstruction	Sodom Road	Lyons Creek Road to Willick Road	2017-2021	2,484,000	-		2,484,000	-	2,484,000	2,235,600	-	248,400	188,784	59,616
107	Road Reconstruction and City CIP / Watermain	Stanley Avenue	Hwy 420 to Ferry Street	2022-2031	2,160,000	-		2,160,000	-	2,160,000	1,944,000	-	216,000	164,160	51,840
108	Road Reconstruction - Urban	Stevensville Rd	Eagle Street to Bowen Road	2017-2021	2,700,000	-		2,700,000	-	2,700,000	2,430,000	-	270,000	205,200	64,800
109	Road Reconstruction	Bowen Road	QEW to Thompson Road	2022-2031	3,780,000	-		3,780,000	-	3,780,000	3,402,000	-	378,000	287,280	90,720
110	Road Reconstruction	Roads Reconstruction Program - 2017-2021		2017-2021	22,680,000	-		22,680,000	-	22,680,000	20,412,000	-	2,268,000	1,723,680	544,320
111	Road Reconstruction	Roads Reconstruction Program - 2022-2026		2022-2026	58,320,000	-		58,320,000	-	58,320,000	52,488,000	-	5,832,000	4,432,320	1,399,680
112	Road Reconstruction	Roads Reconstruction Program - 2027-2041		2027-2041	273,026,700	-		273,026,700	-	273,026,700	245,724,030	-	27,302,670	20,750,029	6,552,641
Subtotal - Road Rehabilitation Program					583,881,500	35,110,000		548,771,500	-	548,771,500	481,707,430	10,500,000	56,564,070	42,988,693	13,575,377
Annual Programs															
113	Traffic Signal Annual Program			2017-2041	51,290,000	1,690,000		49,600,000	-	49,600,000	44,640,000	-	4,960,000	3,769,600	1,190,400
114	Illumination Annual Program			2017-2041	12,350,000	300,000		12,050,000	-	12,050,000	10,845,000	-	1,205,000	915,800	289,200
115	Transportation Studies			2017-2041	9,925,000	-		9,925,000	-	9,925,000	992,500	-	8,932,500	6,788,700	2,143,800
116	Road Facility Program / Yards			2017-2041	14,000,000	2,650,000		11,350,000	-	11,350,000	7,217,400	-	4,132,600	3,140,776	991,824
117	Provision for Additional Vehicles			2017-2041	6,440,000	-		6,440,000	-	6,440,000	-	-	6,440,000	4,894,400	1,545,600
Subtotal - Annual Rehabilitation Program					94,005,000	4,640,000		89,365,000	-	89,365,000	63,694,900	-	25,670,100	19,509,276	6,160,824
	Reserve Fund Adjustment										26,221,009		(26,221,009)	(19,927,967)	(6,293,042)
	Total				1,271,494,796	74,960,000		1,196,534,796	42,488,313	1,154,046,483	691,225,989	17,150,000	445,670,494	338,709,576	106,960,919

5.3.3 Police Services

The Niagara Regional Police Service operates from several facilities, some of which are owned while others are leased. These facilities combined provide 351,045 sq.ft. of building area, providing for a per capita average level of service of 0.62 sq.ft. or \$251 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 25-year forecast period of \$38,482,759.

To service growth over the 25-year forecast period, a new district #1 facility in St. Catharines has been identified. Based on current estimates, the new facility will not create additional space, however, it is still in the design stages, hence the total estimated cost of \$23.34 million has been deducted as benefit to existing. Should the final report, and construction of the facility, result in additional Police space, the incremental space may be recovered through development charges.

Growth related debt principal and interest for the new headquarters in Niagara Falls has been included in the D.C. calculation. The total capital cost of the debt is approximately \$20,540,000. As this debt is only the growth-related portion, no amount for benefit to existing development has been included. The D.C. reserve fund deficit of \$73,926 has also been incorporated for a total D.C.-eligible amount of \$20,613,960 for inclusion in the D.C. calculations including \$4,808,668 of debt interest (discounted) which is in addition to the service standard.

Equipped vehicles with a useful life of seven years or more are included in the service level calculation. The inclusion of police cruisers as part of D.C.s is considered to be permissible, based on their having an equivalent useful life of seven years or more. Police vehicles have an anticipated useful lifetime of beyond seven years, based on one shift per day use, which is the normal basis for determining use. The seven-year provision is a D.C. minimum threshold. The vehicles are actually used virtually “24/7” and, as a result, are used in a patrol function for several years. Many are subsequently used for non-patrol car functions (e.g. training) or interim vehicles while other vehicles are being repaired, or are sold and used by others. The police service currently has a fleet of 371 vehicles. Over the past 10 years, the average level of service was 0.9 vehicles per 1,000 population or an average investment of \$26 per capita. Based on the anticipated growth over the forecast period, the Region is eligible to collect \$4,009,322 in D.C. funding.

Provisions for additional vehicles have been provided in the amount of \$4.01 million. As Police services does not require a 10% mandatory deduction, the net growth-related amount included in the D.C. calculation is \$4.01 million.

The police service currently has 698 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 \$15 per capita, providing for a D.C.-eligible amount over the forecast period of \$2,224,340.

Based on growth-related needs the Region has identified a provision for additional equipment and gear. The total capital cost included is \$2,224,000 which is the resultant D.C.-eligible amount.

The costs for the Niagara Police Service are shared 76%/24% between residential and non-residential based on the population to employment ratio over the 25-year forecast period.

Service: Police Facilities

[illegible]

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Police Vehicles

Prj .No	Increased Service Needs Attributable to Anticipated Development 2017-2041	Useful Life (years)	Timing (year) From	Timing (year) To	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
										Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
1	Provision for Patrol and Non-Patrol Vehicles	7	2017	2041	2017-2041	2,700,000	-		2,700,000	-		2,700,000	2,046,888	653,112
2	Provision for Other Police Vehicles	7	2017	2041	2017-2041	1,309,000	-		1,309,000	-		1,309,000	992,362	316,638
Total						4,009,000	-	-	4,009,000	-	-	4,009,000	3,039,250	969,750

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Police Small Equipment and Gear

Prj .No	Increased Service Needs Attributable to Anticipated Development 2017-2041	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
1	Provision for Equipment and Gear	2017-2041	2,224,000	-		2,224,000	-		2,224,000	1,686,029	537,971
	Total		2,224,000	-	-	2,224,000	-	-	2,224,000	1,686,029	537,971

5.4 Service Levels and Urban 25-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with urban 25-year capital costs.

5.4.1 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 25-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.

In total, GM BluePlan have identified capital works totalling \$308.65 million required to service growth, including \$2 million for updates to the Master Plan over the 25-year forecast. Of this amount, \$75.79 million has been identified as benefiting existing development within the Region, \$18.5 million in grant funding has been identified, and \$5.15 million has been identified as post-period benefit. The reserve fund balance of \$14,774,128 has been applied against the capital program. This results in a net growth related amount of \$194,431,072 attributable to growth over the 25-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 \$19,996,600. Therefore, the total to be included in the D.C. calculation for previous unfunded works and future works is \$214,427,672.

The costs for all water services are shared 76%/24% between residential and non-residential based on the anticipated population to employment over the 25-year forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix F).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Water Services

Master Plan ID	Increased Service Needs Attributable to Anticipated Development		MUNICIPALITY	System	Project Type	Size/ Capacity	Length (m)	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
													Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
	2017-2041																
	Name	Description															
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	N/A	-	2022-2031	1,979,000	-		1,979,000	1,385,300	-	593,700	451,212	142,488
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	N/A	-	2022-2031	2,913,000	-		2,913,000	2,039,100	-	873,900	664,164	209,736
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	Grimsby	Grimsby	Storage	N/A	-	2022-2031	523,000	-		523,000	366,100	-	156,900	119,244	37,656
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	N/A	-	2032-2041	1,979,000	-		1,979,000	1,385,300	-	593,700	451,212	142,488
W-D-005	Decommissioning of Pelham ET	Decommissioning of existing Pelham ET, to be replaced by a new ET	Pelham	Welland	Storage	N/A	-	2022-2031	1,028,000	-		1,028,000	719,600	-	308,400	234,384	74,016
W-D-006	Decommissioning of King Street ET	Decommissioning of King Street ET, to be replaced by storage at new Barrick Road ET	Port Colborne	Port Colborne	Storage	N/A	-	2017-2021	1,979,000	-		1,979,000	1,385,300	-	593,700	451,212	142,488
W-D-007	Decommissioning of Fielden Ave Res + PS	Decommissioning of Fielden Avenue Reservoir and Pumping Station	Port Colborne	Port Colborne	Storage	N/A	-	2032-2041	2,913,000	-		2,913,000	2,039,100	-	873,900	664,164	209,736
W-F-001	Grimsby WTP Expansion	Provide an additional 15 MLD treatment, and new high lift pumping capacities to support feed to new Grimsby Reservoir	Grimsby	Grimsby	Treatment	15	-	2022-2031	51,496,000	5,149,600		46,346,400	5,149,600	-	41,196,800	31,309,568	9,887,232
W-F-002	Decew inlet channel	New intake channel from Welland Canal to the Decew Water Treatment Plant. This will provide capacity above the current 147 MLD. Recommended in 2011 MSP	St. Catharines	Decew	Treatment	0	-	2017-2021	22,969,000	-		22,969,000	-	18,500,000	4,469,000	3,396,440	1,072,560
W-M-001	New trunk main in Central Fort Erie	New trunk main in Central Fort Erie	Fort Erie	Rosehill	Watermain	450	2,821	2022-2031	9,479,000	-		9,479,000	4,739,500	-	4,739,500	3,602,020	1,137,480
W-M-002	New Conveyance to Port Colborne East side	New Conveyance to East side of Port Colborne across canal	Port Colborne	Port Colborne	Watermain	450	1,610	2017-2021	11,548,000	-		11,548,000	5,774,000	-	5,774,000	4,388,240	1,385,760
W-M-003	New trunk main from Welland WTP to North	New trunk main from Welland WTP to North service area	Welland	Welland	Watermain	450	3,000	2032-2041	7,556,000	-		7,556,000	3,778,000	-	3,778,000	2,871,280	906,720
W-M-004	Upgrade trunk main from Grimsby WTP to Park Road	Upgrade trunk main from Grimsby WTP to Park Road	Grimsby	Grimsby	Watermain	750	2,945	2017-2021	13,139,000	-		13,139,000	6,569,500	-	6,569,500	4,992,820	1,576,680
W-M-005	New trunk main from Grimsby WTP to New Grimsby Reservoir	New trunk main from Grimsby WTP to New Grimsby Reservoir	Grimsby	Grimsby	Watermain	750	9,065	2022-2031	42,044,000	-		42,044,000	4,204,400	-	37,839,600	28,758,096	9,081,504
W-M-006	New trunk main in Smithville	New trunk main in Smithville	West Lincoln	Grimsby	Watermain	400	5,600	2022-2031	14,357,000	-		14,357,000	1,435,700	-	12,921,300	9,820,188	3,101,112

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Water Services

Master Plan ID	Increased Service Needs Attributable to Anticipated Development	MUNICIPALITY	System	Project Type	Size/ Capacity	Length (m)	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
												Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
	2017-2041															
	Name	Description														
W-M-007	New trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls	New trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls	Niagara Falls	Niagara Falls	Watermain	450	1,215	2017-2021	2,543,000	-	2,543,000	1,271,500	-	1,271,500	966,340	305,160
W-M-008	Trunk main from South NOTL to Virgil ET	Trunk main from South NOTL to Virgil ET with PRV in NOTL to supply Decew system from Niagara Falls system	Niagara-on-the-Lake	Decew	Watermain	600	5,700	2032-2041	13,535,000	-	13,535,000	6,767,500	-	6,767,500	5,143,300	1,624,200
W-M-009	New Niagara Falls South trunk main to New Elevated Tank	New Niagara Falls South trunk main to provide additional supply to new growth areas	Niagara Falls	Niagara Falls	Watermain	750	1,360	2032-2041	4,858,000	-	4,858,000	-	-	4,858,000	3,692,080	1,165,920
W-M-010	New Niagara Falls South trunk main	New Niagara Falls South trunk main to provide additional supply to new growth areas	Niagara Falls	Niagara Falls	Watermain	400	7,465	2032-2041	18,316,000	-	18,316,000	-	-	18,316,000	13,920,160	4,395,840
W-M-011	New trunk main to Fort Erie Elevated Tank	New trunk main to Fort Erie Elevated Tank	Fort Erie	Rosehill	Watermain	450	955	2017-2021	4,107,000	-	4,107,000	2,053,500	-	2,053,500	1,560,660	492,840
W-M-012	Upgrade watermain in Port Colborne to new Barrick Road ET	Upgrade watermain in Port Colborne to new Barrick Road ET	Port Colborne	Port Colborne	Watermain	450	955	2017-2021	2,185,000	-	2,185,000	1,092,500	-	1,092,500	830,300	262,200
W-P-001	Upgrade Shoalt's Drive LLPS	Replace both 3 MLD low lift pumps with 6.5 MLD pumps each	Welland	Welland	Pumping	75	-	2017-2021	3,062,000	-	3,062,000	306,200	-	2,755,800	2,094,408	661,392
W-P-002	Upgrade Shoalt's Drive HLPS	Replace all four 5.4 MLD high lift pumps with 10 MLD pumps each	Welland	Welland	Pumping	347	-	2017-2021	7,882,000	-	7,882,000	788,200	-	7,093,800	5,391,288	1,702,512
W-P-003	Upgrade Lincoln/Grimsby BPS	Add third 9.5 MLD pump	Lincoln	Grimsby	Pumping	110	-	2032-2041	989,000	-	989,000	98,900	-	890,100	676,476	213,624
W-S-001	New Fort Erie ET	New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir	Fort Erie	Rosehill	Storage	8	-	2017-2021	12,838,000	-	12,838,000	6,419,000	-	6,419,000	4,878,440	1,540,560
W-S-002	New Barrick Road ET in Port Colborne	New Barrick Road ET in Port Colborne to replace the King Street Elevated Tank	Port Colborne	Port Colborne	Storage	6	-	2017-2021	8,022,000	-	8,022,000	4,011,000	-	4,011,000	3,048,360	962,640
W-S-003	New Pelham ET	New Pelham ET to replace existing ET	Pelham	Welland	Storage	5.8	-	2022-2031	9,307,000	-	9,307,000	4,653,500	-	4,653,500	3,536,660	1,116,840
W-S-004	New South Niagara Falls ET	New South Niagara Falls ET to replace the Lundy's Lane ET and provide additional storage	Niagara Falls	Niagara Falls	Storage	6	-	2032-2041	9,629,000	-	9,629,000	4,814,500	-	4,814,500	3,659,020	1,155,480
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 interim operational configuration	Grimsby	Grimsby	Storage	15	-	2017-2021	23,474,000	-	23,474,000	2,347,400	-	21,126,600	16,056,216	5,070,384
Studies		Water Master Plan Updates					2017-2041	2,000,000	-		2,000,000	200,000	-	1,800,000	1,368,000	432,000
		Reserve Fund Adjustment										14,774,128		(14,774,128)	(11,228,337)	(3,545,791)
	Total							308,649,000	5,149,600	0	303,499,400	90,568,328	18,500,000	194,431,072	147,767,615	46,663,457

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

SERVICE:

Water - Growth Related Component of Works Previously Completed

Region of Niagara

Prj. No.	System	Type	Description	Timing	Gross Capital Cost Est. (2017 \$)	Less:			Potential DC Recoverable Cost		
						Benefit to Existing Development		Post Period Benefit	Net Costs Benefiting New Development	Residential Share	Non- Residential Share
						\$	%				
			<u>Already Constructed</u>								
ZCW0405	Decew	Recovery of PPC	New Watermain Decew System	<2012	1,424,375	-		-	1,424,375		
ZCW9709	Decew Falls	Recovery of PPC	DeCew WTP Phase 3 Upgrade	<2008	196,320	-		-	196,320		
ZCW0405	Decew Falls	Recovery of PPC	Loop trunk system from Eastchester to Roehampton (1.3	<2012	105,509	-		-	105,509		
ZCW0205	Decew Falls(# 11)	Recovery of PPC	Consolidated Storage in Vineland	<2008	799,177	-		-	799,177		
	Decew Falls	Recovery of PPC	Decew Falls WTP Upgrade	<2004	165,587				165,587		
	Decew Falls	Recovery of PPC	Water Supply Reinforcement, Niagara Falls/NOTL	<2004	131,908			-	131,908		
	Subtotal				2,822,877				2,822,877	1,745,229	1,077,648
ZCW0504	Fort Erie (#12, 13, 14)	Recovery of PPC	Eagle Street Watermain - From Stevensville to Bridge/Pettit	<2012	1,986,388	-		-	1,986,388		
	Fort Erie	Recovery of PPC	Treated Water Reservoir in Stevensville	<2004	954,230			-	954,230		
	Fort Erie	Recovery of PPC	Trunk Watermain - Bamard St. from Dominion to Garrison	<2004	404,145			-	404,145		
	Fort Erie	Recovery of PPC	10 ML/d expansion to the water plant and upgrades	<2004	352,724			-	352,724		
	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		
ZCW0303	Grimsby (#9)	Recovery of PPC	Watermain from Park Road Booster Station to new London	<2008	3,589,702	-		-	3,589,702		
	Grimsby	Recovery of PPC	Grimsby WTP Expansion	<2004	1,403,280			-	1,403,280		
	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		
	Niagara Falls	Recovery of PPC	Water Supply Reinforcement, Niagara Falls/NOTL	<2004	131,908				131,908		
	Niagara Falls	Recovery of PPC	Trunk Watermain - St. Paul St. from Thorold Stone to	<2004	420,984				420,984		
	Niagara Falls	Recovery of PPC	400mm WM across Welland River at Niagara Pkwy (water	<2004	16,453				16,453		
	Niagara Falls	Recovery of PPC	400mm WM on Church's Lane from St. Paul Ave to Stanley	<2004	225,738				225,738		
	Niagara Falls	Recovery of PPC	26 ML additional system storage	<2004	428,002				428,002		
	Subtotal				1,431,235				1,431,235	976,049	455,186
	Port Colborne	Recovery of PPC	Install a 500mm x 1km watermain on King Street from the	<2012	51,218	-		-	51,218		
ZCW0402	Port Colborne (# 3)	Recovery of PPC	Fielden Avenue Pumping Station	<2008	85,393	-		-	85,393		
ZCW0203	Port Colborne (#1)	Recovery of PPC	Elizabeth Street watermain Killally Street East to Main	<2008	30,549	-		-	30,549		
ZCW1002	Port Colborne (#4)	Recovery of PPC	Fielden Reservoir expansion (10ML) in lieu of tank	<2012	165,754	-		-	165,754		
ZCW9621	Port Colborne (#5)	Recovery of PPC	Port Colborne WTP Upgrades	<2008	16,309	-		-	16,309		
	Port Colborne	Recovery of PPC	Bell-Elizabeth Trunk Watermain (part of)	<2004	58,470			-	58,470		
	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		
ZCW0204	Welland (#1, #4)	Recovery of PPC	Welland WTP Upgrade including new inground reservoir and	<2012	136,582	-		-	136,582		
	Welland	Recovery of PPC	Welland WTP Improvement	<2004	56,131			-	56,131		
	Welland	Recovery of PPC	400mm WM on Ridge Rd from Southworth to Moore	<2004	181,092			-	181,092		
	Subtotal				2,226,817				2,226,817	1,775,950	450,867
Total Estimated Capital Cost					\$ 19,996,600	\$ -		\$ -	\$ 19,996,600	\$ 14,292,422	\$ 5,704,178

5.4.2 Wastewater Services

As part of the Water and Wastewater Master Servicing Plan, GM BluePlan is undertaking a detailed review of the wastewater services required to service growth over the forecast period to 2041, details of their work is provided in Appendix G. In addition to the capital costs identified in the Master Plan, previous constructed unfunded works and the balance in the Region's D.C. reserve fund have been included in the tables to follow.

Based on the anticipated growth to 2041, a total gross cost of \$502,318,000 has been identified, including \$2 million for updates to the Master Plan over the 25-year forecast. Deductions to this amount include \$200,234,944 which has been identified as benefiting existing development and \$16,991,600 that has been identified as costs that benefit development post-2041. The surplus in the wastewater D.C. reserve fund of \$19,112,554 has also been deducted from the D.C. calculations. The result of these deductions is a net growth-related cost of \$265,978,902 which has been included in the D.C. calculations. In addition to these future works, adjustments have been made to recognize amounts for unfunded works previously constructed in the amount of \$36,721,668. The grand total to be included in the D.C. calculation for all of these components is \$302,700,570.

The costs for all water services are shared 76%/24% between residential and non-residential based on the anticipated population to employment over the 25-year forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix G).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Wastewater Services

Master Plan ID	Increased Service Needs Attributable to Anticipated Development	MUNICIPALITY	WWTP	Project Type	Size/Capacity	Length (m)	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost		
											Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 76%	Non-Residential Share 24%
	2017-2041														
	Name	Description													
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 Falls	Queenston	Treatment	N/A	-	2022-2031	1,979,000	-	1,979,000	1,385,300	593,700	451,212	142,488
WW-FM-001	Upgrade Catherine St. SPS Forcemain	Upgrade Catherine St. SPS Forcemain in Fort Erie	Fort Erie	Anger Ave	Forcemain	300	165	2032-2041	467,000	-	467,000	93,400	373,600	283,936	89,664
WW-FM-003	Upgrade Foss Road SPS Forcemain	Upgrade Foss Road SPS Forcemain in Welland	Welland	Welland	Forcemain	250	5,720	2022-2031	4,500,000	-	4,500,000	900,000	3,600,000	2,736,000	864,000
WW-FM-004	Laurie Avenue SPS Forcemain Upgrade	Laurie Avenue SPS Forcemain Upgrade in Lincoln	Lincoln	Baker Road	Forcemain	250	1,000	2017-2021	2,981,000	-	2,981,000	298,100	2,682,900	2,039,004	643,896
WW-FM-005	New Peel Street SPS Forcemain	New Peel Street SPS Forcemain in Thorold from station to Black Horse SPS	Thorold	Port Weller	Forcemain	400	2,000	2022-2031	4,889,000	-	4,889,000	977,800	3,911,200	2,972,512	938,688
WW-FM-006	New Black Horse Forcemain to Niagara Falls	New Black Horse Forcemain to Niagara Falls	Niagara Falls	South Niagara Falls	Forcemain	400	6,000	2022-2031	9,820,000	-	9,820,000	1,964,000	7,856,000	5,970,560	1,885,440
WW-FM-008	South Side High Lift conveyance	South Side High Lift to new South Niagara Falls WWTP	Niagara Falls	South Niagara Falls	Sewer	900	3,200	2022-2031	38,039,000	-	38,039,000	7,607,800	30,431,200	23,127,712	7,303,488
WW-FM-009	Dorchester Forcemain twinning	Twin existing Dorchester Forcemain in Niagara Falls	Niagara Falls	Niagara Falls	Forcemain	300	50	2022-2031	303,000	-	303,000	60,600	242,400	184,224	58,176
WW-FM-010	St. Davids #1 Forcemain twinning	Twin existing St. Davids #1 Forcemain in Niagara-on-the-Lake	Niagara-on-the-Lake	Niagara Falls	Forcemain	300	2,030	2022-2031	3,923,000	-	3,923,000	784,600	3,138,400	2,385,184	753,216
WW-FM-011	Smithville Forcemain twinning	Twin existing Smithville Forcemain	West Lincoln	Baker Road	Forcemain	400	10,786	2022-2031	18,132,000	-	18,132,000	1,813,200	16,318,800	12,402,288	3,916,512
WW-FM-012	New Queenston Forcemain	New Queenston Forcemain into Niagara Falls system	Niagara-on-the-Lake	Niagara Falls	Forcemain	250	7,065	2022-2031	11,136,000	-	11,136,000	7,795,200	3,340,800	2,539,008	801,792
WW-II-001	Wet weather reduction in East Fort Erie	Wet weather reduction in East Fort Erie	Fort Erie	Anger Ave	Wet Weather Reduction	30	-	2022-2031	4,500,000	-	4,500,000	2,250,000	2,250,000	1,710,000	540,000
WW-II-002	Wet weather reduction in Crystal Beach	Wet weather reduction in Crystal Beach	Fort Erie	Crystal Beach	Wet Weather Reduction	30	-	2022-2031	4,500,000	-	4,500,000	2,250,000	2,250,000	1,710,000	540,000
WW-II-003	Wet weather reduction in Stevensville/Douglastown	Wet weather reduction in Stevensville/Douglastown	Fort Erie	Stevensville Douglastown	Wet Weather Reduction	30	-	2022-2031	4,500,000	-	4,500,000	2,250,000	2,250,000	1,710,000	540,000
WW-II-004	Wet weather reduction in Central Welland	Wet weather reduction in Central Welland	Welland	Welland	Wet Weather Reduction	200	-	2022-2031	30,000,000	-	30,000,000	15,000,000	15,000,000	11,400,000	3,600,000
WW-II-005	Wet weather reduction in West Grimsby	Wet weather reduction in West Grimsby	Grimsby	Baker Road	Wet Weather Reduction	50	-	2022-2031	7,500,000	-	7,500,000	3,750,000	3,750,000	2,850,000	900,000
WW-II-006	Wet weather reduction in Beamsville	Wet weather reduction in Beamsville	West Lincoln	Baker Road	Wet Weather Reduction	20	-	2022-2031	3,000,000	-	3,000,000	1,500,000	1,500,000	1,140,000	360,000
WW-II-007	Wet weather reduction in Jordan Valley	Wet weather reduction in Jordan Valley	West Lincoln	Baker Road	Wet Weather Reduction	10	-	2022-2031	1,500,000	-	1,500,000	750,000	750,000	570,000	180,000
WW-II-008	Wet weather reduction in St. Catharines - Port Dalhousie	Wet weather reduction in St. Catharines - Port Dalhousie	St. Catharines	Port Dalhousie	Wet Weather Reduction	200	-	2022-2031	30,000,000	-	30,000,000	15,000,000	15,000,000	11,400,000	3,600,000
WW-II-009	Wet weather reduction in North Thorold	Wet weather reduction in North Thorold	Thorold	Port Dalhousie	Wet Weather Reduction	90	-	2022-2031	13,500,000	-	13,500,000	6,750,000	6,750,000	5,130,000	1,620,000
WW-II-010	Wet weather reduction in St. Catharines - Port Weller	Wet weather reduction in St. Catharines - Port Weller	St. Catharines	Port Weller	Wet Weather Reduction	134	-	2017-2021	20,100,000	-	20,100,000	10,050,000	10,050,000	7,638,000	2,412,000
WW-II-011	Wet weather reduction in Central Port Colborne	Wet weather reduction in Central Port Colborne	Port Colborne	Seaway	Wet Weather Reduction	20	-	2022-2031	3,000,000	-	3,000,000	1,500,000	1,500,000	1,140,000	360,000
WW-II-012	Wet weather reduction in Central Niagara Falls	Wet weather reduction in Central Niagara Falls	Niagara Falls	Niagara Falls	Wet Weather Reduction	100	-	2022-2031	15,000,000	-	15,000,000	7,500,000	7,500,000	5,700,000	1,800,000
WW-II-013	Wet weather reduction in South Side Niagara Falls	Wet weather reduction in South Side Niagara Falls	Niagara Falls	Niagara Falls	Wet Weather Reduction	100	-	2017-2021	15,000,000	-	15,000,000	7,500,000	7,500,000	5,700,000	1,800,000
WW-II-014	Wet weather reduction in Northeast Niagara-on-the-Lake	Wet weather reduction in Northeast Niagara-on-the-Lake	Niagara-on-the-Lake	NOTL	Wet Weather Reduction	5	-	2022-2031	750,000	-	750,000	375,000	375,000	285,000	90,000
WW-II-015	Wet weather reduction in Virgil	Wet weather reduction in Virgil - NOTL	Niagara-on-the-Lake	NOTL	Wet Weather Reduction	5	-	2022-2031	750,000	-	750,000	375,000	375,000	285,000	90,000
WW-SPS-001	Alliston SPS Pump Replacement - Anger Avenue	Increase station capacity from 43 L/s to 129 L/s	Fort Erie	Anger Ave	Pumping	86	-	2022-2031	989,000	-	989,000	197,800	791,200	601,312	189,888
WW-SPS-002	Catherine St. SPS Expansion - Anger Avenue	Increase station capacity from 117 L/s to 140 L/s	Fort Erie	Anger Ave	Pumping	140	-	2032-2041	2,945,000	-	2,945,000	589,000	2,356,000	1,790,560	565,440
WW-SPS-003	Lakeshore SPS Upgrade - Anger Avenue	Increase station capacity from 63 L/s to 70 L/s	Fort Erie	Anger Ave	Pumping	70	-	2022-2031	2,618,000	-	2,618,000	261,800	2,356,200	1,790,712	565,488
WW-SPS-004	Shirley SPS Upgrade - Crystal Beach	Increase station capacity from 29 L/s to 63 L/s; Also includes sustainability upgrades to the station	Fort Erie	Crystal Beach	Pumping	34	-	2032-2041	2,889,000	-	2,889,000	1,444,500	1,444,500	1,097,820	346,680
WW-SPS-005	Nigh Rd. SPS Pump Replacement - Crystal Beach	Increase station capacity from 29 L/s to 45 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Fort Erie	Crystal Beach	Pumping	16	-	2022-2031	989,000	-	989,000	494,500	494,500	375,820	118,680
WW-SPS-006	Stevensville SPS Upgrade - Stevensville Douglastown	Increase station capacity from 42 L/s to 69 L/s	Fort Erie	Stevensville Douglastown	Pumping	27	-	2022-2031	1,022,000	-	1,022,000	511,000	511,000	388,360	122,640
WW-SPS-007	Rosemount South SPS Pump Replacement - Seaway	Increase station capacity from 9 L/s to 17 L/s	Port Colborne	Seaway	Pumping	8	-	2017-2021	665,000	-	665,000	332,500	332,500	252,700	79,800

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Wastewater Services

Master Plan ID	Increased Service Needs Attributable to Anticipated Development		MUNICIPALITY	WWTP	Project Type	Size/Capacity	Length (m)	Timing (year)	Gross Capital Cost Estimate (2017\$)	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost		
												Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2017-2041													76%	24%	
	Name	Description														
WW-SPS-008	Oxford SPS Pump Replacement - Seaway	Increase station capacity from 7 L/s to 10 L/s	Port Colborne	Seaway	Pumping	3	-	2032-2041	665,000	-	665,000	66,500		598,500	454,860	143,640
WW-SPS-009	Steele SPS Pump Replacement - Seaway	Increase station capacity from 16 L/s to 40 L/s	Port Colborne	Seaway	Pumping	24	-	2032-2041	989,000	-	989,000	494,500		494,500	375,820	118,680
WW-SPS-011	Foss Road SPS Upgrade - Welland	Increase station capacity from 27 L/s to 76 L/s	Pelham	Welland	Pumping	49	-	2022-2031	1,866,000	-	1,866,000	373,200		1,492,800	1,134,528	358,272
WW-SPS-012	Smithville SPS Expansion - Baker Road	Increase station capacity from 120 L/s to 360 L/s	West Lincoln	Baker Road	Pumping	360	-	2022-2031	8,241,000	-	8,241,000	824,100		7,416,900	5,636,844	1,780,056
WW-SPS-013	Campden SPS Pump Replacement - Baker Road	Increase station capacity from 11 L/s to 19 L/s pumps	Lincoln	Baker Road	Pumping	8	-	2022-2031	1,299,000	-	1,299,000	129,900		1,169,100	888,516	280,584
WW-SPS-014	Laurie Avenue SPS Expansion - Baker Road	Increase station capacity from 28 L/s to 38 L/s	Lincoln	Baker Road	Pumping	38	-	2017-2021	1,814,000	-	1,814,000	181,400		1,632,600	1,240,776	391,824
WW-SPS-015	Victoria Avenue SPS Upgrade - Baker Road	Increase station capacity from 120 L/s to 230 L/s	Lincoln	Baker Road	Pumping	110	-	2017-2021	4,051,000	-	4,051,000	810,200		3,240,800	2,463,008	777,792
WW-SPS-016	Bridgeport SPS Pump Replacement - Baker Road	Increase station capacity from 11 L/s to 22 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Lincoln	Baker Road	Pumping	11	-	2022-2031	834,000	-	834,000	166,800		667,200	507,072	160,128
WW-SPS-017	Jordan Valley SPS Pump Replacement - Baker Road	Increase station capacity from 40 L/s to 66 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Lincoln	Baker Road	Pumping	26	-	2022-2031	1,145,000	-	1,145,000	229,000		916,000	696,160	219,840
WW-SPS-018	Ontario Street SPS Upgrade - Baker Road	Increase station capacity from 420 L/s to 600 L/s	Lincoln	Baker Road	Pumping	180	-	2032-2041	3,755,000	-	3,755,000	751,000		3,004,000	2,283,040	720,960
WW-SPS-019	Biggar Lagoon Pump Replacement - Baker Road	Increase station capacity from 60 L/s to 110 L/s; Also includes SOGR project as per Niagara Region capital forecast	Grimsby	Baker Road	Pumping	50	-	2017-2021	3,902,000	-	3,902,000	1,951,000		1,951,000	1,482,760	468,240
WW-SPS-020	Lake St SPS Upgrade - Baker Road	Increase station capacity from 375 L/s to 495 L/s	Grimsby	Baker Road	Pumping	120	-	2017-2021	4,410,000	-	4,410,000	882,000		3,528,000	2,681,280	846,720
WW-SPS-021	Beaverdams SPS Pump Replacement - Port Dalhousie	Increase station capacity from 10 L/s to 20 L/s	Thorold	Port Dalhousie	Pumping	10	-	2017-2021	665,000	-	665,000	133,000		532,000	404,320	127,680
WW-SPS-025	Garner Road SPS Pump Replacement - Niagara Falls	Increase station capacity from 81 L/s to 206 L/s	Niagara Falls	Niagara Falls	Pumping	103	-	2032-2041	824,000	-	824,000	82,400		741,600	563,616	177,984
WW-SPS-026	Dorchester SPS Pump Replacement - Niagara Falls	Increase station capacity from 220 L/s to 270 L/s	Niagara Falls	Niagara Falls	Pumping	50	-	2022-2031	2,414,000	-	2,414,000	482,800		1,931,200	1,467,712	463,488
WW-SPS-028	Black Horse SPS Upgrade - South Niagara Falls	Increase station capacity from 21 L/s to 180 L/s	Thorold	South Niagara Falls	Pumping	180	-	2022-2031	4,620,000	-	4,620,000	2,310,000		2,310,000	1,755,600	554,400
WW-SPS-031	St. Davids #2 SPS Expansion - Niagara Falls	Increase station capacity from 44 L/s to 104 L/s	Niagara-on-the-Lake	Niagara Falls	Pumping	104	-	2022-2031	3,836,000	-	3,836,000	767,200		3,068,800	2,332,288	736,512
WW-SPS-032	St. Davids #1 SPS Upgrade - Niagara Falls	Increase station capacity from 41 L/s to 88 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades	Niagara-on-the-Lake	Niagara Falls	Pumping	47	-	2022-2031	1,794,000	-	1,794,000	358,800		1,435,200	1,090,752	344,448
WW-SPS-033	Lakeshore Road SPS Pump Replacement - Niagara-on-the-Lake	Increase station capacity from 90 L/s to 144 L/s	Niagara-on-the-Lake	NOTL	Pumping	54	-	2032-2041	1,512,000	-	1,512,000	151,200		1,360,800	1,034,208	326,592
WW-SPS-034	Niagara Stone Road SPS Pump Replacement - Niagara-on-the-Lake	Increase station capacity from 22 L/s to 27 L/s	Niagara-on-the-Lake	NOTL	Pumping	5	-	2032-2041	834,000	-	834,000	83,400		750,600	570,456	180,144
WW-SPS-035	Line 2 SPS Pump Replacement - Niagara-on-the-Lake	Increase station capacity from 8 L/s to 16 L/s	Niagara-on-the-Lake	NOTL	Pumping	8	-	2017-2021	665,000	-	665,000	133,000		532,000	404,320	127,680
WW-SPS-036	Garrison Village SPS Pump Replacement - Niagara-on-the-Lake	Increase station capacity from 62 L/s to 72 L/s	Niagara-on-the-Lake	NOTL	Pumping	10	-	2032-2041	1,250,000	-	1,250,000	250,000		1,000,000	760,000	240,000
WW-SPS-037	Towpath SPS Pump Replacement - Welland	Increase station capacity from 150 L/s to 300 L/s	Pelham	Welland	Pumping	150	-	2022-2031	834,000	-	834,000	83,400		750,600	570,456	180,144
WW-SPS-038	Hurricane Road SPS Pump Replacement - Welland	Increase station capacity from 39 L/s to 55 L/s	Pelham	Welland	Pumping	16	-	2022-2031	1,250,000	-	1,250,000	250,000		1,000,000	760,000	240,000
WW-SPS-039	Queenston SPS	New Queenston SPS with firm capacity of 72 L/s	Niagara-on-the-Lake	Niagara Falls	Pumping	72	-	2022-2031	2,996,000	-	2,996,000	2,097,200		898,800	683,088	215,712
WW-SS-001	Highway 406 Trunk Sewer Crossing	New trunk sewer crossing of HWY 406 between Merritt Rd and recreational waterway in Thorold to support development of the Port Robinson West area.	Thorold	Welland	Sewer	600	-	2017-2021	1,450,000	-	1,450,000	-		1,450,000	1,102,000	348,000
WW-SS-002	Quaker Road Trunk Sewer	New sewer on Quaker Rd. between Pelham Street trunk and Rice Road trunk sewers.	Welland	Welland	Sewer	600	-	2022-2031	1,725,000	-	1,725,000	-		1,725,000	1,311,000	414,000
WW-SS-003	Gravity Sewer upgrade in Smithville	Upgrade gravity sewer downstream of Smithville forcemain from 375 mm to 525 mm	West Lincoln	Baker Road	Sewer	525	-	2022-2031	5,667,000	-	5,667,000	-		5,667,000	4,306,920	1,360,080
WW-SS-004	Gravity Sewer upgrade in Smithville	Upgrade gravity sewer downstream of Smithville forcemain from 375 mm to 525 mm	West Lincoln	Baker Road	Sewer	525	-	2022-2031	923,000	-	923,000	-		923,000	701,480	221,520
WW-SS-005	Gravity Sewer upgrade in Smithville	Upgrade gravity sewer upstream of Smithville SPS from 450 mm to 600 mm	West Lincoln	Baker Road	Sewer	600	-	2022-2031	2,286,000	-	2,286,000	-		2,286,000	1,737,360	548,640
WW-TP-001	Baker Road WWTP Upgrade	Baker Road WWTP Upgrade	Grimsby	Baker Road	Treatment	16	-	2022-2031	41,730,000	4,173,000	37,557,000	4,173,000		33,384,000	25,371,840	8,012,160
WW-TP-002	South Niagara Falls WWTP	New South Niagara Falls WWTP	Niagara Falls	Niagara Falls	Treatment	30	-	2022-2031	128,186,000	12,818,600	115,367,400	76,911,600		38,455,800	29,226,408	9,229,392
Studies	Wastewater Master Plan Updates							2017-2041	2,000,000	-	2,000,000	797,244		1,202,756	914,095	288,661
		Reserve Fund Adjustment										19,112,554		(19,112,554)	(14,525,541)	(4,587,013)
	Total								502,318,000	16,991,600	485,326,400	219,347,498	0	265,978,902	202,143,966	63,834,936

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

SERVICE:

Wastewater - Growth Related Component of Works Previously Completed

Region of Niagara

Prj. No.	System	Type	Description	Timing	Gross Capital Cost Est. (2017 \$)	Less:		Post Period Benefit	Net Costs Benefiting New Development	Potential DC Recoverable Cost			
						Benefit to Existing Development				Residential Share	Non-Residential Share		
						\$	%						
	System	Type	Already Constructed			\$	%	\$					
ZSW0716	Anger Avenue	Recovery of PPC	Anger Avenue WWTP - P2 Project	<2012	234,465	-		-	234,465	-	-		
	Anger Avenue (#5)	Recovery of PPC	Frenchman's Creek Trunk Sewer - PH2	<2012	334,113	-		-	334,113	-	-		
	Anger Avenue	Recovery of PPC	Parkway PS Replacement (Fort Erie)	<2004	928,036			-	928,036				
	Anger Subtotal				1,496,613				1,496,613	854,107	57.1%	642,506 42.9%	
ZSW0006	Baker Road	Recovery of PPC	Smithville PS Expansion (for growth in Smithville)	<2012	897,673	-		-	897,673	-	-		
ZSW0006	Baker Road	Recovery of PPC	Baker Road WWTP Capacity Expansion Stage 1	<2012	4,829,981	-		-	4,829,981	-	-		
ZSW0013	Baker Road (#1)	Recovery of PPC	Replace existing Smithville pumping station	<2008	158,525	-		-	158,525	-	-		
	Baker Road	Recovery of PPC	Smithville PS & Sewer (West Lincoln)	<2004	44,905			-	44,905				
	Baker Road	Recovery of PPC	Install Forcemain on North Service - Biggar PS to Roberts	<2004	105,411			-	105,411				
	Baker Road	Recovery of PPC	Gravity Trunk Sewer Along Ontario St. @ QEW Crossing	<2004	577,927			-	577,927				
	Baker Road Subtotal				6,614,421			-	6,614,421	4,893,099	74.0%	1,721,322 26.0%	
ZSW0721	Crystal Beach Subtotal	Recovery of PPC	Crystal Beach WWTP - P2 Project	<2012	234,465	-		-	234,465	226,335	96.5%	8,130 3.5%	
ZSW0115	Stephensville/Douglastown	Recovery of PPC	Douglastown Forcemain	<2012	799,233	-		-	799,233				
ZSW0607	Stephensville/Douglastown	Recovery of PPC	Stevensville PS capacity upgrade	<2012	175,849	-		-	175,849				
	Stephensville/Douglastown Subtotal				975,082			-	975,082	596,096	61.1%	378,986 38.9%	
ZSW0302	Niagara Falls	Recovery of PPC	Alternative biosolids management program	<2008	749,407	-		-	749,407	-	-		
ZSW0714	Niagara Falls	Recovery of PPC	Niagara Falls WWTP - P2 project	<2012	213,832	-		-	213,832	-	-		
	Niagara Falls	Recovery of PPC	HRT facility at NF High Lift Pumping Station	<2012	375,144	-		-	375,144	-	-		
ZSW9305	Niagara Falls (#2)	Recovery of PPC	Central Avenue Pumping Station and forcemain	<2008	492,745	-		-	492,745	-	-		
	Niagara Falls	Recovery of PPC	Upgrade Niagara Falls WPCP	<2004	1,010,361			-	1,010,361				
	Niagara Falls	Recovery of PPC	Upgrade NF WPCP	<2004	4,319,262			-	4,319,262				
	Niagara Falls Subtotal				7,160,751			-	7,160,751	4,767,263	66.6%	2,393,488 33.4%	
ZSW0807	Niagara-on-the-Lake	Recovery of PPC	Niagara-on-the-Lake WWTP Capacity Upgrade from 5.7	<2012	1,965,999	-		-	1,965,999				
	Niagara-on-the-Lake	Recovery of PPC	NOTL Sewage Treatment Facility Upgrade	<2004	190,846			-	190,846				
	Niagara-on-the-Lake	Recovery of PPC	William St PS and Forcemain (NOTL)	<2004	62,867			-	62,867				
	Niagara-on-the-Lake Subtotal				2,219,712	-		-	2,219,712	1,674,580	75.4%	545,132 24.6%	
ZSW9816	Port Dalhousie	Recovery of PPC	Port Dalhousie WPCP optimization study and upgrades	<2008	317,645	-		-	317,645	-	-		
ZSW0712	Port Dalhousie	Recovery of PPC	Port Dalhousie WWTP - P2 Project	<2012	410,314	-		-	410,314	-	-		
	Port Dalhousie	Recovery of PPC	Port Dalhousie WPCP Upgrading	<2004	110,391			-	110,391				
	Port Dalhousie Subtotal				838,350			-	838,350	445,349	53.1%	393,001 46.9%	
	Port Weller	Recovery of PPC	Upgrade Black Horse PS	<2004	358,995			-	358,995				
	Port Weller	Recovery of PPC	Peel St PS	<2004	2,163,175			-	2,163,175				
	Port Weller Subtotal				2,522,170			-	2,522,170	1,615,016	64.0%	907,154 36.0%	
	Seaway	Recovery of PPC	Seaway WPCP Upgrading (Port Colborne)	<2004	855,439			-	855,439				
	Seaway	Recovery of PPC	Elm Street PS Upgrading (Port Colborne)	<2004	276,614			-	276,614				
	Seaway	Recovery of PPC	Industrial PS Upgrade	<2004	142,908			-	142,908				
	Seaway Subtotal				1,274,961			-	1,274,961	931,364	73.1%	343,597 26.9%	
	Welland	Recovery of PPC	Sanitary Sewer Service to East Industrial Lands (Welland)	<2004	175,578			-	175,578				
	Welland	Recovery of PPC	North East Welland Trunk Sewer	<2004	1,717,614			-	1,717,614				
	Welland	Recovery of PPC	Dain City PS upgrade	<2004	254,058			-	254,058				
ZSW0609	Welland	Recovery of PPC	Welland WWTP - P2 Project	<2012	24,150	-		-	24,150	-	-		
ZSW9815	Welland	Recovery of PPC	South Thorold PS, forcemains, sewers	<2008	11,213,742	-		-	11,213,742	-	-		
	Welland Subtotal				13,385,143				13,385,143	10,675,416	79.8%	2,709,727 20.2%	
	Grand Total				36,721,668	-		-	36,721,668	26,678,625		10,043,043	

6. Development Charge Calculation

Table 6-1 and Table 6-2 calculates the proposed uniform development charges to be imposed for infrastructure services based upon an urban 25-year horizon (wastewater and water). Table 6-3 calculates the proposed uniform development charge to be imposed on anticipated development in the Region for Region-wide services over a 25-year planning horizon. Table 6-4 calculates the proposed uniform development charge 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 (single and semi-detached, apartments 2+ bedrooms, bachelor apartments and 1 bedroom apartments, all other multiples and special care/special dwelling units/rooms). The non-residential development charge has been calculated on a per sq.ft. of gross floor area 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 Regional 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, 6-2, 6-3, and 6-4.

With respect to non-residential development, the total costs associated with non-residential development have been allocated to those costs associated with commercial development, industrial developments, and institutional development based on the relative share of employment anticipated for each category. These costs have then been divided by the anticipated commercial, industrial, and institutional development, respectfully, over the planning period to calculate a cost per sq.ft. of gross floor area.

Table 6-5 summarizes the total development charge that is applicable for Region-wide services and Table 6-6 summarizes the gross capital expenditures and sources of revenue for works to be undertaken during the 5-year life of the by-law.

TABLE 6-1
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
Urban-specific Services
2017-2041

SERVICE	2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost			2017 \$ DC Eligible Cost		
	Residential	Non-Residential	SDU	per ft²	Commercial	Industrial	Institutional	Commercial	Industrial	Institutional
1. <u>Wastewater Services</u>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1.1 Wastewater	202,143,966	63,834,936	3,905	2.29	45,669,843	5,528,823	12,636,271	2.75	1.14	1.96
1.2 Wastewater, Previously Constructed Unfunded Works	26,678,625	10,043,043	515	0.36	7,185,159	869,840	1,988,043	0.43	0.18	0.31
Sub-Total	228,822,591	73,877,979	4,420	2.65	52,855,002	6,398,663	14,624,314	3.18	1.32	2.27
TOTAL	\$228,822,591	\$73,877,979	\$4,420	\$2.65	\$52,855,002	\$6,398,663	\$14,624,314	\$3.18	\$1.32	\$2.27
DC ELIGIBLE CAPITAL COST	\$228,822,591	\$73,877,979			\$52,855,002	\$6,398,663	\$14,624,314			
Build out Gross Population / GFA Growth (ft².)	150,665	27,914,500			16,636,600	4,833,700	6,444,200			
Cost Per Capita / Non-Residential GFA (ft².)	\$1,518.75	\$2.65			\$3.18	\$1.32	\$2.27			
<u>By Residential Unit Type</u>	<u>D.P.U.</u>									
Single and Semi-Detached Dwelling	2.91	\$4,420								
Apartments - 2+ Bedrooms	2.02	\$3,068								
Apartments - Bachelor and 1 Bedroom	1.20	\$1,823								
Other Multiples	2.12	\$3,220								
Special Care/Special Dwelling Units/Rooms	1.10	\$1,671								

TABLE 6-2
 NIAGARA REGION
 DEVELOPMENT CHARGE CALCULATION
 Urban-specific Services
 2017-2041

SERVICE	2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost			2017 \$ DC Eligible Cost		
	Residential	Non-Residential	SDU	per ft²	Commercial	Industrial	Institutional	Commercial	Industrial	Institutional
2. <u>Water Services</u>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
2.1 Water	147,767,615	46,663,457	2,853	1.68	33,384,740	4,041,580	9,237,138	2.00	0.84	1.43
2.2 Water, Previously Completed Unfunded Works	14,292,422	5,704,178	276	0.20	4,080,977	494,046	1,129,155	0.25	0.10	0.18
Sub-Total	162,060,036	52,367,635	3,129	1.88	37,465,717	4,535,626	10,366,293	2.25	0.94	1.61
TOTAL	\$162,060,036	\$52,367,635	\$3,129	\$1.88	\$37,465,717	\$4,535,626	\$10,366,293	\$2.25	\$0.94	\$1.61
DC ELIGIBLE CAPITAL COST	\$162,060,036	\$52,367,635			\$37,465,717	\$4,535,626	\$10,366,293			
Build out Gross Population / GFA Growth (ft².)	150,706	27,914,500			16,636,600	4,833,700	6,444,200			
Cost Per Capita / Non-Residential GFA (ft².)	\$1,075.34	\$1.88			\$2.25	\$0.94	\$1.61			
<u>By Residential Unit Type</u>	<u>D.P.U.</u>									
Single and Semi-Detached Dwelling	2.91	\$3,129								
Apartments - 2+ Bedrooms	2.02	\$2,172								
Apartments - Bachelor and 1 Bedroom	1.20	\$1,290								
Other Multiples	2.12	\$2,280								
Special Care/Special Dwelling Units/Rooms	1.10	\$1,183								

TABLE 6-3
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2017-2041

SERVICE	2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost			2017 \$ DC Eligible Cost		
	Residential	Non-Residential	SDU	per ft²	Commercial	Industrial	Institutional	Commercial	Industrial	Institutional
3. <u>Services Related to a Highway</u>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Services Related to a Highway, Related										
3.1 Facilities & Vehicles, and Previously	338,709,576	106,960,919	6,297	3.68	76,036,005	10,057,511	20,867,402	4.45	1.86	3.18
Completed Unfunded Works										
4. <u>Police Services</u>										
4.1 Police facilities	15,627,581	4,986,379	290	0.17	3,544,700	468,868	972,811	0.21	0.09	0.15
4.2 Police vehicles	3,039,250	969,750	56	0.03	689,373	91,185	189,192	0.04	0.02	0.03
4.3 Small equipment and gear	1,686,029	537,971	31	0.02	382,431	50,585	104,955	0.02	0.01	0.02
Sub-Total	20,352,860	6,494,100	377	0.22	4,616,503	610,639	1,266,958	0.27	0.12	0.20
TOTAL	\$359,062,435	\$113,455,019	\$6,674	\$3.90	\$80,652,508	\$10,668,150	\$22,134,360	\$4.72	\$1.98	\$3.38
DC ELIGIBLE CAPITAL COST	\$359,062,435	\$113,455,019			\$80,652,508	\$10,668,150	\$22,134,360			
25 Year Gross Population / GFA Growth (ft².)	156,550	29,062,000			17,078,600	5,421,700	6,561,700			
Cost Per Capita / Non-Residential GFA (ft².)	\$2,293.60	\$3.90			\$4.72	\$1.98	\$3.38			
By Residential Unit Type	p.p.u									
Single and Semi-Detached Dwelling	2.91	\$6,674								
Apartments - 2+ Bedrooms	2.02	\$4,633								
Apartments - Bachelor and 1 Bedroom	1.20	\$2,752								
Other Multiples	2.12	\$4,862								
Special Care/Special Dwelling Units/Rooms	1.10	\$2,523								

TABLE 6-4
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2017-2026

SERVICE	2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost			2017 \$ DC Eligible Cost		
	Residential	Non-Residential	SDU	per ft²	Commercial	Industrial	Institutional	Commercial	Industrial	Institutional
5. <u>General Government</u>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
5.1 Studies	4,164,080	1,363,119	212	0.14	944,744	208,947	209,428	0.19	0.07	0.13
6. <u>Long Term Care</u>										
6.1 Long Term Care facilities	23,826,150	2,647,350	1,212	0.27	1,834,812	405,802	406,735	0.34	0.14	0.25
7. <u>Health</u>										
7.1 Health department space	2,909,520	323,280	148	0.03	224,057	49,554	49,668	0.04	0.02	0.03
8. <u>Provincial Offences Act</u>										
8.1 POA facilities	949,123	310,697	48	0.03	215,336	47,626	47,735	0.05	0.02	0.03
9. <u>Social and Child Services</u>										
9.1 Social and Child Services facilities	0	0	0	0.00	0	0	0	-	-	-
10. <u>Emergency Medical Services</u>										
10.1 EMS facilities	2,303,598	251,362	117	0.03	174,213	38,530	38,619	0.03	0.01	0.02
10.2 Vehicles	959,141	104,659	49	0.01	72,536	16,043	16,080	0.01	0.01	0.01
Sub-Total	3,262,739	356,021	166	0.04	246,750	54,573	54,699	0.04	0.02	0.03
11. <u>Social Housing</u>										
11.1 Social housing facilities	23,563,710	0	1,199	0.00	0	0	0	-	-	-
12. <u>Waste Diversion</u>										
12.1 Waste diversion facilities - Stations/Depots	5,453,829	1,785,321	278	0.19	1,237,362	273,665	274,294	0.24	0.09	0.17
12.2 Waste diversion vehicles and equipment	515,312	168,688	26	0.02	116,914	25,858	25,917	0.02	0.01	0.02
12.3 Waste diversion - Containers	433,947	142,053	22	0.01	98,454	21,775	21,825	0.02	0.01	0.01
12.4 Waste diversion other	698,383	228,617	36	0.02	158,449	35,044	35,124	0.03	0.01	0.02
Sub-Total	7,101,470	2,324,680	362	0.24	1,611,178	356,341	357,161	0.31	0.12	0.22
TOTAL	\$65,776,792	\$7,325,148	\$3,346	\$0.75	\$5,076,877	\$1,122,844	\$1,125,426	\$0.96	\$0.39	\$0.69
DC ELIGIBLE CAPITAL COST	\$65,776,792	\$7,325,148			\$5,076,877	\$1,122,844	\$1,125,426			
10 Year Gross Population / GFA Growth (ft².)	57,204	9,810,900			5,328,700	2,828,500	1,653,700			
Cost Per Capita / Non-Residential GFA (ft².)	\$1,149.86	\$0.75			\$0.96	\$0.39	\$0.69			
By Residential Unit Type	p.p.u.									
Single and Semi-Detached Dwelling	2.91	\$3,346								
Apartments - 2+ Bedrooms	2.02	\$2,323								
Apartments - Bachelor and 1 Bedroom	1.20	\$1,380								
Other Multiples	2.12	\$2,438								
Special Care/Special Dwelling Units/Rooms	1.10	\$1,265								

TABLE 6-5
 NIAGARA REGION
 DEVELOPMENT CHARGE CALCULATION
 TOTAL ALL SERVICES

	2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost		2017 \$ DC Eligible Cost			2017 \$ DC Eligible Cost		
	Residential	Non-Residential	SDU	per ft²	Commercial	Industrial	Institutional	Commercial	Industrial	Institutional
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Urban-wide Services 25 Year	\$390,882,627	\$126,245,615	\$7,549	\$4.53	90,320,719	10,934,289	24,990,607	\$5.43	\$2.26	\$3.88
Municipal-wide Services 25 Year	359,062,435	113,455,019	6,674	3.90	80,652,508	10,668,150	22,134,360	\$4.72	\$1.98	\$3.38
Municipal-wide Services 10 Year	65,776,792	7,325,148	3,346	0.75	5,076,877	1,122,844	1,125,426	\$0.96	\$0.39	\$0.69
TOTAL	815,721,855	247,025,781	17,569	9.18	176,050,104	22,725,283	48,250,393	11.11	4.63	7.95

Table 6-6
NIAGARA REGION
GROSS EXPENDITURE AND SOURCES OF REVENUE SUMMARY
FOR COSTS TO BE INCURRED OVER THE LIFE OF THE BY-LAW

SERVICE	TOTAL GROSS COST	SOURCES OF FINANCING						
		TAX BASE OR OTHER NON-DC SOURCE				POST DC PERIOD BENEFIT	DC RESERVE FUND	
		OTHER DEDUCTIONS	BENEFIT TO EXISTING	OTHER FUNDING	LEGISLATED REDUCTION		RESIDENTIAL	NON-RESIDENTIAL
1. Wastewater Services								
1.1 Wastewater	56,103,000	0	22,430,649	0	0	0	25,590,987	8,081,364
2. Water Services								
2.1 Water	114,148,000	0	32,058,100	18,500,000	0	0	48,328,324	15,261,576
3. Services Related to a Highway								
3.1 Services Related to a Highway, Related Facilities & Vehicles, and	301,611,296	0	168,309,480	14,350,000	0	0	90,403,380	28,548,436
4. Police Services								
4.1 Police facilities	23,341,000	0	23,341,000	0	0	0	0	0
4.2 Police vehicles	801,800	0	0	0	0	0	607,850	193,950
4.3 Small equipment and gear	444,800	0	0	0	0	0	337,206	107,594
5. General Government								
5.1 Studies	5,770,000	140,000	772,000	0	460,550	240,000	3,132,138	1,025,312
6. Long Term Care								
6.1 Long Term Care facilities	50,329,286	0	36,415,714	1,285,714	1,260,643	21,429	10,211,207	1,134,579
7. Health								
7.1 Health department space	6,000,000	0	2,220,000	1,000,000	259,200	188,000	2,099,520	233,280
8. Provincial Offences Act								
8.1 POA facilities	12,400,000	0	10,156,000	0	100,980	1,234,200	684,687	224,133
9. Social and Child Services								
9.1 Social and Child Services facilities	0	0	0	0	0	0	0	0
10. Emergency Medical Services								
10.1 EMS facilities	30,500,000	0	2,594,559	0	289,544	25,010,000	2,349,523	256,374
10.2 Vehicles	1,028,000	0	0	0	42,600	602,000	345,680	37,720
11. Social Housing								
11.1 Social housing facilities	46,045,000	0	843,100	19,020,000	2,618,190	0	23,563,710	0
12. Waste Diversion								
12.1 Waste diversion facilities - Stations/Depots	4,232,500	30,000	180,750	0	402,175	0	2,726,914	892,661
12.2 Waste diversion vehicles and equipment	380,000	0	0	0	38,000	0	257,656	84,344
12.3 Waste diversion - Containers	320,000	0	0	0	0	32,000	216,973	71,027
12.4 Waste diversion other	515,000	0	0	0	51,500	0	349,191	114,309
TOTAL EXPENDITURES & REVENUES	\$653,969,681	\$170,000	\$299,321,352	\$54,155,714	\$5,523,382	\$27,327,629	\$211,204,947	\$56,266,657

7. Development Charge Policy Recommendations and Development Charge By-law Rules

7.1 Introduction

s.s.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 development charges.

s.s.5(6) establishes the following restrictions on the rules:

- the total of all development charges that would be imposed on anticipated development must not exceed the capital costs determined under 5(1) 2-8 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay development charges 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 development charge than is allowed, the rules for determining development charges 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 s.s.5(1) para. 9 and 10, as well as how the rules apply to the redevelopment of land.

The rules provided are based on the Region’s existing policies; however, there are items under consideration at this time and these may be refined prior to adoption of the by-law.

7.2 Development Charge By-law Structure

It is recommended that:

- water and wastewater services be imposed on the urban service areas of the Region;
- the Region uses a uniform Region-wide development charge calculation for all other services; and
- one Municipal development charge by-law be used for all services.

7.3 Development Charge By-law Rules

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

It is recommended that the following sections provide the basis for the development charges:

7.3.1 Payment in any Particular Case

In accordance with the D.C.A., s.2(2), a development charge 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 section 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 50 of the Condominium Act; or
- g) the issuing of a building permit under the Building Code Act 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 gross floor area constructed for eligible uses (i.e. industrial, commercial and institutional). Costs allocated to wind turbines will be based on a single detached residential equivalent for services related to a highway, police, E.M.S. and general government.

- 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 General Government, Provincial Offences Act space, and Waste Diversion services, the costs have been based on a population vs. employment growth ratio (75%/25%) for residential and non-residential, respectively) over the 10-year forecast period;
 - for Long-term Care, Health, and Social and Child Services facility space, a 10% non-residential attribution has been made to recognize use by the non-residential sector;
 - for Social Housing, the costs have been attributed 100% to residential development;
 - for E.M.S. services, a 90% residential/10% non-residential share has been calculated based on the forecast population (weighted times three) to employment within the Region over the 10-year forecast period;
 - for Police services and Services Related to a Highway, a 76% residential/24% non-residential allocation has been made based on the forecast population to employment growth anticipated in the Region over the 25-year forecast period; and
 - for Water and Wastewater services a 76% residential/24% non-residential allocation has been made based on serviced population vs. employment (adjusted for W.A.H and N.F.P.O.W.) growth over the 25-year forecast period.

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

If a development involves the demolition of and replacement of a building or structure on the same site, 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 development charge in place at the time the development charge is payable; and/or

- 2) the gross floor area of the building demolished/converted multiplied by the current non-residential development charge in place at the time the development charge is payable.

The demolition credit is allowed only if the land was improved by occupied structures and if the demolition permit related to the site was issued less than five years prior to the issuance of a building permit. The credit can, in no case, exceed the amount of development charges that would otherwise be payable. Where demolition takes place on a brownfield, 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 above. This application will be considered by Regional Council for approval.

The conversion credit is applied based on the “first use” of a building when converting to another use. The D.C. payable would be reduced by the amount calculated based on the first use, provided that such reduction shall not exceed the D.C. otherwise payable. When the first use of a premise would be exempt from D.C.s by operation of the by-law, the reduction available would be determined by assessing the first use of the premise at the institutional rate.

7.3.4 Exemptions (full or partial)

a) Statutory exemptions

- industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to development charges (s.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 (s.3);
- residential 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 s.2 of O.Reg. 82/98).

b) Non-statutory exemptions

- Granny flats;
- parking structures;
- non-residential lands and buildings used for agricultural use;
- the portion of a place of worship used for religious services

- lands and buildings used or intended to be used as municipal housing project facilities;
- the proportionate share of lands and buildings used for affordable housing projects;
- gas station canopies; and
- long-term care homes (reduced by 50%).

c) Rules with Respect to Brownfield Development located within the Urban Areas (Brownfields Development Charge Reduction Program)

The applicable development charge shall be reduced, after any demolition credits are applied, by the eligible cost of remediation for brownfield development located within the approved urban area as set out in Schedules “D1 to D11” to the By-law, as may be amended from time to time; as approved by Council of the Region, without amendment to the By-law. The following requirements are provided:

- The total reduction under this program is not to exceed the total costs of remediation;
- The Region has sole discretion in determining if a development will be considered a brownfield development, in accordance with the by-law;
- The Region has sole discretion as to what costs will be eligible. Costs associated with remediation may be subject to third party review or independent audit at the owner's expense;
- Eligible properties must submit a complete application within 12 months of commencement of Environmental Rehabilitation. The owner shall include an identification of lands for which remediation has occurred, the nature of the proposed development, the nature of the remediation works, the anticipated date of the works, and the associated costs;
- Only lands identified in Schedules D1-D11 of the by-law may be considered eligible;
- Where funding from another source is, or may be, provided, the D.C. reduction under this program will be reduced by the amounts of the anticipated funding from other sources;
- Remediation costs may be assigned to subsequent owners of the lands, subject to notifying the Region a minimum of 90 days in advance of transfer of ownership or issuance of a building permit. Any assignment of costs will be subject to approval by the Region;
- Brownfield redevelopment that has commenced prior to September 1, 2017 may be transitioned pursuant to the provisions of Schedule F of the by-law and have

the former program continue to apply, subject to the terms of any written agreement with the Region;

- Determination of the amount of the reduction and any conditions will be subject to a written agreement between the owner and the Region prior to issuance of a building permit; and
- Potential costs eligible of the program are outlined in Schedule D of the by-law.

d) Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Development within the Urban Areas

- For all development located within the Designated Exemption Areas, as set out in Schedules “E1 to E10” and to Brownfield Developments within the Urban Areas, as set out in Schedules D1 to D11 of the By-law, a maximum 50% reduction in Development Charges, after any demolition credits are applied, will apply provided the Smart Growth Design Criteria endorsed by Council of the Region and/or any level of LEED certification are achieved.
- The Smart Growth Design Criteria may be amended or eliminated at the discretion of Regional Council in which case the development charge reductions granted under the Schedule may also be amended or eliminated without amendment to this By-law.
- In the case of a project that qualifies for reduction under Schedules D and E, the total benefit under Schedules D and E shall not exceed the total Development Charges payable.
- Brownfield redevelopment that has commenced prior to September 1, 2017 may continue to be eligible to the transition provisions of Schedule F of the by-law.

7.3.5 Phasing in

The development charge is to be phased-in in two phases, the first from September 1, 2017 to August 31, 2019 and the second from September 1, 2019 to August 31, 2022.

7.3.6 Timing of Collection

A development charge that is applicable under Section 5 of the Development Charges Act shall be calculated and payable;

- where a permit is required under the Building Code Act in relation to a building or structure, the owner shall pay the development charge prior to the issuance of the first building permit prior to the commencement of development or redevelopment as the case may be; and

- Despite above, Council, from time to time, and at any time, may enter into agreements providing for all or any part of a development charge to be paid before or after it would otherwise be payable.

7.3.7 Indexing

Indexing of the development charges shall be implemented on a mandatory basis annually commencing on January 1st, 2018 and each January 1st thereafter, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (CANSIM Table 327-0043)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 – the full residential and non-residential charge will be imposed on the urban service areas of the Region.

7.4 Other Development Charge By-law Provisions

It is recommended that:

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

The Region's development charge collections are currently reserved in six separate reserve funds: Roads, Police, Administration, E.M.S., Water, and Wastewater services. It is recommended that the Region add the following reserve funds; Long-term Care, P.O.A., Health, Social and Child Services, Social Housing, and Waste Diversion. It is also recommended that the Region rename the Roads reserve fund to Services Related to a Highway (including Related Facilities, Vehicles and Studies). Appendix D outlines the reserve fund policies that the Region is required to follow as per the *Development Charges Act*.

¹ O.Reg 82/98 referenced "The Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007" as the index source. As of the end of December, 2013 this catalogue has been discontinued and replaced by this web based table.

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, unless another date is set by Council.

It is recommended that the new by-law would come into force on September 1, 2017.

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 s.11 of O.Reg. 82/98).

7.5 Other Recommendations

It is recommended that Council:

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

“Adopt the assumptions contained herein as an ‘anticipation’ with respect to capital grants, subsidies and other contributions;”

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

“Approve the capital project listing set out in Chapter 5 of the Development Charges Background Study dated April 28, 2017, subject to further annual review during the capital budget process;”

“Approve the Development Charges Background Study dated April 28, 2017, as amended (if applicable);”

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

“Approve the Development Charge By-law as set out in Appendix J.”

8. By-law Implementation

8.1 Public Consultation Process

8.1.1 Introduction

This chapter addresses the mandatory, formal public consultation process (Section 8.1.2), as well as the optional, informal consultation process (Section 8.1.3). The latter is designed to seek the co-operation and participation of those involved, in order to produce the most suitable policy. Section 8.1.4 addresses the anticipated impact of the development charge 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 development charge 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 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 development charge 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 development charge revenues. Others, such as realtors, are directly impacted by development charge 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 development charge policy. Their primary concern is frequently with the quantum of the charge, gross floor area exclusions such as basements, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

8.2 Anticipated Impact of the Charge on Development

The establishment of sound development charge policy often requires the achievement of an acceptable balance between two competing realities. The first is that high non-residential development charges 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 development charges 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, development charges or other Region capital funding sources need to be obtained in order to help ensure that the necessary infrastructure and amenities are installed. The timely installation of such works is a key initiative in providing adequate service levels and in facilitating strong economic growth, investment and wealth generation.

8.3 Implementation Requirements

8.3.1 Introduction

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

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

The sections which follow overview the requirements in each case.

8.3.2 Notice of Passage

In accordance with s.13 of the D.C.A., when a D.C. by-law is passed, the Regional 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;
- s.s.10(4) lists the persons/organizations who must be given notice; and
- s.s.10(5) lists the eight items which the notice must cover.

8.3.3 By-law Pamphlet

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

- a description of the general purpose of the development charges;
- 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 development charges relate; and
- a general 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.M.B., 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 13-19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and O.M.B. Hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the O.M.B. by filing a notice of appeal with the Regional 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 which 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 development charge, or his agent, may complain to the Regional Council imposing the charge that:

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

Sections 20-25 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 Regional Council to the O.M.B.

8.3.6 Credits

Sections 38-41 of the D.C.A. set out a number of credit requirements, which apply where a municipality 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 development charges 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 development charge is payable.

8.3.7 Front-Ending Agreements

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

Part III of the D.C.A. (Sections 44-58) 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 s.51 or s.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 s.s.59(4) of the D.C.A. requires that the municipal approval authority for a draft plan of subdivision under s.s.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 development charges 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 Regional development charges related to the site.

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

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.

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

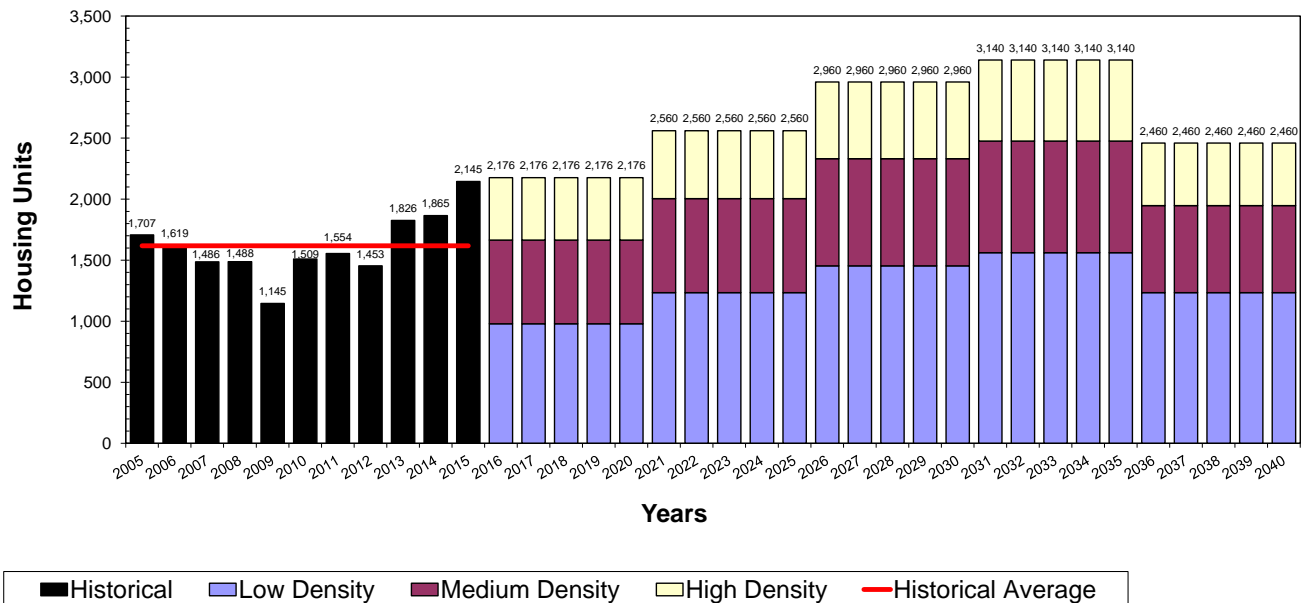
**Schedule 1
Niagara Region
Residential Growth Forecast Summary**

Year		Population (Excluding Census Undercount)	Population (Including Census Undercount) ¹	Housing Units					
				Singles & Semi- Detached	Multiple Dwellings ²	Apartments ³	Other	Total Households	Person Per Unit (PPU)
Historical	Mid 2001	410,574	421,480	122,770	12,375	26,425	845	162,415	2.53
	Mid 2006	427,421	438,770	124,025	15,860	28,445	1,170	169,500	2.52
	Mid 2011	431,346	442,800	128,795	16,695	28,285	915	174,690	2.47
Forecast	Early 2017	441,135	452,850	134,188	19,009	29,497	915	183,608	2.40
	Early 2027	489,117	502,110	145,488	26,393	34,884	915	207,680	2.36
	Mid 2041	594,221	610,000	166,008	38,479	43,599	915	249,000	2.39
Incremental	Mid 2001 - Mid 2006	16,847	17,290	1,255	3,485	2,020	325	7,085	
	Mid 2006 - Mid 2011	3,925	4,030	4,770	835	-160	-255	5,190	
	Mid 2011 - Early 2017	9,789	10,050	5,393	2,314	1,212	0	8,918	
	Early 2017 - Early 2027	47,982	49,260	11,300	7,384	5,387	0	24,072	
	Early 2017 - Mid 2041	153,086	157,150	31,820	19,470	14,102	0	65,392	

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Census Undercount estimated at approximately 2.6%. Note: Population including the net Census undercount has been rounded.
2. Includes townhomes and apartments in duplexes.
3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Annual Housing Forecast¹



Source: Historical housing activity (2005-2015) based on Statistics Canada building permits, Catalogue 64-001-XIB

1. Growth Forecast represents calendar year.

Schedule 2
Niagara Region
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
1	Serviced	2017 - 2041	29,810	19,470	14,102	63,382	150,706	(3,362)	147,344
2	Water servicing	2017 - 2041	29,810	19,470	14,102	63,382	150,706	(3,362)	147,344
3	Wastewater Servicing	2017 - 2041	29,796	19,470	14,102	63,368	150,665	(3,148)	147,517
4	Unserviced	2017 - 2041	2,010	-	-	2,010	5,844	(102)	5,742
1+4	Niagara Region	2017 - 2041	31,820	19,470	14,102	65,392	156,550	(3,464)	153,086

Source: Derived from Niagara Region population forecast by water pressure zone and wastewater catchment area, summarized by Watson & Associates Economists Ltd., 2017

1. Includes townhomes and apartments in duplexes.

2. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

**Schedule 3
Niagara Region
Current Year Growth Forecast
Early 2011 to Early 2017**

			POPULATION
Mid 2011 Population			431,346
Occupants of New Housing Units, Mid 2011 to Early 2017	<i>Units (2)</i>	8,918	
	<i>multiplied by persons per unit (3)</i>	2.44	
	<i>gross population increase</i>	21,753	21,753
Decline in Housing Unit Occupancy, Mid 2011 to Early 2017	<i>Units (4)</i>	174,690	
	<i>multiplied by ppu decline rate (5)</i>	-0.0685	
	<i>total decline in population</i>	-11,964	-11,964
Population Estimate to Mid 2017			441,135
<i>Net Population Increase, Mid 2011 to Early 2017</i>			9,789

(1) 2011 population based on StatsCan Census unadjusted for Census Undercount.

(2) Estimated residential units constructed, Mid 2011 to the beginning of the growth period, assuming a six month lag between construction and occupancy.

(3) Average number of persons per unit (ppu) is assumed to be:

Structural Type	Persons Per Unit ¹	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	2.83	60.5%	1.71
<i>Multiples (6)</i>	2.02	25.9%	0.52
<i>Apartments (7)</i>	1.52	13.6%	0.21
Total		100%	2.44

¹ Based on 2011 Census custom database

² Based on Building permit/completion activity

(4) 2011 households taken from StatsCan Census.

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

**Schedule 4
Niagara Region
Ten Year Growth Forecast
Early 2017 to Early 2027**

			POPULATION
Early 2017 Population			441,135
Occupants of New Housing Units, Early 2017 to Early 2027	<i>Units (2)</i>	24,072	
	<i>multiplied by persons per unit (3)</i>	2.38	
	<i>gross population increase</i>	57,204	57,204
Decline in Housing Unit Occupancy, Early 2017 to Early 2027	<i>Units (4)</i>	183,608	
	<i>multiplied by ppu decline rate (5)</i>	-0.0502	
	<i>total decline in population</i>	-9,222	-9,222
Population Estimate to Early 2027			489,117
<i>Net Population Increase, Early 2017 to Early 2027</i>			47,982

(1) Early 2017 Population based on:

2011 Population (431,346) + Mid 2011 to Early 2017 estimated housing units to beginning of forecast period (8,918 x 2.44 = 21,753)
+ (174,690 x -0.0685 = -11,964) = 441,135

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

(3) Average number of persons per unit (ppu) is assumed to be:

Structural Type	Persons Per Unit ¹	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	2.91	46.9%	1.37
<i>Multiples (6)</i>	2.12	30.7%	0.65
<i>Apartments (7)</i>	1.62	22.4%	0.36
<i>one bedroom or less</i>	1.20		
<i>two to three bedrooms</i>	1.88		
<i>four bedroom or more</i>	4.00		
Total		100%	2.38

¹ Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Early 2017 households based upon 174,690 (2011 Census) + 8,918 (Mid 2011 to Early 2017 unit estimate) = 183,608

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 5
Niagara Region
25 year Growth Forecast
Early 2017 to Mid 2041

		POPULATION
Early 2017 Population		441,135
Occupants of New Housing Units, Early 2017 to Mid 2041	<i>Units (2)</i>	65,392
	<i>multiplied by persons per unit (3)</i>	2.39
	<i>gross population increase</i>	156,550
Decline in Housing Unit Occupancy, Early 2017 to Mid 2041	<i>Units (4)</i>	183,608
	<i>multiplied by ppu. decline rate (5)</i>	-0.0189
	<i>total decline in population</i>	-3,464
Population Estimate to 2041		594,221
<i>Net Population Increase, Early 2017 to Mid 2041</i>		153,086

(1) Early 2017 Population based on:

2011 Population (431,346) + Mid 2011 to Early 2017 estimated housing units to beginning of forecast period (8,918 x 2.44 = 21,753)
+ (174,690 x -0.0685 = -11,964) = 441,135

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

(3) Average number of persons per unit (ppu) is assumed to be:

Structural Type	Persons Per Unit ¹	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	2.91	48.7%	1.42
<i>Multiples (6)</i>	2.12	29.8%	0.63
<i>Apartments (7)</i>	1.62	21.6%	0.35
<i>one bedroom or less</i>	1.20		
<i>two/three bedrooms</i>	1.88		
<i>four bedroom or more</i>	4.00		
Total		100%	2.39

¹ Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Early 2017 households based upon 174,690 (2011 Census) + 8,918 (Mid 2011 to Early 2017 unit estimate) = 183,608

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 6

Niagara Region
Historical Residential Building Permits
Years 2006 - 2015

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples ¹	Apartments ²	Total
2006	1,168	181	270	1,619
2007	1,107	270	109	1,486
2008	950	360	178	1,488
2009	843	179	123	1,145
2010	986	254	269	1,509
Average (2006 - 2010)	1,011	249	190	1,449
% Breakdown	69.7%	17.2%	13.1%	100.0%
2011	852	438	264	1,554
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
Sub-total	5,359	2,290	1,194	8,843
Average (2011 - 2015)	1,072	458	239	1,769
% Breakdown	60.6%	25.9%	13.5%	100.0%
2006 - 2015				
Total	10,413	3,534	2,143	16,090
Average	1,041	353	214	1,609
% Breakdown	64.7%	22.0%	13.3%	100.0%

Source: Statistics Canada building permits, Catalogue 64-001-XIB

1. Includes townhomes and apartments in duplexes.

2. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 7

**Niagara Region
Persons Per Unit By Age And Type Of Dwelling
(2011 Census)**

Age of Dwelling	Singles and Semi-Detached						25 Year Average ¹
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	-	1.621	2.010	3.058	4.164	2.887	
6-10	-	2.214	2.060	3.173	3.672	3.050	
11-15	-	2.143	1.876	2.988	4.188	2.889	
16-20	-	-	1.926	2.960	4.209	2.908	
20-25	-	1.941	2.209	2.930	3.767	2.923	2.91
25-35	-	1.696	2.000	2.922	3.329	2.846	
35+	2.429	1.643	1.992	2.603	3.525	2.511	
Total	2.194	1.681	1.995	2.726	3.648	2.631	

Age of Dwelling	Multiples ²						25 Year Average
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	-	1.400	1.663	2.383	-	2.069	
6-10	-	1.520	1.846	2.273	-	1.988	
11-15	-	1.333	1.621	2.545	-	1.977	
16-20	-	1.900	1.790	2.761	-	2.373	
20-25	-	-	1.926	2.508	-	2.252	2.12
25-35	-	1.550	1.863	2.991	-	2.569	
35+	1.222	1.331	2.032	2.682	3.768	2.284	
Total	0.712	1.378	1.891	2.631	4.566	2.234	

Age of Dwelling	Apartments ³						25 Year Average
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
6-10	-	1.421	1.513	-	-	1.656	
11-15	-	1.254	1.667	2.531	-	1.701	
16-20	-	1.191	1.761	2.475	-	1.572	
20-25	-	1.274	1.755	2.806	-	1.632	1.62
25-35	1.273	1.352	1.679	2.800	-	1.592	
35+	1.061	1.230	1.714	2.629	2.905	1.577	
Total	1.029	1.241	1.710	2.667	2.905	1.585	

Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	1.818	1.319	1.851	2.946	4.138	2.602
6-10	-	1.678	1.918	3.079	3.667	2.816
11-15	-	1.411	1.758	2.920	4.012	2.599
16-20	-	1.307	1.808	2.897	4.176	2.480
20-25	-	1.335	1.906	2.887	3.611	2.610
25-35	1.000	1.398	1.786	2.920	3.440	2.496
35+	1.573	1.318	1.906	2.606	3.499	2.338
Total	1.500	1.333	1.886	2.714	3.606	2.420

1. The Census PPU has been adjusted to account for the downward PPU trend which has been recently experienced in both new and older units, largely due to the aging of the population

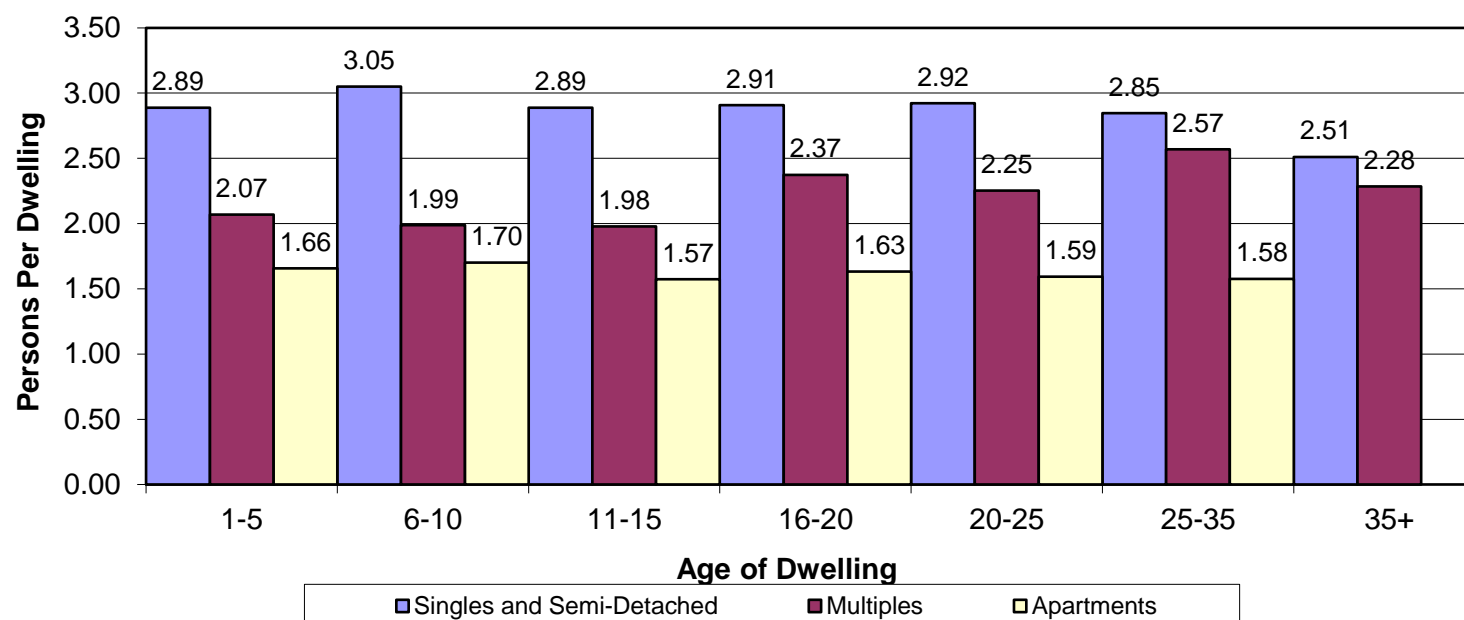
2. Includes townhomes and apartments in duplexes.

3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

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

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

**Schedule 8
Niagara Region
Persons Per Unit By Structural Type And Age Of Dwelling
(2011 Census)**

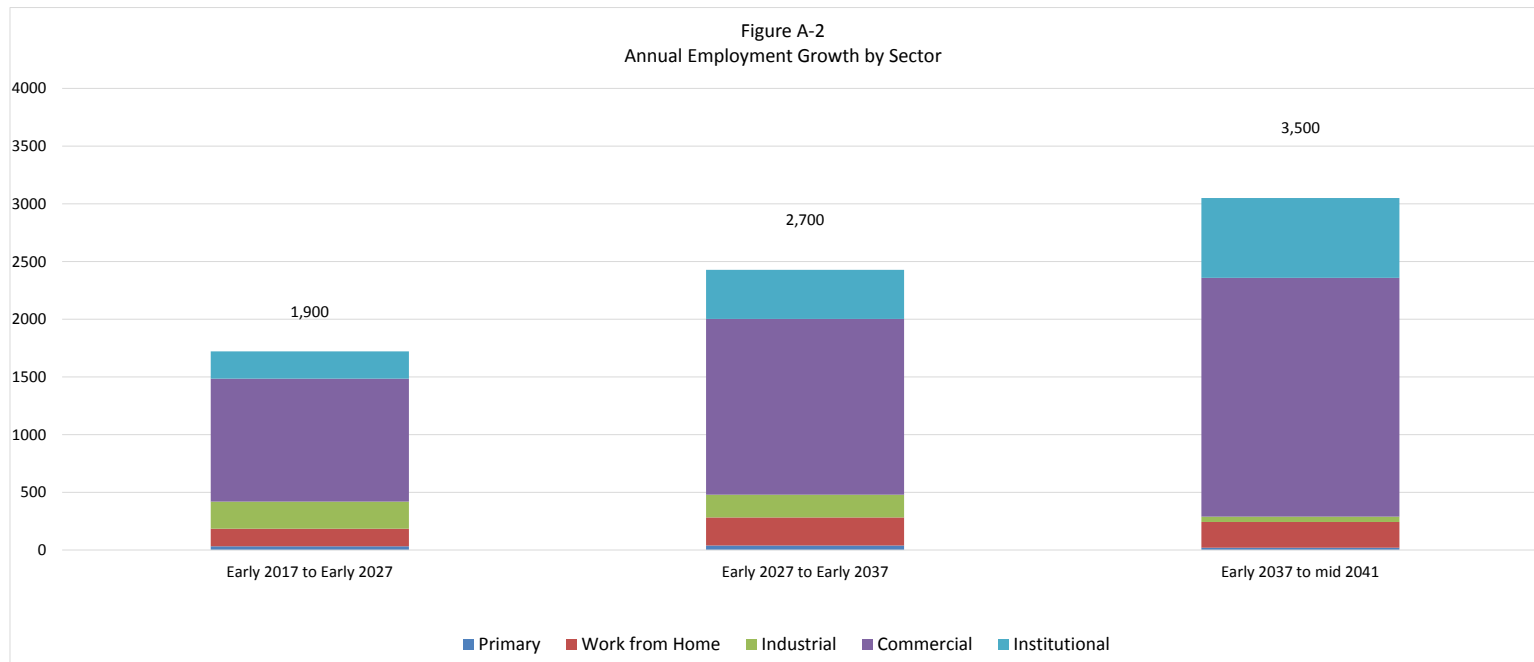


Schedule 9a
Niagara Region
Employment Forecast, 2017 to 2041

Period	Population	Activity Rate								Employment								Employment
		Primary	Work from Home	Industrial	Commercial/Population Related	Institutional	Total	NFPOW ¹	Total Including NFPOW	Primary	Work from Home	Industrial	Commercial/Population Related	Institutional	Total	NFPOW ¹	Total Employment (Including NFPOW)	Total (Excluding Work at Home and NFPOW)
Early 2017	441,135	0.008	0.029	0.091	0.191	0.093	0.412	0.051	0.463	3,945	12,700	40,049	84,396	41,093	182,184	22,400	204,584	169,484
Early 2027	489,117	0.009	0.029	0.087	0.194	0.088	0.406	0.050	0.457	4,275	14,210	42,406	95,054	43,456	199,401	24,550	223,951	185,191
Mid 2041	594,221	0.008	0.030	0.075	0.200	0.091	0.404	0.049	0.453	4,742	17,540	44,567	118,553	50,467	235,870	29,130	265,000	218,330
Incremental Change																		
Mid 2011 - Early 2017	9,789	0.0000	0.0002	0.0088	0.0187	0.0017	0.0294	0.0033	0.0327	390	375	4,674	9,926	1,663	17,029	1,915	18,944	16,654
Early 2017 - Early 2027	47,982	0.0005	0.0003	-0.0041	0.0030	-0.0056	-0.0059	-0.0006	0.0000	330	1,510	2,357	10,657	2,362	17,217	2,150	19,367	15,707
Early 2017 - Mid 2041	153,086	0.0000	0.0007	-0.0158	0.0082	-0.0017	-0.0086	-0.0018	-0.0104	797	4,840	4,518	34,157	9,374	53,686	6,730	60,416	48,846
Annual Average																		
Early 2017 - Early 2027	4,798	0.00005	0.00003	-0.00041	0.00030	-0.00056	-0.00059	-0.00006	0.00000	33	151	236	1,066	236	1,722	215	1,937	1,571
Early 2017 - Mid 2041	6,123	0.00000	0.00003	-0.00064	0.00033	-0.00007	-0.00035	-0.00007	-0.00042	33	198	184	1,394	383	2,191	275	2,466	1,954

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

Figure A-2
Annual Employment Growth by Sector



Schedule 9b
Niagara Region
Employment & Gross Floor Area (GFA) Forecast, 2017 To 2041

Period	Population	Employment					Gross Floor Area in Square Feet (Estimated) ¹			
		Primary	Industrial	Commercial/ Population Related	Institutional	Total	Industrial	Commercial/ Population Related	Institutional	Total
Early 2017	441,135	3,945	40,049	84,396	41,093	169,484				
Early 2027	489,117	4,275	42,406	95,054	43,456	185,191				
Mid 2041	594,221	4,742	44,567	118,553	50,467	218,330				
Incremental Change										
Early 2017 - Early 2027	47,982	330	2,357	10,657	2,362	15,707	2,828,500	5,328,700	1,653,700	9,810,900
Early 2017 - Mid 2041	153,086	797	4,518	34,157	9,374	48,846	5,421,700	17,078,600	6,561,700	29,062,000
Annual Average										
Early 2017 - Early 2027	4,798	33	236	1,066	236	1,571	282,850	532,870	165,370	981,090
Early 2017 - Mid 2041	6,123	33	184	1,394	383	1,994	221,294	697,086	267,824	1,186,204

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Square Foot Per Employee Assumptions

Industrial	1,200
Commercial/ Population Related	500
Institutional	700

Schedule 9c

Niagara Region Employment Growth by Servicing Location (Including Work from Home and No Fixed Place of Work)

Development Location	Timing	Primary	Industrial	Work from Home	Commercial/ Population Related	Institutional	No Fixed Place of Work	Total Employment Increase
Municipally Serviced (Water and Wastewater) ¹	2017 - 2027	-	1,938	1,284	10,274	2,290	2,000	17,785
	2017 - 2041	-	4,028	4,114	33,273	9,206	6,259	56,880
Unserviced	2017 - 2027	330	419	227	383	73	151	1,582
	2017 - 2041	797	490	726	884	168	471	3,536
Niagara Region	2017 - 2027	330	2,357	1,510	10,657	2,362	2,150	19,367
	2017 - 2041	797	4,518	4,840	34,157	9,374	6,730	60,416

Source: Watson & Associates Economists Ltd., 2017

1. Employment allocated to serviced area is based on water & wastewater capacity within Niagara Region.

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

Development Location	Timing	Industrial GFA S.F	Commercial/ Population Related GFA S.F	Institutional GFA S.F.	Total Non-Res GFA S.F.	Employment Increase ¹
Municipally Serviced (Water and Wasetwater) ²	2017 - 2027	2,325,500	5,137,000	1,602,800	9,065,300	14,502
	2017 - 2041	4,833,700	16,636,600	6,444,200	27,914,500	46,507
Unserviced	2017 - 2027	503,000	191,700	51,000	745,700	1,205
	2017 - 2041	588,000	442,000	117,500	1,147,500	2,339
Niagara Region	2017 - 2027	2,828,500	5,328,700	1,653,700	9,810,900	15,707
	2017 - 2041	5,421,700	17,078,600	6,561,700	29,062,000	48,846

Source: Watson & Associates Economists Ltd., 2017

1. Employment Increase does not include No Fixed Place of Work.

2. Employment allocated to serviced area is based on water and wastewater capacity within Niagara Region.

Square feet per employee assumptions:

Industrial	1,200
Commercial/ Population Related	500
Institutional	700

Appendix B – Level of Service

APPENDIX B - LEVEL OF SERVICE CEILING

NIAGARA REGION

SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997

Service Category	Sub-Component	10 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Services Related to a Highway	Services Related to a Highway - Roads	\$6,702	0.0039	lane km of roadways	1,718,385	per lane km	1,025,936,446
	Services Related to a Highway - Facilities	\$40	0.1863	ft² of building area	215	per ft²	6,131,094
	Services Related to a Highway - Vehicles & Equipment	\$42	0.0012	No. of vehicles and equipment	35,075	per vehicle	6,443,390
Police	Police Facilities	\$251	0.6208	ft² of building area	405	per ft²	38,482,759
	Police Vehicles	\$26	0.0009	No. of vehicles and equipment	29,100	per vehicle	4,009,322
	Police Small Equipment and Gear	\$15	0.0029	No. of equipment and gear	5,010	per Officer	2,224,340
E.M.S.	E.M.S. Facilities	\$61	0.1683	ft² of building area	362	per ft²	2,926,422
	E.M.S. Vehicles	\$25	0.0001	No. of vehicles and equipment	246,800	per vehicle	1,184,196
Long Term Care	Long Term Care Facilities	\$613	1.4505	ft² of building area	423	per ft²	29,423,522
Social Housing	Social Housing	\$966	5.16	ft² of building area	187.26	per ft²	46,368,365
Provincial Offences Act	Provincial Offences Act Facilities	\$29	0.0500	ft² of building area	585.0000	per ft²	1,403,474
Health	Health Facilities	\$75	0.1952	ft² of building area	385	per ft²	3,602,009
Social & Child Services	Social & Child Services Facilities	\$99	0.2809	ft² of building area	352	per ft²	4,740,142
Waste Diversion	Waste Diversion - Facilities - Stations/Depots	\$157	0.5775	ft² of building area	272	per ft²	7,537,492
	Waste Diversion - Facilities - Stations/Depots Land	\$11	0.0001	ft² of building area	108,000	per acre	518,206
	Waste Diversion - Vehicles & Equipment	\$16	0.0001	No. of vehicles and equipment	159,100	per vehicle	763,394
	Waste Diversion - Containers	\$13	1.1662	No. of items	11	per Item	641,040
	Waste Diversion - Other Equipment	\$22	0.0002	No. of items	108,000	per Item	1,036,411

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Roads
 Unit Measure: lane km of roadways

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/lane km)
Regional Roads - Rural	988	994	994	995	997	987	991	992	1,039	1,039	\$1,460,000
Regional Roads - Urban	659	663	663	664	665	658	661	662	693	693	\$2,150,000
Total	1,647	1,657	1,657	1,659	1,662	1,645	1,652	1,654	1,732	1,732	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0038	0.0039	0.0038	0.0039	0.0039	0.0038	0.0038	0.0038	0.0040	0.0039

10 Year Average	2007-2016
Quantity Standard	0.0039
Quality Standard	\$1,718,385
Service Standard	\$6,702

DC Amount (before deductions)	Buildout
Forecast Population	153,086
\$ per Capita	\$6,702
Eligible Amount	\$1,025,936,446

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Facilities
 Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Smithville Yard dome	8,137	8,137	8,137	8,137	8,137	8,137	8,137	8,137	8,137	8,137	\$187	\$215
Pelham Yard - 2 domes	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	\$187	\$215
Thorold Yard - 2 domes	16,738	16,738	16,738	16,738	16,738	16,738	16,738	16,738	16,738	16,738	\$187	\$215
Welland Yard	39,019	39,019	39,019	39,019	39,019	39,019	39,019	39,019	39,019	39,019	\$187	\$215
Total	80,557	80,557	80,557	80,557	80,557	80,557	80,557	80,557	80,557	80,557		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.1879	0.1875	0.1871	0.1871	0.1868	0.1864	0.1861	0.1855	0.1847	0.1836

10 Year Average	2007-2016
Quantity Standard	0.1863
Quality Standard	\$215
Service Standard	\$40

DC Amount (before deductions)	Buildout
Forecast Population	153,086
\$ per Capita	\$40
Eligible Amount	\$6,131,094

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
21 - Truck 5000-5999 GVW	34	38	38	40	44	46	45	42	42	45	\$28,700
22 - Truck 6000-7999 GVW	65	62	40	46	48	41	43	43	45	50	\$31,100
23 - Truck 8000-9999 GVW	33	31	49	49	52	52	53	54	58	58	\$45,400
24 - Truck 10000-14999 GVW	11	10	9	9	8	10	10	7	5	8	\$46,700
25 - Truck 15000-18999 GVW	21	20	21	20	22	20	20	20	20	17	\$76,900
26 - Truck 19000-23999 GVW	-	1	1	1	1	3	3	3	5	5	\$122,200
29 - Truck 32000-35999 GVW	1	3	2	2	1	1	2	2	2	1	\$263,700
30 - Truck 36000-48999 GVW	10	10	10	10	10	10	10	10	4	4	\$285,200
32 - Truck 54000-65000 GVW	13	13	15	15	15	15	15	15	21	21	\$265,700
37 - Front End Loader 1½-2½ Cy	3	3	3	3	5	5	5	4	4	2	\$141,600
40 - Grader 100-114 HP	-	-	-	-	-	-	-	2	2	2	\$201,900
43 - Grader >150 HP	2	2	2	2	2	2	2	-	-	-	\$173,400
47 - Mechanical Chipper	2	2	2	2	2	2	2	2	2	2	\$81,300
50 - Tractor Wheeled 21-27 HP	2	2	2	2	3	4	4	4	4	4	\$4,700
51 - Tractor Wheeled 28-37 HP	2	2	2	2	2	2	2	2	2	2	\$5,100
52 - Tractor Wheeled 38-45 HP	2	5	4	4	6	6	6	6	6	3	\$23,500
54 - Tractor Wheeled 56-60 HP	-	-	1	1	1	1	1	1	1	1	\$21,200
55 - Tractor Wheeled >60 HP	9	9	9	9	11	11	11	11	11	13	\$76,800
57 - Compressor	2	2	2	2	2	2	2	2	2	2	\$900
60 - Roller <3 Ton	2	2	2	1	1	1	1	1	1	1	\$39,800
68 - Trailer >10000lb	1	1	1	1	1	1	1	1	1	3	\$17,800
69 - Trailer 3001-10000lb	21	23	26	27	29	31	33	35	34	35	\$13,000
70 - Trailer <3000lb	20	22	25	29	28	29	30	32	32	26	\$4,800
73 - Road Breakers and Drills	7	7	7	7	7	5	4	4	4	4	\$5,200

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
75 - Line Striper	4	4	3	3	4	4	4	4	4	4	\$9,400
77 - Post Driver	4	4	4	4	4	4	4	7	8	5	\$3,400
78 - Snowblowers	5	5	5	5	5	5	5	5	5	5	\$800
79 - Post Hole Augers	4	4	3	2	2	1	1	1	1	1	\$9,700
80 - Chainsaws	20	20	22	22	22	22	23	29	29	29	\$800
81 - Waterpumps	7	7	7	9	9	10	12	12	12	11	\$900
82 - Concrete Saws	10	10	11	10	10	10	10	8	8	10	\$700
83 - Vibratory Tampers	2	2	2	2	2	2	2	2	2	2	\$3,500
84 - Generators	17	17	18	17	17	19	21	21	21	21	\$2,600
85 - Mowers	34	36	37	39	41	42	45	58	57	55	\$9,500
86 - Steam Washers	3	3	2	2	2	2	1	1	1	1	\$21,700
87 - Water Tanks	1	1	1	2	3	3	3	3	5	5	\$5,000
88 - Power Brooms	6	7	7	7	8	8	8	8	8	8	\$17,400
89 - Spreader Attachments	2	2	2	2	2	2	2	-	-	2	\$7,300
90 - Miscellaneous Equipment	2	2	3	3	4	4	5	5	5	5	\$8,300
99 - Attachments	43	43	63	66	72	73	72	65	75	64	\$7,400
Total	427	437	463	479	508	511	523	532	549	537	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0010	0.0010	0.0011	0.0011	0.0012	0.0012	0.0012	0.0012	0.0013	0.0012

10 Year Average	2007-2016
Quantity Standard	0.0012
Quality Standard	\$35,075
Service Standard	\$42

DC Amount (before deductions)	Buildout
Forecast Population	153,086
\$ per Capita	\$42
Eligible Amount	\$6,443,390

Niagara Region
Service Standard Calculation Sheet

Service: Police Facilities
 Contact : Facilities
 Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Operations Service Branch (3250 Schmon Pkwy) Thorold	6,019	6,019	7,219	7,219	7,219	7,219	7,219	7,219	7,219	-	\$356	\$401
Police Building (Thompson Road) Fort Erie	2,800	2,800	2,800	2,800	2,800	-	-	-	-	-	\$356	\$401
NRPS #8 District - 45 Clarke St. Grimsby - Owned	3,600	3,600	3,600	8,180	8,180	8,180	8,180	8,180	8,180	8,180	\$474	\$531
Police Building (Division 22) - 4343 Morrison Niagara Falls	17,900	17,900	17,900	17,900	17,900	17,900	17,900	17,900	17,900	-	\$356	\$401
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	\$356	\$401
NRPS #1 District- 68 Church Street - St. Catharines - Owned	64,284	75,280	75,280	75,280	75,280	75,280	75,280	75,280	75,280	37,640	\$356	\$401
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	\$356	\$401
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	\$356	\$401
Police Building 110 James St. St. Catharines1	50,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	-	\$356	\$401
Police Building 5741 River Rd. Niagara Falls	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	-	\$356	\$401
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	\$417	\$468

**Niagara Region
Service Standard Calculation Sheet**

Service: Police Facilities
Contact : Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
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	\$356	\$401
63 Church St. St. Catharines - Server room rental space	-	-	2,025	2,025	2,025	2,025	2,025	2,025	2,025	-	\$356	\$401
Hwy #20 Secure storage - leased facility	-	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	-	\$356	\$401
NRPS #5 - 650 Gilmore Rd Fort Erie - Owned	-	-	-	-	-	7,560	7,560	7,560	7,560	7,560	\$466	\$522
NRPS HQ/#2 District - 5700 Valley Way NF - Owned	-	-	-	-	-	-	-	-	-	207,528	\$280	\$317
Total	239,240	240,236	258,461	263,041	263,041	267,801	267,801	267,801	267,801	351,045		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.5581	0.5592	0.6004	0.6110	0.6098	0.6197	0.6188	0.6165	0.6139	0.8002

10 Year Average	2007-2016
Quantity Standard	0.6208
Quality Standard	405
Service Standard	\$251

DC Amount (before deductions)	Buildout
Forecast Population	153,086
\$ per Capita	\$251
Eligible Amount	\$38,482,759

Niagara Region
Service Standard Calculation Sheet

Service: Police Vehicles
 Unit Measure: No. of vehicles and equipment

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012 Value (\$/Vehicle)	2017 Value (\$/Vehicle)
Mobile Command Post	1	1	1	1	1	1	1	1	1	1	165,000	\$174,400
Bomb Truck	1	1	1	1	1	1	1	1	1	1	100,000	\$200,000
Emergency Task Unit	1	1	1	1	1	1	1	1	1	1	100,000	\$200,000
Boats	2	2	2	2	2	2	2	2	3	3	80,000	\$54,684
Medeiros	1	-	-	-	-	-	-	-	-	-	235,000	\$252,000
Boat Trailers	4	5	5	5	5	5	5	5	5	4	10,000	\$8,917
Hike 30 Foot Command Vessel	1	1	1	1	1	1	1	1	1	1	250,000	\$250,000
Protector, 28 Foot Patrol Vessel	1	1	1	1	1	1	1	1	1	1	300,000	\$300,000
Bomb Trailer	1	1	1	1	1	1	1	1	1	-	10,000	\$10,600
OneTon Pick-up Truck	3	4	4	4	4	4	4	4	4	2	35,000	\$43,464
One Ton Cube Van	1	1	1	1	1	1	1	1	1	1	75,000	\$75,000
Utility Trailers	3	3	3	3	3	3	3	3	3	4	10,000	\$13,453
One Ton Van Prisoner Transport	5	5	5	5	5	5	5	5	5	4	90,000	\$92,500
Personal Watercraft (See Doos)	2	2	2	2	2	2	2	2	2	2	10,000	\$17,176
Personal Water Craft Trailers	2	2	2	2	2	2	1	1	1	1	10,000	\$2,000
One Ton Van, 15 Passenger	1	2	2	3	3	3	3	3	3	4	60,000	\$44,136
SUV, Special Service Package	11	12	12	13	13	13	13	13	13	16	40,000	\$39,163
SUV, Tactical	3	4	4	4	4	4	4	4	4	4	40,000	\$43,627
Patrol Cruisers	99	105	111	118	124	124	124	124	124	119	42,000	\$38,630
Non-Patrol Vehicles	134	136	138	140	141	141	141	141	141	131	27,000	\$18,648
Motorcycles	6	6	6	7	7	7	7	10	10	10	25,000	\$20,070
Light Vans	26	29	32	35	38	38	38	38	38	42	27,000	\$18,459
Light Truck	5	7	9	11	12	12	12	12	12	9	35,000	\$25,605
Medium Truck	3	3	3	3	3	3	3	3	3	3	65,000	\$52,736
ATV	4	4	4	4	4	4	6	6	6	6	15,000	\$15,000
Tow Motors	2	2	2	2	2	2	1	1	1	1	30,000	\$24,800
												\$0
Total	323	340	353	370	381	381	381	384	385	371		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0008	0.0008	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008

10 Year Average	2007-2016
Quantity Standard	0.0009
Quality Standard	\$29,100
Service Standard	\$26

DC Amount (before deductions)	Buildout
Forecast Population	153,086
\$ per Capita	\$26
Eligible Amount	\$4,009,322

Niagara Region
Service Standard Calculation Sheet

Service: Police Small Equipment and Gear
 Unit Measure: No. of equipment and gear

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Equipped Cadets	13	13	13	13	-	-	-	-	-	-	\$6,290
Equipped Officers	682	682	682	682	682	684	685	685	681	677	\$5,626
Equipped Senior Officers	20	20	20	20	20	20	21	21	21	21	\$3,355
Equipped Special Constables	78	78	78	78	60	60	60	58	58	58	\$2,998
Portable Radios APX6000	360	360	360	360	352	353	354	353	351	349	\$4,692
Portable Radios APX7000	31	31	31	31	30	30	30	30	30	30	\$7,613
Radar (Gensis II)	19	19	19	19	19	19	19	19	19	19	\$2,500
Radar (Gensis II Directional)	11	11	11	11	11	11	11	11	11	11	\$2,500
Radar (MPH Bee III)	8	8	8	8	8	8	8	8	8	8	\$2,500
Radar (Genesis VPD)	31	31	31	31	31	31	31	31	31	31	\$2,500
Lidar (LTI Ultralyte LRB)	9	9	9	9	9	9	9	9	9	9	\$6,000
Lidar (LTI Ultralyte LR)	2	2	2	2	2	2	2	2	2	2	\$6,000
Radar (Spectre RDD)	3	3	3	3	3	3	3	3	3	3	\$2,500
Total	1,267	1,267	1,267	1,267	1,227	1,230	1,233	1,230	1,224	1,218	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0030	0.0029	0.0029	0.0029	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028

10 Year Average	2007-2016
Quantity Standard	0.0029
Quality Standard	\$5,010
Service Standard	\$15

DC Amount (before deductions)	25 Year
Forecast Population	153,086
\$ per Capita	\$15
Eligible Amount	\$2,224,340

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Fort Erie Ambulance - 100 Hospital Drive - Land Lease	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	-	-	\$338	\$382
West Lincoln/Grimsby Ambulance Base -10 Iroquois Trail - Owned	3,358	3,358	3,358	3,358	3,358	3,358	3,358	3,358	3,358	3,358	\$338	\$382
Niagara Falls Ambulance Base 5685 North St. - Leased	5,990	5,990	5,990	5,990	5,990	5,990	5,990	5,990	5,990	5,990	\$273	\$309
NOTL Ambulance Base-176 Wellington St. Land - Leased	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190	2,190	\$271	\$307
Pelham Ambulance Base - 177 HWY. 20 W. - Owned	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	\$242	\$276
Port Colborne Base - 42 Dolphin St. - Owned	4,291	4,291	4,291	4,291	4,291	4,291	4,291	4,291	4,291	4,291	\$271	\$307
St. Catharines Ambulance Base-139 Ontario St - Owned	9,408	9,408	9,408	9,408	9,408	9,408	9,408	9,408	9,408	9,408	\$339	\$383
St. Catharines Ambulance Linwell Rd Base-337 Linwell Rd - Owned	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	\$338	\$382
Thorold Ambulance Base- 701 Allanburg Rd. - Fire Dept - Leased	2,714	2,714	2,714	2,714	2,714	2,714	2,714	2,714	2,714	2,714	\$338	\$382
Welland Ambulance Base- 580 King Street - Leased	6,792	6,792	6,792	6,792	6,792	6,792	6,792	6,792	6,792	6,792	\$338	\$382
Fort Erie/Ridgeway Ambulance Base-369 Gorham Rd - Owned	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	3,360	\$271	\$307
Fort Erie Ambulance Base - 650 Gilmore Rd - Owned	-	-	-	-	-	6,440	6,440	6,440	6,440	6,440	\$373	\$419
NOTL Ambulance -350 Townline Rd - Fire Dept -Lease	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	1,970	\$338	\$382
St. Catharines Ambulance - Walnut Street - Fire Dept Lease	1,108	1,108	1,108	1,108	1,108	1,108	1,108	1,108	-	-	\$338	\$382
Smithville Ambulance - 110 West St - Owned	3,474	3,474	3,474	3,474	3,474	3,474	3,474	3,474	3,474	3,474	\$271	\$307
Vineland Ambulance Base(Lincoln) 3335 Talman Dr - Fire Dept - Leased	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	\$338	\$382
Welland Ambulance 18 Rose Ave - Fire dept -lease	730	730	730	730	730	730	730	730	730	-	\$338	\$382
Niagara Falls Ambulance- 2722 St Paul Ave - Lease	975	975	975	975	975	975	975	975	975	975	\$338	\$382
Skylon Tower		240	240	240	240	240	240	240	240	-	\$338	\$382
EMS Administration - 509 Glendale Avenue East St. Catharines - Leased	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	4,673	\$338	\$382
EMS Dispatch - 509 Glendale Avenue East St. Catharines - Leased	2,139	2,139	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$338	\$382

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
EMS Quality Assurance - 509 Glendale Avenue East St. Catharines - Leased	-	-	-	-	-	-	-	-	7,333	7,333	\$338	\$382
Moveable Storage Space - Welland - Rented	-	-	-	480	480	480	480	480	-	-	\$338	\$382
Merrittville Ambulance Base - 3450 Merrittville Hwy . Thorold - Owned	-	-	-	-	-	-	-	-	3,470	3,470	\$493	\$501
Abbey Rd. Amulance Base - 655 Niagara St., Welland - Leased	-	-	-	-	-	-	-	-	-	1,750	\$338	\$382
Westwood EMS Fleet Centre - 2 Westwood Court, NOTL	-	-	-	-	-	-	-	14,892	14,892	14,892	\$373	\$420
Casino Space	-	-	-	-	-	-	-	-	350	350	\$271	\$307
Total	61,467	61,707	63,568	64,048	64,048	70,488	70,488	85,380	93,255	94,035		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.1434	0.1436	0.1477	0.1488	0.1485	0.1631	0.1629	0.1966	0.2138	0.2144

10 Year Average	2007-2016
Quantity Standard	0.1683
Quality Standard	\$362
Service Standard	\$61

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$61
Eligible Amount	\$2,926,422

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Vehicles
 Unit Measure: No. of vehicles and equipment

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
Ambulance-Crestline	16	16	13	12	12	15	15	15	13	13	\$257,000
Ambulance Demers	19	19	24	25	25	21	21	22	27	27	\$257,000
ESUB-Super Duty Ford	1	1	1	1	1	1	1	1	1	1	\$85,000
Expeditions -Supervisors	2	3	4	5	5	7	7	7	8	8	\$117,500
F150-Pick-Up	1	1	1	1	1	1	1	1	1	1	\$101,900
ESU-Bus	1	1	1	1	-	-	-	-	-	-	\$214,600
Stock Vehicle -E350	1	1	1	1	1	2	2	2	2	2	\$48,300
CBRN Vehicle-F350	1	1	1	1	1	1	1	1	1	1	\$75,100
Gator	1	1	1	1	1	1	1	1	1	1	\$16,100
ERU	-	1	1	1	1	1	1	1	1	1	\$80,500
Total	43	45	48	49	48	50	50	51	55	55	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

10 Year Average	2007-2016
Quantity Standard	0.0001
Quality Standard	\$246,800
Service Standard	\$25

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$25
Eligible Amount	\$1,184,196

**Niagara Region
Service Standard Calculation Sheet**

Service: Long Term Care Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft ²)	Value/ft ² 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	\$296	\$335
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	\$391	\$439
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	\$304	\$344
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	\$390	\$438
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	\$457	\$512
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	\$465	\$521
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	\$393	\$442
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	\$239	\$273
West Niagara Adult Day Service Long Term Care Home- 18 Livingston Avenue Grimsby - Leased	-	-	-	-	-	1,964	1,964	1,964	1,964	1,964	\$284	\$322
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	\$284	\$322

Niagara Region
Service Standard Calculation Sheet

Service: Long Term Care Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft ²)	Value/ft ² with land, site works, etc.
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	\$457	\$512
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	\$379	\$427
Rapelje Lodge Garage	480	480	480	480	480	480	480	480	480	480	\$93	\$112
Linhaven Garage	768	768	768	768	768	768	768	768	768	768	\$141	\$164
Meadows of Dorchester Equipment Storage	162	162	162	162	162	162	162	162	162	162	\$122	\$144
Gilmore Lodge Garage	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	1,743	\$164	\$190
Total	626,315	626,315	626,315	626,315	626,315	628,279	628,279	628,279	628,279	628,279		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	1.4612	1.4578	1.4550	1.4548	1.4520	1.4538	1.4517	1.4464	1.4401	1.4322

10 Year Average	2007-2016
Quantity Standard	1.4505
Quality Standard	\$423
Service Standard	\$613

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$613
Eligible Amount	\$29,423,522

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
317 Albany St	Fort Erie	32,524	32,524	32,524	32,524	32,524	32,524	32,524	32,524	32,524	32,524	\$141	\$149
132 Idylewilde St	Fort Erie	7,692	7,692	7,692	7,692	7,692	7,692	7,692	7,692	7,692	7,692	\$184	\$188
19-31 Bowden	Fort Erie	8,702	8,702	8,702	8,702	8,702	8,702	8,702	8,702	8,702	8,702	\$159	\$166
1-17 Bowden	Fort Erie	9,894	9,894	9,894	9,894	9,894	9,894	9,894	9,894	9,894	9,894	\$180	\$186
1A Bowden	Fort Erie	7,204	7,204	7,204	7,204	7,204	7,204	7,204	7,204	7,204	7,204	\$191	\$199
2-20 Bowden	Fort Erie	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	\$168	\$174
82 Crooks St	Fort Erie	983	983	983	983	983	983	983	983	983	983	\$187	\$201
84 Crooks St	Fort Erie	947	947	947	947	947	947	947	947	947	947	\$194	\$209
17 Jessie	Fort Erie	952	952	952	952	952	952	952	952	952	952	\$193	\$208
15 Jessie	Fort Erie	957	957	957	957	957	957	957	957	957	957	\$192	\$207
337 Highland Ave	Fort Erie	758	758	758	758	758	758	758	758	758	758	\$242	\$261
335 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
333 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
331 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
329 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
327 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
325 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
323 Highland Ave	Fort Erie	960	960	960	960	960	960	960	960	960	960	\$191	\$212
321 Highland Ave.	Fort Erie	982	982	982	982	982	982	982	982	982	982	\$187	\$202
88 Crooks St	Fort Erie	996	996	996	996	996	996	996	996	996	996	\$184	\$203
86 Crooks St	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$207
340 Highland Ave	Fort Erie	756	756	756	756	756	756	756	756	756	756	\$243	\$267
338 Highland Ave	Fort Erie	983	983	983	983	983	983	983	983	983	983	\$187	\$212
336 Highland Ave	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$214
334 Highland Ave	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$214
332 Highland Ave	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$214
330 Highland Ave	Fort Erie	1,173	1,173	1,173	1,173	1,173	1,173	1,173	1,173	1,173	1,173	\$157	\$178
328 Highland Ave	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$210
326 Highland Ave	Fort Erie	977	977	977	977	977	977	977	977	977	977	\$188	\$214
324 Highland Ave.	Fort Erie	996	996	996	996	996	996	996	996	996	996	\$184	\$202
24 Jessie	Fort Erie	756	756	756	756	756	756	756	756	756	756	\$243	\$264
21 Jessie	Fort Erie	972	972	972	972	972	972	972	972	972	972	\$189	\$209
19 Jessie	Fort Erie	972	972	972	972	972	972	972	972	972	972	\$189	\$208
335 Bowen	Fort Erie	996	996	996	996	996	996	996	996	996	996	\$184	\$200
67 Leaside Dr	Welland	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	\$180	\$196
11 Leaside Dr	Welland	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	1,101	\$180	\$198
44 Leaside Dr	Welland	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	\$192	\$212
50 Mccrae Dr.	Welland	992	992	992	992	992	992	992	992	992	992	\$199	\$219
53 New Leaf Cres	Welland	992	992	992	992	992	992	992	992	992	992	\$199	\$218

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
22 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$167
24 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$169
30 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
32 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
38 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
40 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
46 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
48 Silvan Dr	Welland	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	1,136	\$158	\$168
124 Elmview St	Welland	43,592	43,592	43,592	43,592	43,592	43,592	43,592	43,592	43,592	43,592	\$146	\$148
140 Elmview St	Welland	19,440	19,440	19,440	19,440	19,440	19,440	19,440	19,440	19,440	19,440	\$165	\$169
61 Woodcroft Cres	Welland	19,232	19,232	19,232	19,232	19,232	19,232	19,232	19,232	19,232	19,232	\$152	\$157
235 Fitch St W	Welland	25,112	25,112	25,112	25,112	25,112	25,112	25,112	25,112	25,112	25,112	\$412	\$422
211 King St	Welland	78,670	78,670	78,670	78,670	78,670	78,670	78,670	78,670	78,670	78,670	\$239	\$240
235 Fitch St E	Welland	-	-	-	-	-	-	65,868	65,868	65,868	65,868	\$219	\$223
292 Victory Ave	Welland	806	806	806	806	806	806	806	806	806	806	\$242	\$256
294 Victory Ave	Welland	808	808	808	808	808	808	808	808	808	808	\$241	\$252
300 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
302 Victory Ave	Welland	801	801	801	801	801	801	801	801	801	801	\$243	\$255
308 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
310 Victory	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
316 Victory	Welland	814	814	814	814	814	814	814	814	814	814	\$240	\$251
318 Victory	Welland	808	808	808	808	808	808	808	808	808	808	\$241	\$252
324 Victory	Welland	810	810	810	810	810	810	810	810	810	810	\$241	\$252
326 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
332 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
334 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
340 Victory Ave	Welland	807	807	807	807	807	807	807	807	807	807	\$242	\$253
342 Victory Ave	Welland	810	810	810	810	810	810	810	810	810	810	\$241	\$252
348 Victory Ave	Welland	808	808	808	808	808	808	808	808	808	808	\$241	\$252
350 Victory Ave	Welland	809	809	809	809	809	809	809	809	809	809	\$241	\$255
293 Victory Ave	Welland	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	\$163	\$172
295 Victory Ave	Welland	1,197	1,197	1,197	1,197	1,197	1,197	1,197	1,197	1,197	1,197	\$163	\$171
301 Victory Ave	Welland	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	1,028	\$190	\$199
303 Victory Ave	Welland	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	\$189	\$198
309 Victory Ave	Welland	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	\$191	\$200
311 Victory Ave	Welland	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	\$192	\$201
317 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
319 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
325 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
327 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
333 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
335 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
341 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
343 Victory Ave	Welland	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$190	\$199
349 Victory Ave	Welland	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	\$160	\$168
351 Victory Ave	Welland	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	1,216	\$160	\$169
292 Gatfield	Welland	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	\$140	\$150
296 Gatfield	Welland	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	\$159	\$168
300 Gatfield	Welland	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	\$159	\$168
304 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
308 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
312 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
316 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
320 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
324 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
328 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
332 Gatfield	Welland	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	\$185	\$196
336 Gatfield	Welland	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	\$159	\$168
340 Gatfield	Welland	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	1,392	\$140	\$150
219-221 McLaughlin St	Welland	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	\$179	\$188
215-217 McLaughlin St	Welland	1,662	1,662	1,662	1,662	1,662	1,662	1,662	1,662	1,662	1,662	\$236	\$247
211-213 McLaughlin St	Welland	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	\$177	\$185
207-209 McLaughlin St	Welland	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	\$177	\$185
203-205 McLaughlin St	Welland	1,676	1,676	1,676	1,676	1,676	1,676	1,676	1,676	1,676	1,676	\$234	\$245
199-201 McLaughlin St	Welland	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	1,964	\$200	\$209
195-197 McLaughlin St	Welland	2,220	2,220	2,220	2,220	2,220	2,220	2,220	2,220	2,220	2,220	\$177	\$185
191-193 McLaughlin St	Welland	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	\$178	\$186
187-189 McLaughlin St	Welland	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	1,670	\$235	\$246
183-185 McLaughlin St	Welland	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	2,216	\$177	\$185
179-181 McLaughlin St	Welland	1,672	1,672	1,672	1,672	1,672	1,672	1,672	1,672	1,672	1,672	\$235	\$246
175-177 McLaughlin St	Welland	2,202	2,202	2,202	2,202	2,202	2,202	2,202	2,202	2,202	2,202	\$178	\$186
218-220 McLaughlin St	Welland	1,626	1,626	1,626	1,626	1,626	1,626	1,626	1,626	1,626	1,626	\$242	\$254
214-216 McLaughlin St	Welland	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	\$178	\$186
210-212 McLaughlin St	Welland	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	\$179	\$187
206-208 McLaughlin St	Welland	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	\$206	\$215
202-204 McLaughlin St	Welland	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	\$178	\$186
198-200 McLaughlin St	Welland	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	\$236	\$247
194-196 McLaughlin St	Welland	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	\$179	\$187
190-192 McLaughlin St	Welland	1,668	1,668	1,668	1,668	1,668	1,668	1,668	1,668	1,668	1,668	\$235	\$245
186-188 McLaughlin St	Welland	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	\$206	\$215
182-184 McLaughlin St	Welland	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	\$178	\$186
178-180 McLaughlin St	Welland	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	2,208	\$178	\$186
174-176 McLaughlin St	Welland	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	\$179	\$186
170-172 McLaughlin St	Welland	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	\$236	\$246

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
272-274 Roach Ave	Welland	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$225	\$237
262-264 Roach Ave	Welland	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$225	\$237
252-254 Roach Ave	Welland	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$225	\$237
242-244 Roach Ave	Welland	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	\$167	\$175
232-234 Roach Ave	Welland	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	\$173	\$182
222-224 Roach Ave	Welland	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	\$227	\$239
212-214 Roach Ave	Welland	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	2,244	\$173	\$182
202-204 Roach Ave	Welland	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	1,716	\$227	\$240
301-303 Roach Ave	Welland	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	\$171	\$179
291-293 Roach Ave	Welland	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	\$174	\$188
281-283 Roach Ave	Welland	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$225	\$237
271-273 Roach Ave	Welland	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	\$173	\$181
261-263 Roach Ave	Welland	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	\$174	\$182
251-253 Roach Ave	Welland	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	\$174	\$182
241-243 Roach Ave	Welland	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$225	\$237
231-233 Roach Ave	Welland	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	2,248	\$173	\$181
221-223 Roach Ave	Welland	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	2,270	\$171	\$179
211-213 Roach Ave	Welland	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	\$223	\$235
201-203 Roach Ave	Welland	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	\$174	\$183
24-30 Dundonald St	St Catharines	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	\$168	\$178
14-20 Dundonald Street	St Catharines	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	4,956	\$168	\$178
23 Christopher	St Catharines	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280	\$90	\$95
8 Christopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
16 Christopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
24-30 Christpoher St	St Catharines	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	\$204	\$216
32-38 Christopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
40-46 Christopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
48-54 Chistopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
56-62 Christopher St	St Catharines	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	\$204	\$216
13-19 Dundonald Ave.	St Catharines	4,320	4,320	4,320	4,320	4,320	4,320	4,320	4,320	4,320	4,320	\$193	\$204
9-15 Christopher St.	St Catharines	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	4,084	\$204	\$216
17-23 Christopher	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
25-31 Christopher St	St Catharines	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	4,640	\$180	\$190
34 Powerview Ave	St Catharines	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	\$146	\$157
32 Powerview Ave	St Catharines	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	\$146	\$154
30 Powerview	St Catharines	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$208	\$216
28 Powerview Ave	St Catharines	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$208	\$218
29 Powerview Ave	St Catharines	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	\$146	\$155
27 Powerview Ave	St Catharines	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	\$146	\$157
19 Powerview Ave	St Catharines	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$208	\$218
17 Powerview Ave	St Catharines	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$208	\$218

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
26 Wallace	St Catharines	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	\$145	\$154
24 Wallace	St Catharines	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	\$145	\$150
25 Galbraith	St Catharines	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	\$146	\$155
23 Galbraith	St Catharines	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	1,427	\$146	\$151
21 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
19 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
17 Galbraith St.	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
15 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
13 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
11 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
9 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
7 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
28 Galbraith	St Catharines	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	\$204	\$216
26 Galbraith	St Catharines	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	\$204	\$213
24 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$188
22 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
20 Galbraith	St Catharines	1,158	1,158	1,158	1,158	1,158	1,158	1,158	1,158	1,158	1,158	\$180	\$189
18 Galbraith	St Catharines	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$180	\$189
16 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
14 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
12 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
10 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
8 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
6 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
4 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
2 Galbraith	St Catharines	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$204	\$214
13 Brackencrest	St Catharines	973	973	973	973	973	973	973	973	973	973	\$202	\$211
15 Brackencrest	St Catharines	973	973	973	973	973	973	973	973	973	973	\$202	\$211
1 Brackencrest	St Catharines	986	986	986	986	986	986	986	986	986	986	\$199	\$210
3 Brackencrest	St Catharines	986	986	986	986	986	986	986	986	986	986	\$199	\$210
9 Brackenrest	St Catharines	988	988	988	988	988	988	988	988	988	988	\$199	\$209
11 Brackenrest	St Catharines	988	988	988	988	988	988	988	988	988	988	\$199	\$209
69 Greenmaple	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204
67 Greenmaple	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204
72 Greenmaple	St Catharines	999	999	999	999	999	999	999	999	999	999	\$197	\$208
70 Greenmaple	St Catharines	999	999	999	999	999	999	999	999	999	999	\$197	\$208
48 Greenmaple	St Catharines	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	\$194	\$204
46 Greenmaple	St Catharines	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	\$194	\$204
206 St. Augustine Dr.	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204
204 St. Augustine Dr	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204
190 St Augustine Dr	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204
188 St Augustine Dr	St Catharines	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	\$195	\$204

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
59 Rykert	St Catharines	123,920	123,920	123,920	123,920	123,920	123,920	123,920	123,920	123,920	123,920	\$152	\$160
15 Gale Street	St Catharines	128,490	128,490	128,490	128,490	128,490	128,490	128,490	128,490	128,490	128,490	\$235	\$236
14 Centre St	St Catharines	97,608	97,608	97,608	97,608	97,608	97,608	97,608	97,608	97,608	97,608	\$198	\$199
45 Manchester	St Catharines	98,597	98,597	98,597	98,597	98,597	98,597	98,597	98,597	98,597	98,597	\$173	\$182
479A-CCarlton St	St Catharines	143,142	143,142	143,142	143,142	143,142	143,142	143,142	143,142	143,142	143,142	\$162	\$168
10 Old Pine Trails	St Catharines	84,740	84,740	84,740	84,740	84,740	84,740	84,740	84,740	84,740	84,740	\$146	\$154
436-442 Scott St	St Catharines	44,672	44,672	44,672	44,672	44,672	44,672	44,672	44,672	44,672	44,672	\$152	\$159
4520 Huron	Niagara Falls	51,393	51,393	51,393	51,393	51,393	51,393	51,393	51,393	51,393	51,393	\$208	\$209
4900 Buckley	Niagara Falls	142,702	142,702	142,702	142,702	142,702	142,702	142,702	142,702	142,702	142,702	\$205	\$206
3896-3980 Sinnicks	Niagara Falls	22,940	22,940	22,940	22,940	22,940	22,940	22,940	22,940	22,940	22,940	\$115	\$123
3874 Portage	Niagara Falls	84,944	84,944	84,944	84,944	84,944	84,944	84,944	84,944	84,944	84,944	\$180	\$183
5130 Portage	Niagara Falls	60,244	60,244	60,244	60,244	60,244	60,244	60,244	60,244	60,244	60,244	\$149	\$156
6603-6625 Kiwanis	Niagara Falls	35,442	35,442	35,442	35,442	35,442	35,442	35,442	35,442	35,442	35,442	\$163	\$175
6858-6868 Ailanthus	Niagara Falls	58,334	58,334	58,334	58,334	58,334	58,334	58,334	58,334	58,334	58,334	\$177	\$184
6938-7032 Ailanthus	Niagara Falls	44,734	44,734	44,734	44,734	44,734	44,734	44,734	44,734	44,734	44,734	\$142	\$151
6165 Mcleod Rd	Niagara Falls	29,180	29,180	29,180	29,180	29,180	29,180	29,180	29,180	29,180	29,180	\$141	\$149
7775 Jubilee Dr	Niagara Falls	-	-	-	-	-	65,258	65,258	65,258	65,258	65,258	\$203	\$210
6363 Arad	Niagara Falls	762	762	762	762	762	762	762	762	762	762	\$226	\$248
6375 Arad	Niagara Falls	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	\$171	\$187
6387 Arad	Niagara Falls	979	979	979	979	979	979	979	979	979	979	\$176	\$193
6399 Arad	Niagara Falls	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	\$172	\$188
6411 Arad	Niagara Falls	982	982	982	982	982	982	982	982	982	982	\$175	\$192
6362 Churchill	Niagara Falls	985	985	985	985	985	985	985	985	985	985	\$175	\$192
6374 Churchill	Niagara Falls	985	985	985	985	985	985	985	985	985	985	\$175	\$192
6386 Churchill	Niagara Falls	739	739	739	739	739	739	739	739	739	739	\$233	\$255
6398 Churchill	Niagara Falls	985	985	985	985	985	985	985	985	985	985	\$175	\$192
6410 Churchill	Niagara Falls	985	985	985	985	985	985	985	985	985	985	\$175	\$192
6956 Dell Ave	Niagara Falls	745	745	745	745	745	745	745	745	745	745	\$231	\$256
6966 Dell Ave	Niagara Falls	996	996	996	996	996	996	996	996	996	996	\$173	\$191
6976 Dell Ave	Niagara Falls	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	\$172	\$190
6986 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$252
7008 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$252
7018 Dell Ave	Niagara Falls	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	\$167	\$185
7028 Dell Ave	Niagara Falls	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031	\$167	\$185
7038 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$252
7062 Dell Ave	Niagara Falls	733	733	733	733	733	733	733	733	733	733	\$235	\$262
7072 Dell Ave	Niagara Falls	991	991	991	991	991	991	991	991	991	991	\$174	\$194
7082 Dell Ave	Niagara Falls	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	\$170	\$189
7092 Dell Ave	Niagara Falls	995	995	995	995	995	995	995	995	995	995	\$173	\$193
7102 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$254
7112 Dell Ave	Niagara Falls	980	980	980	980	980	980	980	980	980	980	\$176	\$196

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
7122 Dell Ave	Niagara Falls	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	\$170	\$189
7132 Dell Ave	Niagara Falls	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	1,016	\$170	\$189
7144 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$254
7168 Dell Ave	Niagara Falls	756	756	756	756	756	756	756	756	756	756	\$228	\$258
7180 Dell Ave	Niagara Falls	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	\$170	\$192
7194 Dell Ave	Niagara Falls	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	\$170	\$193
6322 Hawkins St	Niagara Falls	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$168	\$192
6332 Hawkins St	Niagara Falls	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	1,037	\$166	\$190
6342 Hawkins St	Niagara Falls	977	977	977	977	977	977	977	977	977	977	\$176	\$201
6362 Hawkins St.	Niagara Falls	980	980	980	980	980	980	980	980	980	980	\$176	\$201
6372 Hawkins St	Niagara Falls	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	\$169	\$193
6382 Hawkins St	Niagara Falls	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	\$169	\$193
6392 Hawkins St	Niagara Falls	982	982	982	982	982	982	982	982	982	982	\$175	\$200
6402 Hawkins St	Niagara Falls	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	\$170	\$194
6412 Hawkins St	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$192
6363 Skinner	Niagara Falls	980	980	980	980	980	980	980	980	980	980	\$176	\$193
6375 Skinner	Niagara Falls	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$169	\$185
6387 Skinner	Niagara Falls	744	744	744	744	744	744	744	744	744	744	\$232	\$254
6399 Skinner	Niagara Falls	989	989	989	989	989	989	989	989	989	989	\$174	\$191
6411 Skinner	Niagara Falls	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022	\$169	\$185
6362 Skinner	Niagara Falls	985	985	985	985	985	985	985	985	985	985	\$175	\$192
6374 Skinner	Niagara Falls	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	\$171	\$187
6386 Skinner	Niagara Falls	744	744	744	744	744	744	744	744	744	744	\$232	\$254
6398 Skinner	Niagara Falls	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	1,003	\$172	\$188
6410 Skinner	Niagara Falls	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	\$171	\$187
6361 Churchill	Niagara Falls	972	972	972	972	972	972	972	972	972	972	\$177	\$195
6371 Churchill	Niagara Falls	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	\$168	\$185
6381 Churchill	Niagara Falls	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	\$169	\$186
6391 Churchill	Niagara Falls	976	976	976	976	976	976	976	976	976	976	\$176	\$193
6401 Churchill	Niagara Falls	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	1,024	\$168	\$185
6411 Churchill	Niagara Falls	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	\$166	\$182
7037 Dell Ave	Niagara Falls	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	\$172	\$192
7047 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$188
7057 Dell Ave	Niagara Falls	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	\$163	\$182
7067 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$188
7077 Dell Ave	Niagara Falls	763	763	763	763	763	763	763	763	763	763	\$226	\$253
7087 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$188
7097 Dell Ave	Niagara Falls	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	\$171	\$191
7107 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$188
7117 Dell Ave	Niagara Falls	763	763	763	763	763	763	763	763	763	763	\$226	\$253
7141 Dell Ave	Niagara Falls	763	763	763	763	763	763	763	763	763	763	\$226	\$255
7151 Dell Ave	Niagara Falls	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	\$163	\$184

**Niagara Region
Service Standard Calculation Sheet**

Service: Social Housing
Unit Measure: ft² of building area

Description	Local Area Municipality	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² with land
7163 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$189
7173 Dell Ave	Niagara Falls	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	\$172	\$194
7185 Dell Ave	Niagara Falls	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	1,026	\$168	\$189
7195 Dell Ave	Niagara Falls	1,011	1,011	1,011	1,011	1,011	1,011	1,011	1,011	1,011	1,011	\$170	\$192
6902-6905 Warden	Niagara Falls	97,340	97,340	97,340	97,340	97,340	97,340	97,340	97,340	97,340	97,340	\$106	\$115
30 Robinson	Grimsby	38,364	38,364	38,364	38,364	38,364	38,364	38,364	38,364	38,364	38,364	\$230	\$235
4278 Queen	Lincoln	39,360	39,360	39,360	39,360	39,360	39,360	39,360	39,360	39,360	39,360	\$267	\$270
45 Ormond St	Thorold	22,826	22,826	22,826	22,826	22,826	22,826	22,826	22,826	22,826	22,826	\$149	\$156
557 Steele Street	Port Colborne	27,064	27,064	27,064	27,064	27,064	27,064	27,064	27,064	27,064	27,064	\$151	\$154
561 Steele Street	Port Colborne	29,960	29,960	29,960	29,960	29,960	29,960	29,960	29,960	29,960	29,960	\$163	\$166
709 King Street	Port Colborne	6,055	6,055	6,055	6,055	6,055	6,055	6,055	6,055	6,055	6,055	\$122	\$130
300 Davy Street	Niagara on the Lake	32,822	32,822	32,822	32,822	32,822	32,822	32,822	32,822	32,822	32,822	\$175	\$188
Total		2,173,164	2,173,164	2,173,164	2,173,164	2,173,164	2,238,422	2,304,290	2,304,290	2,304,290	2,304,290		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	5.0699	5.0583	5.0486	5.0480	5.0381	5.1795	5.3243	5.3048	5.2819	5.2529

10 Year Average	2007-2016
Quantity Standard	5.1606
Quality Standard	\$187
Service Standard	\$966

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$966
Eligible Amount	\$46,368,365

**Niagara Region
Service Standard Calculation Sheet**

Service: Health Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² 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	\$284	\$322
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	\$339	\$383
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	\$273	\$309
Fort Erie Public Health - 1264 Garrison Road Unit 12 - Leased	-	-	-	-	-	-	-	-	-	3,417	\$284	\$322
Community Mental Health Program - 3550 Schmon Parkway (Units 1 B an 2) Thorold - Leased	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	\$284	\$322
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	\$370	\$416
Total	84,081	84,081	84,081	84,081	84,081	84,081	84,081	84,081	84,081	87,498		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.1962	0.1957	0.1953	0.1953	0.1949	0.1946	0.1943	0.1936	0.1927	0.1995

10 Year Average	2007-2016
Quantity Standard	0.1952
Quality Standard	\$385
Service Standard	\$75

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$75
Eligible Amount	\$3,602,009

**Niagara Region
Service Standard Calculation Sheet**

Service: Provincial Offences Act Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft ²)	Value/ft ² 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	4,913	4,913	\$523	\$585
Welland POA - 3 Cross Street Welland - Leased	7,285	7,285	7,285	7,285	7,285	7,285	7,285	7,285	7,285	7,285	\$523	\$585
Niagara Falls POA - 4635 Queen Street Niagara Falls - Leased	7,024	7,024	7,024	7,024	7,024	7,024	7,024	7,024	7,024	7,024	\$523	\$585
200 Jarvis Street Fort Erie - Satellite office - License Agreement	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	\$523	\$585
Total	21,622	21,622	21,622	21,622	21,622	21,622	21,622	21,622	21,622	21,622		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0504	0.0503	0.0502	0.0502	0.0501	0.0500	0.0500	0.0498	0.0496	0.0493

10 Year Average	2007-2016
Quantity Standard	0.0500
Quality Standard	\$585
Service Standard	\$29

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$29
Eligible Amount	\$1,403,474

Niagara Region
Service Standard Calculation Sheet

Service: Social & Child Services Facilities
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² 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	7,030	\$272	\$308
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	\$272	\$308
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	\$340	\$384
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	\$272	\$308
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	\$318	\$359
SAEO - St. Catharines Community Services Employment Office - 234 Bunting Road St. Catharines - Leased	29,504	29,504	29,504	29,504	29,504	29,504	29,504	29,504	29,504	29,504	\$318	\$359
SAEO - Welland Community Services Employment Office - 250 Thorold Road Welland - Owned	25,870	25,870	25,870	25,870	25,870	25,870	25,870	25,870	25,870	25,870	\$341	\$385
SAEO - Fort Erie Community Services Employment Office - 469 Central Avenue Fort Erie - Leased	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	\$318	\$359
SAEO - Niagara Falls Community Services Employment Office - 5853 Peer Street Niagara Falls - Owned	21,710	21,710	21,710	21,710	21,710	21,710	21,710	21,710	21,710	21,710	\$306	\$346
SAEO - Port Care Community Services Employment Office - 92 Charlotte Street Port Colborne - Leased	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	\$318	\$359
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	\$296	\$335
Social Services - Headquarters Building - 1815 Sir Isaac Brock Way Thorold - Owned	881	881	881	881	881	881	881	881	881	881	\$296	\$335
Portable at SAEO Welland Community Services - 250 Thorold Road	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$50	\$64
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	1,000	1,000	\$50	\$64
Total	121,465	121,465	121,465	121,465	121,465	121,465	121,465	121,465	121,465	121,465		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.2834	0.2827	0.2822	0.2821	0.2816	0.2811	0.2807	0.2796	0.2784	0.2769

10 Year Average	2007-2016
Quantity Standard	0.2809
Quality Standard	\$352
Service Standard	\$99

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$99
Eligible Amount	\$4,740,142

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Facilities - Stations/Depots
Unit Measure: ft² of building area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Bld'g Value (\$/ft²)	Value/ft² 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	\$260	\$287
- Plant	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	\$260	\$287
- Scalehouse	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	6,550	\$37	\$40
- Starlight facility	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	6,613	\$65	\$71
- Glass Storage	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	\$83	\$91
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	\$260	\$287
- Composting Pad Building	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	92,473	\$260	\$287
- Composting Operations Office	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	\$260	\$287
Total	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736	249,736		

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.5826	0.5813	0.5802	0.5801	0.5790	0.5779	0.5770	0.5749	0.5724	0.5693

10 Year Average	2007-2016
Quantity Standard	0.5775
Quality Standard	\$272
Service Standard	\$157

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$157
Eligible Amount	\$7,537,492

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Facilities - Stations/Depots Land
Unit Measure: acres of land area

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Land Value (acre)
Humberstone:											
- Shared Area	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	\$50,000
- Asphalt Shingles Pile	-	-	-	-	-	0.78	0.78	0.78	0.78	0.78	\$50,000
- Wood Chip Pile	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	\$50,000
- Reuseable Goods Drop-Off Depot	-	-	-	-	-	-	0.21	0.21	0.21	0.21	\$50,000
- Household Hazardous Waste	-	-	-	-	-	-	-	-	0.43	0.43	\$50,000
Niagara Road 12:											
- Shared Area											50,000
- Leaf/yard composting	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	50,000
- Drop-Off Depot	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	50,000
- Household Hazardous Waste	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	50,000
- Wood Chip Pile	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	50,000
- Asphalt Shingles Area	-	-	-	-	-	0.20	0.20	0.20	0.20	0.20	50,000
Bridge Street:											
- Shared Area											\$119,000
- Leaf/yard composting	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	\$119,000
- Recycle Drop off Area	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	\$119,000
- Asphalt Shingles Area	-	-	-	-	-	-	-	-	0.10	0.10	\$119,000
- Wood Chip Pile	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	\$119,000
Thorold - Household Hazardous Waste	-	-	-	-	-	-	-	-	0.89	0.89	\$50,000
4935 Kent Avenue - Materials Recycling Centre (MRF)	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	18.79	\$119,000
Walkers Environmental Organics Facilities	-	-	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.10	\$50,000
Total	45.69	45.69	58.79	58.79	58.79	59.77	59.99	59.99	61.40	61.40	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

10 Year Average	2007-2016
Quantity Standard	0.0001
Quality Standard	\$108,000
Service Standard	\$11

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$11
Eligible Amount	\$518,206

Service:	Waste Diversion - Vehicles & Equipment
Unit Measure:	No. of vehicles and equipment

Watson & Associates Economists Ltd. H:\Niagara\2017 DC\Report\Report.docx

Service:	Waste Diversion - Vehicles & Equipment
Unit Measure:	No. of vehicles and equipment

Watson & Associates Economists Ltd. H:\Niagara\2017 DC\Report\Report.docx

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
Unit Measure: No. of vehicles and equipment

Description	Waste Diversion Share (%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
Freightliner- RLSPL	40%	-	-	-	-	-	-	0.4	0.4	0.4	0.4	\$175,000
Freightliner- RLSPL	40%	-	-	-	-	-	-	0.4	0.4	0.4	0.4	\$175,000
Modern Trucks:												
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Bucket	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
SL-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Bucket	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
SL-Bucket	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
RP-Straight	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
Unit Measure: No. of vehicles and equipment

Description	Waste Diversion Share (%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Split	40%	0.4	0.4	0.4	0.4	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Straight	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$150,000
RP-Split	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
RP-Straight	0%	-	-	-	-	-	-	-	-	-	-	\$150,000
Panel Van	100%	1.0	1.0	1.0	1.0	-	-	-	-	-	-	\$50,000
JWS Curbside Trucks:					-	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
SL-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

Description	Waste Diversion Share (%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/Vehicle)
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Straight	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
RP-Split	50%	0.5	0.5	0.5	0.5	-	-	-	-	-	-	\$150,000
Walkers Environmental Organics Facilities:												
<u>Loaders</u>												
2002, Volvo L110E	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
2008, Volvo L110F	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
2008, Volvo L110F	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
2008, Volvo L110F	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
2011, Doosan DL300A	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
2014, Volvo L90G	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$240,000
<u>Tractor</u>												
2010, New Holland T1530	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$15,000
<u>Water Truck</u>												
1989, Mack RB688 SerVan	100%	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	\$20,000
Total		42	42	50	50	61	64	65	66	66	66	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001

10 Year Average	2007-2016
Quantity Standard	0.0001
Quality Standard	\$159,100
Service Standard	\$16

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$16
Eligible Amount	\$763,394

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Containers
 Unit Measure: No. of items

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Residential:											
Blue Box	155,645	156,616	158,685	160,807	165,980	171,153	175,308	178,940	182,449	183,955	\$6
Grey Box	154,390	155,074	157,006	159,466	162,739	167,179	170,790	174,501	178,088	179,698	\$6
Green Bin	154,534	154,729	156,081	157,989	160,996	163,477	165,905	168,027	170,432	171,510	\$22
Kitchen Catcher	-	-	-	1,792	3,620	5,485	7,157	9,037	11,250	12,251	\$4
Multi-Residential:											
Blue & Grey Combined (small)	-	-	-	-	1,237	1,237	1,237	1,237	1,237	1,237	\$70
Blue & Grey Combined (large)	-	-	-	-	215	215	215	215	215	215	\$70
Blue Carts	-	-	-	-	-	187	253	313	415	529	\$70
Grey Carts	-	-	-	-	-	231	334	435	555	709	\$70
Green Carts	-	-	-	-	-	41	113	147	147	147	\$70
Green Bin (12 Gallon)	-	-	-	-	-	-	-	-	6	118	\$22
Green Carts (32 Gallon)	-	-	-	-	-	-	-	-	73	74	\$40
ICI:											
Blue Box					103	161	187	216	257	298	\$70
Grey Box					55	89	109	146	195	236	\$70
Green Bin (12 Gallon)					-	-	-	-	-	-	\$22
Green Carts (32 Gallon)					24	35	44	55	108	143	\$40
Green Carts (64 Gallon)					-	-	-	1	1	1	\$70
Backyard Composters	258	279	395	553	690	894	894	894	894	894	\$21
Total	464,827	466,698	472,167	480,607	495,659	510,384	522,546	534,164	546,322	552,015	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	1.0844	1.0863	1.0969	1.1164	1.1491	1.1810	1.2074	1.2297	1.2523	1.2584

10 Year Average	2007-2016
Quantity Standard	1.1662
Quality Standard	\$11
Service Standard	\$13

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$13
Eligible Amount	\$641,040

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Material Recovery Facility Equipment:											
Fibre Processing Line:											
In-Feed Metering Conveyor (M1)	-	-	-	-	-	1	1	1	1	1	\$51,000
Inclined Feed Conveyor (M2)	-	-	-	1	1	1	1	1	1	1	\$101,000
Metering Drum	1	1	1	1	1	1	1	1	1	1	\$40,000
Pre-Sort Area Sort Conveyor (M3)	1	1	1	1	1	1	1	1	1	1	\$76,000
OCC Disc Screen (M4)	1	1	1	1	1	1	1	1	1	1	\$253,000
OCC Unders Collection/Transfer Conveyor to ONP Screen (M5, M6, M7)	1	1	1	1	1	1	1	1	1	1	\$121,000
Fibre Line Secondary Sort Conveyors (M8, M9, M10)	1	1	1	1	1	1	1	1	1	1	\$101,000
Fibre Line Secondary Sort Elevated Platforms, Chutes, Stairs/walkways	-	-	-	1	1	1	1	1	1	1	\$152,000
Other - pit plates closing for conveyor, hydraulic bunker doors, etc.	-	-	-	1	1	1	1	1	1	1	\$101,000
Newspaper Sort Conveyor (M205)	-	-	-	1	1	1	1	1	1	1	\$76,000
Reversible OCC/OBB Transfer Conveyor (M218)	-	-	-	1	1	1	1	1	1	1	\$76,000
Newspaper Transfer Conveyor (M208)	-	-	-	1	1	1	1	1	1	1	\$40,000
Newspaper Transfer Conveyors (M206, M207)	-	-	-	1	1	1	1	1	1	1	\$40,000
OCC/OBB Transfer Conveyors (M214, M215, M216, M217)	-	-	-	1	1	1	1	1	1	1	\$101,000
Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways	-	-	-	1	1	1	1	1	1	1	\$606,000
Electrical Controls	-	-	-	1	1	1	1	1	1	1	\$202,000
Electrical and Mechanical Installation	-	-	-	1	1	1	1	1	1	1	\$505,000
Fibre Baling System:											
Inclined Baler Feed Conveyor	-	-	-	1	1	1	1	1	1	1	\$253,000
Baler (Nexgen model 2R-310W-84, 2 ram)	-	-	-	1	1	1	1	1	1	1	\$657,000
Fibre Optical Sorting System:											
Discharge Conveyor Under OCC Separator & Splitter Roller (C10)	-	-	-	-	-	-	-	-	1	1	\$40,000
Splitter Conveyor (C20)	-	-	-	-	-	-	-	-	1	1	\$27,000
Incline Conveyor (C30)	-	-	-	-	-	-	-	-	1	1	\$42,000
Vibratory Feeder (C40)	-	-	-	-	-	-	-	-	1	1	\$116,000
Accelerator Conveyor (C50)	1	1	1	1	1	1	1	1	1	1	\$53,000
Titech Optical Sorter (C60)	-	-	-	-	-	-	-	-	1	1	\$414,000
Incline Conveyor (C80)	-	-	-	-	-	-	-	-	1	1	\$38,000
Vibratory Feeder (C90)	-	-	-	-	-	-	-	-	1	1	\$116,000
Accelerator Conveyor (C100)	-	-	-	-	-	-	-	-	1	1	\$53,000
Titech Optical Sorter (C110)	-	-	-	-	-	-	-	-	1	1	\$414,000
Discharge Conveyor (C120)	-	-	-	-	-	-	-	-	1	1	\$40,000
Discharge Conveyor (C130)	-	-	-	-	-	-	-	-	1	1	\$40,000
Transfer Conveyor (C140)	-	-	-	-	-	-	-	-	1	1	\$67,000
Transfer Conveyor (C150)	-	-	-	-	-	-	-	-	1	1	\$62,000
Elevated Platforms, Stairways and Walkways	-	-	-	-	-	-	-	-	1	1	\$101,000

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Electrical Controls	-	-	-	-	-	-	-	-	1	1	\$202,000
Electrical and Mechanical Installation	-	-	-	-	-	-	-	-	1	1	\$404,000
Air Compressor System for Fibre & Container Opticals:											
\$150 Boge Screw Compressors (quantity = 2)	-	-	-	-	-	-	-	-	-	1	\$101,000
Aircell 600 Desiccant Air Dryer	-	-	-	-	-	-	-	-	-	1	\$15,000
Tanks and Filtration	-	-	-	-	-	-	-	-	-	1	\$20,000
HVAC Compressor Room Ventilation and Ducting	-	-	-	-	-	-	-	-	-	1	\$51,000
Air Lines to Optical Sorters / Compressor Room Installation / Electrical	-	-	-	-	-	-	-	-	-	1	\$121,000
Container Processing Line:											
Horizontal Feed Conveyor (C15)	-	-	-	1	1	1	1	1	1	1	\$51,000
Inclined Feed Conveyor (C16)	-	-	-	1	1	1	1	1	1	1	\$101,000
Pre-Sort Area Sort Conveyor (C17)	-	-	-	1	1	1	1	1	1	1	\$85,000
Container Transfer Conveyor (C18)	-	-	-	1	1	1	1	1	1	1	\$40,000
Steel Can Transfer Conveyor (C101A)	-	-	-	1	1	1	1	1	1	1	\$40,000
Cross Belt Ferrous Separator (M101A & M101B)	1	1	1	1	1	1	1	1	1	1	\$51,000
Glass Breaker Screen (GBS102 A,B & C)	-	-	-	1	1	1	1	1	1	1	\$152,000
Broken Glass Conveyor (C105)	-	-	-	1	1	1	1	1	1	1	\$40,000
Plastic Perforator (PP103 A & B)	-	-	-	1	1	1	1	1	1	1	\$40,000
Fine Disc Screen (DS104)	1	1	1	1	1	1	1	1	1	1	\$51,000
Container Transfer Conveyor (C106)	-	-	-	1	1	1	1	1	1	1	\$40,000
Light Suction / Mesh Conveyor (C107)	-	-	-	1	1	1	1	1	1	1	\$76,000
Light Transfer Conveyor (C108)	-	-	-	1	1	1	1	1	1	1	\$30,000
Container Transfer Conveyor (C109)	-	-	-	1	1	1	1	1	1	1	\$51,000
Film, Fibre and Metal Sort Conveyor (C110)	-	-	-	1	1	1	1	1	1	1	\$61,000
Plastic Bag Air Vacuum	-	-	-	1	1	1	1	1	1	1	\$51,000
Optical Speed Conveyor (C111)	-	-	-	1	1	1	1	1	1	1	\$40,000
Pellenc Optical Sorter (OPT112)	-	-	-	1	1	1	1	1	1	1	\$455,000
Split PET & Mixed Plastic QC Conveyor (C113A)	-	-	-	1	1	1	1	1	1	1	\$51,000
Reversible PET Transfer Conveyor (C114)	-	-	-	1	1	1	1	1	1	1	\$30,000
Reversible Mixed Plastic Transfer Conveyor (C115)	-	-	-	1	1	1	1	1	1	1	\$30,000
Transfer Conveyor (C116)	-	-	-	1	1	1	1	1	1	1	\$40,000
Transfer Conveyor (C117)	-	-	-	1	1	1	1	1	1	1	\$40,000
Transfer Conveyor (C118)	-	-	-	1	1	1	1	1	1	1	\$40,000
Container Sorting Conveyor (C119)	1	1	1	1	1	1	1	1	1	1	\$51,000
Eddy Current Rotor (M25A) and Conveyor (M25B)	-	-	-	-	-	-	-	1	1	1	\$121,000
Aluminum Silo Blower (AB27)	1	1	1	1	1	1	1	1	1	1	\$51,000
Residue Transfer Conveyor (M26)	1	1	1	1	1	1	1	1	1	1	\$40,000
Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways	1	1	1	1	1	1	1	1	1	1	\$303,000
Electrical Controls	1	1	1	1	1	1	1	1	1	1	\$202,000

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Electrical and Mechanical Installation	1	1	1	1	1	1	1	1	1	1	\$505,000
Container and OCC Baling System											
Reclaim Conveyor	1	1	1	1	1	1	1	1	1	1	\$253,000
Inclined Baler Feed Conveyor	1	1	1	1	1	1	1	1	1	1	\$354,000
Elevated Quality Control Sorting Station	1	1	1	1	1	1	1	1	1	1	\$30,000
Baler (IPS model TR-1388-LH-200 with pre-compression lid)	1	1	1	1	1	1	1	1	1	1	\$1,010,000
Other - transition chutes, pit plates, etc.	1	1	1	1	1	1	1	1	1	1	\$76,000
Polystyrene Densifer System:											
Feed Conveyor	-	-	-	-	-	-	-	-	1	1	\$61,000
Sort Conveyor and Sort Platform	-	-	-	-	-	-	-	-	1	1	\$71,000
Crusher	-	-	-	-	-	-	-	-	1	1	\$30,000
Blower	-	-	-	-	-	-	-	-	1	1	\$20,000
Compactor	-	-	-	-	-	-	-	-	1	1	\$51,000
Glass Processing System:											
Feed Hopper	1	1	1	1	1	1	1	1	1	1	\$10,000
Conveyor C-1 Sort Conveyor	1	1	1	1	1	1	1	1	1	1	\$15,000
Sort Platform	1	1	1	1	1	1	1	1	1	1	\$5,100
Magnetic Separator	1	1	1	1	1	1	1	1	1	1	\$30,000
Kongsilde Air Separation System	1	1	1	1	1	1	1	1	1	1	\$40,000
Primary Grinder	1	1	1	1	1	1	1	1	1	1	\$76,000
Conveyor C-2	1	1	1	1	1	1	1	1	1	1	\$15,000
3/4" Trommel Screen	1	1	1	1	1	1	1	1	1	1	\$20,000
3/4" Scalping Screen	1	1	1	1	1	1	1	1	1	1	\$20,000
Fluidized Bed and Gas Trane/Heater	1	1	1	1	1	1	1	1	1	1	\$404,000
Intersystems Bucket Elevator	-	-	-	-	-	-	-	1	1	1	\$35,000
Aspirator	-	-	-	-	-	-	-	1	1	1	\$15,200
Cyclone and Airlock	-	-	-	-	-	-	-	1	1	1	\$25,000
Fan	1	1	1	1	1	1	1	1	1	1	\$9,100
Bucket Elevator	1	1	1	1	1	1	1	1	1	1	\$76,000
Five Deck 5x10 Screen	1	1	1	1	1	1	1	1	1	1	\$101,000
Gyra-Vib Low Profile Separator	1	1	1	1	1	1	1	1	1	1	\$10,000
Gyra-Vib Low Profile Separator	1	1	1	1	1	1	1	1	1	1	\$10,000
Vibratory Feeders (3)	1	1	1	1	1	1	1	1	1	1	\$15,000
Mini-Aspirator	1	1	1	1	1	1	1	1	1	1	\$10,000
Secondary Grinder	1	1	1	1	1	1	1	1	1	1	\$101,000

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 Value (\$/item)
Five Deck 5x10 Screen	1	1	1	1	1	1	1	1	1	1	\$62,000
Dust Collection Unit	1	1	1	1	1	1	1	1	1	1	\$76,000
Dust Collection System for Labels	1	1	1	1	1	1	1	1	1	1	\$40,000
Supersac Support Stands	1	1	1	1	1	1	1	1	1	1	\$5,100
Electric Chain Hoist	1	1	1	1	1	1	1	1	1	1	\$3,000
Air Compressor - Piston	1	1	1	1	1	1	1	1	1	1	\$10,100
Air Compressor - Screw	1	1	1	1	1	1	1	1	1	1	\$20,000
Dryer for Air Compressor	1	1	1	1	1	1	1	1	1	1	\$5,100
Packaging Sealer	1	1	1	1	1	1	1	1	1	1	\$10,000
Packaging Conveyor	1	1	1	1	1	1	1	1	1	1	\$5,100
Packaging Bagger	1	1	1	1	1	1	1	1	1	1	\$15,200
Supersac Scale: 36" x 36"	1	1	1	1	1	1	1	1	1	1	\$3,500
Supersac Scale: 48" x 48"	1	1	1	1	1	1	1	1	1	1	\$2,000
Shrink wrapper	1	1	1	1	1	1	1	1	1	1	\$10,100
Elevated Platforms, Chutes, Silos, Stairways and Walkways	1	1	1	1	1	1	1	1	1	1	\$202,000
Electrical Controls	1	1	1	1	1	1	1	1	1	1	\$202,000
Electrical and Mechanical Installation	1	1	1	1	1	1	1	1	1	1	\$354,000
Total	54	54	54	89	89	90	90	94	115	120	

Population	428,641	429,625	430,447	430,502	431,346	432,173	432,789	434,382	436,263	438,671
Per Capita Standard	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003

10 Year Average	2007-2016
Quantity Standard	0.0002
Quality Standard	\$108,000
Service Standard	\$22

DC Amount (before deductions)	10 Year
Forecast Population	47,982
\$ per Capita	\$22
Eligible Amount	\$1,036,411

Appendix C – Long Term Capital and Operating Cost Examination

Appendix C – Long Term Capital and Operating Cost Examination

Region of Niagara Annual Capital and Operating Cost Impact

As a requirement of the D.C.A. under subsection 10(2)(c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the 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 saving 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 2015 Financial Information Return (FIR).

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as life cycle cost. By definition, life cycle costs are all the costs which are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The method selected for life cycle costing is the sinking fund method which provides that money will be contributed annually and invested, so that those funds will grow over time to equal the amount required for future replacement. The following factors were utilized to calculate the annual replacement cost of the capital projects (annual contribution = factor X capital asset cost) and are based on an annual growth rate of 2% (net of inflation) over the average useful life of the asset:

Asset	Lifecycle Cost Factors	
	TERM	FACTOR
Social Housing	65	0.00763
Wastewater and Wastewater Services	60	0.00877
Services Related to a Highway	40	0.01656
Facilities	40	0.01656
Waste diversion Vehicles, Equipment, Containers & Other	25	0.03122
EMS and Police Vehicles and Equipment	7	0.13451

Table C-1 depicts the annual operating impact resulting from the proposed gross capital projects at the time they are all in place. It is important to note that, while Region program expenditures will increase with growth in population, the costs associated with the new infrastructure (i.e. facilities) would be delayed until the time these works are in place.

Table C-1
NIAGARA REGION
OPERATING AND CAPITAL EXPENDITURE IMPACTS
FOR FUTURE CAPITAL EXPENDITURES

SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Wastewater Services				
1.1 Wastewater	282,970,502	15,480,080	17,445,208	32,925,288
2. Water Services				
2.1 Water	218,080,672	11,725,830	7,720,587	19,446,417
3. Services Related to a Highway				
3.1 Services Related to a Highway, Related Facilities & Vehicles, and Previously Completed Unfunded Works	505,308,807	27,565,467	7,435,894	35,001,361
4. Police Services				
4.1 Police facilities	20,613,960	0	41,361,149	41,361,149
4.2 Police vehicles	4,009,000	636,696	8,043,910	8,680,606
4.3 Small equipment and gear	2,224,000	353,208	4,462,374	4,815,582
5. General Government				
5.1 Studies	7,620,949		0	0
6. Long Term Care				
6.1 Long Term Care facilities	32,465,000	1,753,290	10,046,462	11,799,752
7. Health				
7.1 Health department space	4,780,000	258,145	4,594,932	4,853,077
8. Provincial Offences Act				
8.1 POA facilities	2,634,000	142,248	456,791	599,039
9. Social and Child Services				
9.1 Social and Child Services facilities	0	0	0	0
10. Emergency Medical Services				
10.1 EMS facilities	27,930,505	1,548,093	4,569,723	6,117,816
10.2 Vehicles	2,386,000	394,725	390,375	785,100
11. Social Housing				
11.1 Social housing facilities	45,201,900	2,354,439	3,590,812	5,945,251
12. Waste Diversion				
12.1 Waste diversion facilities - Stations/Depots	8,103,500	437,640	2,392,723	2,830,363
12.2 Waste diversion vehicles and equipment	760,000	49,680	224,405	274,085
12.3 Waste diversion - Containers	640,000	41,840	188,973	230,813
12.4 Waste diversion other	1,030,000	67,330	304,128	371,458
Total	1,166,758,794	62,808,711	113,228,446	176,037,157

Annual Operating Expenditures base on Schedule 40 of FIR (do not include columns 2, 6, 8, 9, 12 & 16)

Appendix D – Development Charge Reserve Fund Policy

Appendix D – Development Charge Reserve Fund Policy

D.1 Legislative Requirements

The D.C.A. requires development charge collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the Act provide the following regarding reserve fund establishment and use:

- a municipality shall establish a reserve fund for each service to which the D.C. by-law relates; s.7(1), however, allows services to be grouped into categories of services for reserve fund (and credit) purposes, although only 100% eligible and 90% eligible services may be combined (minimum of two reserve funds);
- the municipality shall pay each development charge it collects into a reserve fund or funds to which the charge relates;
- the money in a reserve fund shall be spent only for the “capital costs” determined through the legislated calculation process (as per s.5(1) 2-8);
- money may be borrowed from the fund but must be paid back with interest (O.Reg. 82/98, s.11(1) defines this as the 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); and
- D.C. reserve funds may not be consolidated with other municipal reserve funds for investment purposes (s.37).

Annually, the Treasurer of the Region is required to provide Council with a financial statement related to the D.C. by-law(s) and reserve funds. This statement must also be forwarded to the Minister of Municipal Affairs and Housing within 60 days of the statement being filed with Council.

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;
- transactions for the year (e.g. collections, draws);
- list of credits by service or service category (outstanding at beginning of the year, given in the year and outstanding at the end of the year by holder);

- amounts borrowed, purpose of the borrowing and interest accrued during previous year;
- amount and source of money used by the Region to repay municipal obligations to the fund;
- schedule identifying the value of credits recognized by the Region, the service to which it applies and the source of funding used to finance the credit; and
- for each draw, 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.

Based upon the above, Figure D-1 sets out the format for which annual reporting to Council should be provided.

D.2 D.C. Reserve Fund Application

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

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

This provision clearly establishes that reserve funds collected for a specific service are only to be used for that service.

Table D-1
Niagara Region
Annual Treasurer's Statement of Development Charge Reserve Funds

Description	Services to which the Development Charge Relates (examples)												Total
	Discounted Services				Non-Discounted Services								
	Services Related to a Highway	Water Services	Wastewater Services	Police Services	General Government	Long Term Care	Provincial Offences Act	Health	Social and Child Services	Emergency Medical Services	Waste Diversion Services	Social Housing	
Opening Balance, January 1, _____													0
Plus:													
Development Charge Collections													0
Accrued Interest													0
Repayment of Monies Borrowed from Fund and Associated Interest ¹													0
Sub-Total	0	0	0	0	0	0	0	0	0	0		0	0
Less:													
Amount Transferred to Capital (or Other) Funds ²													0
Amounts Refunded													0
Amounts Loaned to Other DC Service Category for Interim Financing													0
Credits ³													0
Sub-Total	0	0	0	0	0	0	0	0	0	0		0	0
Closing Balance, December 31, _____	0	0	0	0	0	0	0	0	0	0		0	0

¹ Source of funds used to repay the DC 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	DC Recoverable Cost Share					Non-DC Recoverable Cost Share				
		DC Forecast Period			Post DC Forecast Period		Other Reserve/Reserve Fund Draws	Tax Supported Operating Fund Contributions	Rate Supported Operating Fund Contributions	Debt Financing	Grants, Subsidies Other Contributions
		DC Reserve Fund Draw	DC Debt Financing	Grants, Subsidies Other Contributions	Post-Period Benefit/ Capacity Interim Financing	Grants, Subsidies Other Contributions					
<u>Services Related to a Highway</u>											
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
<u>Water Services</u>											
Capital Cost D											
Capital Cost E											
Capital Cost F											
Sub-Total - Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Wastewater Services</u>											
Capital Cost G											
Capital Cost H											
Capital Cost I											
Sub-Total - Wastewater	\$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	DC Reserve Fund Draw		Post DC Forecast Period			Non-DC Recoverable Cost Share		
		Principal	Interest	Principal	Interest	Source	Principal	Interest	Source
<u>Services Related to a Highway</u>									
Capital Cost J									
Capital Cost K									
Capital Cost L									
Sub-Total - Services Related to Highways	\$0	\$0	\$0	\$0	\$0		\$0	\$0	
<u>Water Services</u>									
Capital Cost M									
Capital Cost N									
Capital Cost O									
Sub-Total - Water	\$0	\$0	\$0	\$0	\$0		\$0	\$0	
<u>Wastewater Services</u>									
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 DC 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

Watermains internal to a specific development, 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

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 a development charge projects.

4) Wastewater Mains

i) Related to a specific development

Wastewater mains internal to a specific development, 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

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

Temporary or permanent lift stations intended to service a specific development(s) 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

All noise and odour control abatement measures to comply with MOE 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

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

- (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 MOE 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

Land acquisition for Regional facilities and utilities unrelated to a specific development 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

- (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

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

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

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

- (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*

- (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*

- (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*

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*

- (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*

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*

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*

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*

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*

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*

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*

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

- (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

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

10) Storm Drainage Works

i) Related to a Specific Development

(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

- (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.

11) Storm Water Management

(retention/detention storage, erosion remediation)

i) Related to a Specific Development

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

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 municipal 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 Servicing Needs – GM BluePlan Engineering Consultants Limited

Appendix F – Water Servicing Needs – GM BluePlan Engineering Consultants Limited

D.C. Calculation Planning Period

2017 - 2041

Service Coverage and Capital Program

Coverage:

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

Capital Program:

The capital program, which covers the period 2017-2041, is comprised of:

1. Growth related works from the Region's 2017 Water and Wastewater Master Servicing Plan;
2. The portion of previously constructed, unfunded projects.
3. The 2012 study was completed, the post period time frame generally included the period from mid-2018 and beyond. As that time period is now being fully incorporated into the 2017 D.C. calculation period, the full post period capacity amount can be recovered over the forecast growth. This includes works identified in the 2012 D.C. Background Study as already constructed for which a 2014 and beyond P.P.C. share was identified and has not yet been funded from D.C. reserves. These works were first included in the 2004 D.C. Study which had a D.C. recoverable period of 2004-2014.
4. Post period capacity projects from previous development charge studies (i.e. 1999) that have not yet been fully D.C. funded and for which capacity still exists for use by future growth.
5. Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.
6. 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 2017 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.

Growth-Related Categories Project Type		1	2	3	4
		Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
A	Treatment	50% includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
B	Pumping Station	50% includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
C	Storage	50% includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
D	Distribution and Transmission	50% includes system looping and security of supply	20% addresses pipe age, condition or performance and level of service	10%	0%

Growth-Related Categories Project Type		1	2	3	4
		Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
E	Decommissioning	70% Addresses existing system performance			
F	Exceptions	May require unique B.T.E. allocation based on type, location or timing of project			

Post Period/Excess Capacity Deduction

Deductions are made for post 2041 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 2041.

Growth-Related Categories Project Type		1	2	3	4
		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
A	Treatment	50% includes strategic, cost-effective additional capacity	20% Some planning for future capacity	10%	0%
B	Pumping Station	50% includes strategic, cost-effective additional capacity	20% Some planning for future capacity	10%	0%

<div style="display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Growth-Related Categories</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Project Type</div> </div>		1	2	3	4
		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
C	Storage	50% includes strategic, cost-effective additional capacity	20% Some planning for future capacity	10%	0%
D	Distribution and Transmission	50% includes strategic, cost-effective additional capacity	20% Some planning for future capacity	10%	0%
E	Decommissioning	N/A			
F	Exceptions	May require unique OBL allocation based on type, location or timing of project			

Provision for Grants, Subsidies and Other Contributions

No grants, subsidies or other contributions are anticipated for most of the Master Servicing Plan projects. There is currently an established agreement for funding of the Decew Inlet Channel. This contribution has been accounted for and reduced from the gross cost to establish a net development charge eligible cost. For all other 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, 2016 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 2017 to 2041 for the Region.

Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work from Home (W.F.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.F.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.F.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.F.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.

NIAGARA REGION - DEVELOPMENT-RELATED WATER PROJECTS

Master Plan ID	Description	Year in Service	System	Total Component Estimated Cost	Benefit to Existing Development	Beyond 2041 Oversizing	Grants & Contributions	DC Recoverable 2017 - 2041	Residential Share	Non-Residential Share	BTE Comment	OBL Comment
W-D-001	Decommissioning of Central Ave (Fort Erie South) ET	2022 - 2031	Rosehill	\$ 1,979,000	\$ 1,385,300			\$ 593,700	\$ 451,212	\$ 142,488	E1	
W-D-002	Decommissioning of Stevensville Res + PS	2022 - 2031	Rosehill	\$ 2,913,000	\$ 2,039,100			\$ 873,900	\$ 664,164	\$ 209,736	E1	
W-D-003	Decommissioning of Park Road Res + PS	2022 - 2031	Grimsby	\$ 523,000	\$ 366,100			\$ 156,900	\$ 119,244	\$ 37,656	E1	
W-D-004	Decommissioning of Lundy's Lane ET	2032 - 2041	Niagara Falls	\$ 1,979,000	\$ 1,385,300			\$ 593,700	\$ 451,212	\$ 142,488	E1	
W-D-005	Decommissioning of Pelham ET	2022 - 2031	Welland	\$ 1,028,000	\$ 719,600			\$ 308,400	\$ 234,384	\$ 74,016	E1	
W-D-006	Decommissioning of King Street ET	2017 - 2021	Port Colborne	\$ 1,979,000	\$ 1,385,300			\$ 593,700	\$ 451,212	\$ 142,488	E1	
W-D-007	Decommissioning of Fielden Ave Res + PS	2032 - 2041	Port Colborne	\$ 2,913,000	\$ 2,039,100			\$ 873,900	\$ 664,164	\$ 209,736	E1	
W-F-001	Grimsby WTP Expansion	2022 - 2031	Grimsby	\$ 51,496,000	\$ 5,149,600	\$ 5,149,600		\$ 41,196,800	\$ 31,309,568	\$ 9,887,232	A3	A3
W-F-002	Decew inlet channel	2017 - 2021	Decew	\$ 22,969,000			\$ 18,500,000	\$ 4,469,000	\$ 3,396,440	\$ 1,072,560	A4	
W-M-001	New trunk main in Central Fort Erie	2022 - 2031	Rosehill	\$ 9,479,000	\$ 4,739,500			\$ 4,739,500	\$ 3,602,020	\$ 1,137,480	D1	
W-M-002	New Conveyance to Port Colborne East side	2017 - 2021	Port Colborne	\$ 11,548,000	\$ 5,774,000			\$ 5,774,000	\$ 4,388,240	\$ 1,385,760	D1	
W-M-003	New trunk main from Welland WTP to North	2032 - 2041	Welland	\$ 7,556,000	\$ 3,778,000			\$ 3,778,000	\$ 2,871,280	\$ 906,720	D1	
W-M-004	Upgrade trunk main from Grimsby WTP to Park Road	2017 - 2021	Grimsby	\$ 13,139,000	\$ 6,569,500			\$ 6,569,500	\$ 4,992,820	\$ 1,576,680	D1	
W-M-005	New trunk main from Grimsby WTP to New Grimsby Reservoir	2022 - 2031	Grimsby	\$ 42,044,000	\$ 4,204,400			\$ 37,839,600	\$ 28,758,096	\$ 9,081,504	D3	
W-M-006	New trunk main in Smithville	2022 - 2031	Grimsby	\$ 14,357,000	\$ 1,435,700			\$ 12,921,300	\$ 9,820,188	\$ 3,101,112	D3	
W-M-007	New trunk main from PRV to Port Robinson Chlorine BPS	2017 - 2021	Niagara Falls	\$ 2,543,000	\$ 1,271,500			\$ 1,271,500	\$ 966,340	\$ 305,160	D1	
W-M-008	Trunk main from South NOTL to Virgil ET	2032 - 2041	Decew	\$ 13,535,000	\$ 6,767,500			\$ 6,767,500	\$ 5,143,300	\$ 1,624,200	D1	
W-M-009	New Niagara Falls South trunk main to New Elevated Tank	2032 - 2041	Niagara Falls	\$ 4,858,000				\$ 4,858,000	\$ 3,692,080	\$ 1,165,920	D4	
W-M-010	New Niagara Falls South trunk main	2032 - 2041	Niagara Falls	\$ 18,316,000				\$ 18,316,000	\$ 13,920,160	\$ 4,395,840	D4	
W-M-011	New trunk main to Fort Erie Elevated Tank	2017 - 2021	Rosehill	\$ 4,107,000	\$ 2,053,500			\$ 2,053,500	\$ 1,560,660	\$ 492,840	D1	
W-M-012	Upgrade watermain in Port Colborne to new Barrick Road ET	2017 - 2021	Port Colborne	\$ 2,185,000	\$ 1,092,500			\$ 1,092,500	\$ 830,300	\$ 262,200	D1	
W-P-001	Upgrade Shoalt's Drive LLPS	2017 - 2021	Welland	\$ 3,062,000	\$ 306,200			\$ 2,755,800	\$ 2,094,408	\$ 661,392	B3	
W-P-002	Upgrade Shoalt's Drive HLPs	2017 - 2021	Welland	\$ 7,882,000	\$ 788,200			\$ 7,093,800	\$ 5,391,288	\$ 1,702,512	B3	
W-P-003	Upgrade Lincoln/Grimsby BPS	2032 - 2041	Grimsby	\$ 989,000	\$ 98,900			\$ 890,100	\$ 676,476	\$ 213,624	B3	
W-S-001	New Fort Erie ET	2017 - 2021	Rosehill	\$ 12,838,000	\$ 6,419,000			\$ 6,419,000	\$ 4,878,440	\$ 1,540,560	C1	
W-S-002	New Barrick Road ET in Port Colborne	2017 - 2021	Port Colborne	\$ 8,022,000	\$ 4,011,000			\$ 4,011,000	\$ 3,048,360	\$ 962,640	C1	
W-S-003	New Pelham ET	2022 - 2031	Welland	\$ 9,307,000	\$ 4,653,500			\$ 4,653,500	\$ 3,536,660	\$ 1,116,840	C1	
W-S-004	New South Niagara Falls ET	2032 - 2041	Niagara Falls	\$ 9,629,000	\$ 4,814,500			\$ 4,814,500	\$ 3,659,020	\$ 1,155,480	C1	
W-S-005	New Grimsby Reservoir	2017 - 2021	Grimsby	\$ 23,474,000	\$ 2,347,400			\$ 21,126,600	\$ 16,056,216	\$ 5,070,384	C3	
	Total			\$ 306,649,000	\$ 75,594,200	\$ 5,149,600	\$ 18,500,000	\$ 207,405,200	\$ 157,627,952	\$ 49,777,248		

Appendix G – Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

Appendix G – Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

D.C. Calculation Planning Period

2017-2041

Service Coverage and Capital Program

Coverage:

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

Capital Program:

The capital program, which covers the period 2017-2041, is comprised of:

1. Growth related works from the Region's 2017 Water and Wastewater Master Servicing Plan;
2. The portion of previously constructed, unfunded projects.
3. The P.P.C. share of projects from the 2012 D.C. study that have now been constructed. At the time that the 2012 study was completed, the post period time frame generally included the period from mid-2018 and beyond. As that time period is now being fully incorporated into the 2017 D.C. calculation period, the full post period capacity amount can be recovered over the forecast growth. This includes works identified in the 2012 D.C. Background Study as already constructed for which a 2014 and beyond P.P.C. share was identified and have not yet been funded from DC reserves. These works were included in the 2004 DC Background Study which had a DC recoverable period of 2004 - 2014.
4. Post period capacity share of projects from previous development charge studies (i.e. 1999) that have not yet been fully DC-funded and for which capacity still exists for use by future growth.
5. Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.

6. 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 2017 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.

Growth-Related Categories Project Type		1	2	3	4
		Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
A	Treatment	50% includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
B	Pumping Station	50% includes sustainability upgrades	20% addresses facility age, condition or performance	10%	0%
C	Collection and Conveyance	50% includes system twinning and security of conveyance	20% addresses pipe age, condition or performance and level of service	10%	0%
D	Decommissioning	70% Addresses existing system performance			

Growth-Related Categories Project Type		1	2	3	4
		Addresses Growth and Existing Issues	Growth Driven and Addresses Known Existing Issues	Growth Driven with Likely Benefit to Existing Areas	Entirely Growth Driven
E	Wet Weather Management Program	50% Addresses current deficiency in level of service, improvements located in existing service areas			
F	Exceptions	May require unique B.T.E. allocation based on type, location or timing of project			

Post Period/Excess Capacity Deduction

Deductions are made for post 2041 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 2041, with the exception of several recently constructed expansion projects which provide for growth post 2041.

Categories Project Type		1	2	3	4
		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
A	Treatment	50% includes strategic cost effective additional capacity	20% Some planning for future capacity	10%	0%

Categories Project Type		1	2	3	4
		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
B	Pumping Station	50% includes strategic cost effective additional capacity	20% Some planning for future capacity	10%	0%
C	Collection and Conveyance	50% includes strategic cost effective additional capacity	20% Some planning for future capacity	10%	0%
D	Decommissioning	N/A			
E	Wet Weather Management Program	N/A			
F	Exceptions	May require unique B.T.E. allocation based on type, location or timing of project			

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, 2016 uncommitted D.C. reserve fund balance has been netted in making 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 2017 to 2041 for the Region.

Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work from Home (W.F.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.F.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.F.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.F.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.

NIAGARA REGION - DEVELOPMENT-RELATED WASTEWATER PROJECTS

Master Plan ID	Description	Year in Service	System	Total Component Estimated Cost	Benefit to Existing Development	Beyond 2041 Oversizing	Grants & Contributions	DC Recoverable 2017 - 2041	Residential Share	Non-Residential Share	BTE Comment	OBL Comment
WW-D-001	Decommissioning of Queenston WWTP	2022-2031	Queenston	\$ 1,979,000	\$ 1,385,300			\$ 593,700	\$ 451,212	\$ 142,488	D1	
WW-FM-001	Upgrade Catherine St. SPS Forcemain	2032-2041	Anger Ave	\$ 467,000	\$ 93,400			\$ 373,600	\$ 283,936	\$ 89,664	B2	
WW-FM-003	Upgrade Foss Road SPS Forcemain	2022-2031	Welland	\$ 4,500,000	\$ 900,000			\$ 3,600,000	\$ 2,736,000	\$ 864,000	B2	
WW-FM-004	Laurie Avenue SPS Forcemain Upgrade	2017-2021	Baker Road	\$ 2,981,000	\$ 298,100			\$ 2,682,900	\$ 2,039,004	\$ 643,896	B3	
WW-FM-005	New Peel Street SPS Forcemain	2022-2031	Port Weller	\$ 4,889,000	\$ 977,800			\$ 3,911,200	\$ 2,972,512	\$ 938,688	B2	
WW-FM-006	New Black Horse Forcemain to Niagara Falls	2022-2031	South Niagara Falls	\$ 9,820,000	\$ 1,964,000			\$ 7,856,000	\$ 5,970,560	\$ 1,885,440	B2	
WW-FM-008	South Side High Lift conveyance	2022-2031	South Niagara Falls	\$ 38,039,000	\$ 7,607,800			\$ 30,431,200	\$ 23,127,712	\$ 7,303,488	B2	
WW-FM-009	Dorchester Forcemain twinning	2022-2031	Niagara Falls	\$ 303,000	\$ 60,600			\$ 242,400	\$ 184,224	\$ 58,176	B2	
WW-FM-010	St. Davids #1 Forcemain twinning	2022-2031	Niagara Falls	\$ 3,923,000	\$ 784,600			\$ 3,138,400	\$ 2,385,184	\$ 753,216	B2	
WW-FM-011	Smithville Forcemain twinning	2022-2031	Baker Road	\$ 18,132,000	\$ 1,813,200			\$ 16,318,800	\$ 12,402,288	\$ 3,916,512	B3	
WW-FM-012	New Queenston Forcemain	2022-2031	Niagara Falls	\$ 11,136,000	\$ 7,795,200			\$ 3,340,800	\$ 2,539,008	\$ 801,792	B3	
WW-I-001	Wet weather reduction in East Fort Erie	2022-2031	Anger Ave	\$ 4,500,000	\$ 2,250,000			\$ 2,250,000	\$ 1,710,000	\$ 540,000	E1	
WW-I-002	Wet weather reduction in Crystal Beach	2022-2031	Crystal Beach	\$ 4,500,000	\$ 2,250,000			\$ 2,250,000	\$ 1,710,000	\$ 540,000	E1	
WW-I-003	Wet weather reduction in Stevensville/Douglstown	2022-2031	Stev / Doug	\$ 4,500,000	\$ 2,250,000			\$ 2,250,000	\$ 1,710,000	\$ 540,000	E1	
WW-I-004	Wet weather reduction in Central Welland	2022-2031	Welland	\$ 30,000,000	\$ 15,000,000			\$ 15,000,000	\$ 11,400,000	\$ 3,600,000	E1	
WW-I-005	Wet weather reduction in West Grimsby	2022-2031	Baker Road	\$ 7,500,000	\$ 3,750,000			\$ 3,750,000	\$ 2,850,000	\$ 900,000	E1	
WW-I-006	Wet weather reduction in Beamsville	2022-2031	Baker Road	\$ 3,000,000	\$ 1,500,000			\$ 1,500,000	\$ 1,140,000	\$ 360,000	E1	
WW-I-007	Wet weather reduction in Jordan Valley	2022-2031	Baker Road	\$ 1,500,000	\$ 750,000			\$ 750,000	\$ 570,000	\$ 180,000	E1	
WW-I-008	Wet weather reduction in St. Catharines - Port Dalhousie	2022-2031	Port Dalhousie	\$ 30,000,000	\$ 15,000,000			\$ 15,000,000	\$ 11,400,000	\$ 3,600,000	E1	
WW-I-009	Wet weather reduction in North Thorold	2022-2031	Port Dalhousie	\$ 13,500,000	\$ 6,750,000			\$ 6,750,000	\$ 5,130,000	\$ 1,620,000	E1	
WW-I-010	Wet weather reduction in St. Catharines - Port Weller	2017-2021	Port Weller	\$ 20,100,000	\$ 10,050,000			\$ 10,050,000	\$ 7,638,000	\$ 2,412,000	E1	
WW-I-011	Wet weather reduction in Central Port Colborne	2022-2031	Seaway	\$ 3,000,000	\$ 1,500,000			\$ 1,500,000	\$ 1,140,000	\$ 360,000	E1	
WW-I-012	Wet weather reduction in Central Niagara Falls	2022-2031	Niagara Falls	\$ 15,000,000	\$ 7,500,000			\$ 7,500,000	\$ 5,700,000	\$ 1,800,000	E1	
WW-I-013	Wet weather reduction in South Side Niagara Falls	2017-2021	Niagara Falls	\$ 15,000,000	\$ 7,500,000			\$ 7,500,000	\$ 5,700,000	\$ 1,800,000	E1	
WW-I-014	Wet weather reduction in Northeast Niagara-on-the-Lake	2022-2031	NOTL	\$ 750,000	\$ 375,000			\$ 375,000	\$ 285,000	\$ 90,000	E1	
WW-I-015	Wet weather reduction in Virgil	2022-2031	NOTL	\$ 750,000	\$ 375,000			\$ 375,000	\$ 285,000	\$ 90,000	E1	
WW-SPS-001	Alliston SPS Pump Replacement - Anger Avenue	2022-2031	Anger Ave	\$ 989,000	\$ 197,800			\$ 791,200	\$ 601,312	\$ 189,888	B2	
WW-SPS-002	Catherine St. SPS Expansion - Anger Avenue	2032-2041	Anger Ave	\$ 2,945,000	\$ 589,000			\$ 2,356,000	\$ 1,790,560	\$ 565,440	B2	
WW-SPS-003	Lakeshore SPS Upgrade - Anger Avenue	2022-2031	Anger Ave	\$ 2,618,000	\$ 261,800			\$ 2,356,200	\$ 1,790,712	\$ 565,488	B3	
WW-SPS-004	Shirley SPS Upgrade - Crystal Beach	2032-2041	Crystal Beach	\$ 2,889,000	\$ 1,444,500			\$ 1,444,500	\$ 1,097,820	\$ 346,680	B1	
WW-SPS-005	High Rd. SPS Pump Replacement - Crystal Beach	2022-2031	Crystal Beach	\$ 989,000	\$ 494,500			\$ 494,500	\$ 375,820	\$ 118,680	B1	

Master Plan ID	Description	Year in Service	System	Total Component Estimated Cost	Benefit to Existing Development	Beyond 2041 Oversizing	Grants & Contributions	DC Recoverable 2017 - 2041	Residential Share	Non-Residential Share	BTE Comment	OBL Comment
WW-SPS-006	Stevensville SPS Upgrade - Stevensville Douglastown	2022-2031	Stev / Doug	\$ 1,022,000	\$ 511,000			\$ 511,000	\$ 388,360	\$ 122,640	B1	
WW-SPS-007	Rosemount South SPS Pump Replacement - Seaway	2017-2021	Seaway	\$ 665,000	\$ 332,500			\$ 332,500	\$ 252,700	\$ 79,800	B1	
WW-SPS-008	Oxford SPS Pump Replacement - Seaway	2032-2041	Seaway	\$ 665,000	\$ 66,500			\$ 598,500	\$ 454,860	\$ 143,640	B3	
WW-SPS-009	Steele SPS Pump Replacement - Seaway	2032-2041	Seaway	\$ 989,000	\$ 494,500			\$ 494,500	\$ 375,820	\$ 118,680	B1	
WW-SPS-011	Foss Road SPS Upgrade - Welland	2022-2031	Welland	\$ 1,866,000	\$ 373,200			\$ 1,492,800	\$ 1,134,528	\$ 358,272	B2	
WW-SPS-012	Smithville SPS Expansion - Baker Road	2022-2031	Baker Road	\$ 8,241,000	\$ 824,100			\$ 7,416,900	\$ 5,636,844	\$ 1,780,056	B3	
WW-SPS-013	Campden SPS Pump Replacement - Baker Road	2022-2031	Baker Road	\$ 1,299,000	\$ 129,900			\$ 1,169,100	\$ 888,516	\$ 280,584	B3	
WW-SPS-014	Laurie Avenue SPS Expansion - Baker Road	2017-2021	Baker Road	\$ 1,814,000	\$ 181,400			\$ 1,632,600	\$ 1,240,776	\$ 391,824	B3	
WW-SPS-015	Victoria Avenue SPS Upgrade - Baker Road	2017-2021	Baker Road	\$ 4,051,000	\$ 810,200			\$ 3,240,800	\$ 2,463,008	\$ 777,792	B2	
WW-SPS-016	Bridgeport SPS Pump Replacement - Baker Road	2022-2031	Baker Road	\$ 834,000	\$ 166,800			\$ 667,200	\$ 507,072	\$ 160,128	B2	
WW-SPS-017	Jordan Valley SPS Pump Replacement - Baker Road	2022-2031	Baker Road	\$ 1,145,000	\$ 229,000			\$ 916,000	\$ 696,160	\$ 219,840	B2	
WW-SPS-018	Ontario Street SPS Upgrade - Baker Road	2032-2041	Baker Road	\$ 3,755,000	\$ 751,000			\$ 3,004,000	\$ 2,283,040	\$ 720,960	B2	
WW-SPS-019	Biggar Lagoon Pump Replacement - Baker Road	2017-2021	Baker Road	\$ 3,902,000	\$ 1,951,000			\$ 1,951,000	\$ 1,482,760	\$ 468,240	B1	
WW-SPS-020	Lake St SPS Upgrade - Baker Road	2017-2021	Baker Road	\$ 4,410,000	\$ 882,000			\$ 3,528,000	\$ 2,681,280	\$ 846,720	B2	
WW-SPS-021	Beaverdams SPS Pump Replacement - Port Dalhousie	2017-2021	Port Dalhousie	\$ 665,000	\$ 133,000			\$ 532,000	\$ 404,320	\$ 127,680	B2	
WW-SPS-025	Garner Road SPS Pump Replacement - Niagara Falls	2032-2041	Niagara Falls	\$ 824,000	\$ 82,400			\$ 741,600	\$ 563,616	\$ 177,984	B3	
WW-SPS-026	Dorchester SPS Pump Replacement - Niagara Falls	2022-2031	Niagara Falls	\$ 2,414,000	\$ 482,800			\$ 1,931,200	\$ 1,467,712	\$ 463,488	B2	
WW-SPS-028	Black Horse SPS Upgrade - South Niagara Falls	2022-2031	South Niagara Falls	\$ 4,620,000	\$ 2,310,000			\$ 2,310,000	\$ 1,755,600	\$ 554,400	B1	
WW-SPS-031	St. Davids #2 SPS Expansion - Niagara Falls	2022-2031	Niagara Falls	\$ 3,836,000	\$ 767,200			\$ 3,068,800	\$ 2,332,288	\$ 736,512	B2	
WW-SPS-032	St. Davids #1 SPS Upgrade - Niagara Falls	2022-2031	Niagara Falls	\$ 1,794,000	\$ 358,800			\$ 1,435,200	\$ 1,090,752	\$ 344,448	B2	
WW-SPS-033	Lakeshore Road SPS Pump Replacement - NOTL	2032-2041	NOTL	\$ 1,512,000	\$ 151,200			\$ 1,360,800	\$ 1,034,208	\$ 326,592	B3	
WW-SPS-034	Niagara Stone Road SPS Pump Replacement - NOTL	2032-2041	NOTL	\$ 834,000	\$ 83,400			\$ 750,600	\$ 570,456	\$ 180,144	B3	
WW-SPS-035	Line 2 SPS Pump Replacement - NOTL	2017-2021	NOTL	\$ 665,000	\$ 133,000			\$ 532,000	\$ 404,320	\$ 127,680	B2	
WW-SPS-036	Garrison Village SPS Pump Replacement - NOTL	2032-2041	NOTL	\$ 1,250,000	\$ 250,000			\$ 1,000,000	\$ 760,000	\$ 240,000	B2	
WW-SPS-037	Towpath SPS Pump Replacement - Welland	2022-2031	Welland	\$ 834,000	\$ 83,400			\$ 750,600	\$ 570,456	\$ 180,144	B3	
WW-SPS-038	Hurricane Road SPS Pump Replacement - Welland	2022-2031	Welland	\$ 1,250,000	\$ 250,000			\$ 1,000,000	\$ 760,000	\$ 240,000	B2	
WW-SPS-039	Queenston SPS	2022-2031	Niagara Falls	\$ 2,996,000	\$ 2,097,200			\$ 898,800	\$ 683,088	\$ 215,712	F1	
WW-SS-001	Highway 406 Trunk Sewer Crossing	2017-2021	Welland	\$ 1,450,000				\$ 1,450,000	\$ 1,102,000	\$ 348,000	C4	
WW-SS-002	Quaker Road Trunk Sewer	2022-2031	Welland	\$ 1,725,000				\$ 1,725,000	\$ 1,311,000	\$ 414,000	C4	
WW-SS-003	Gravity Sewer upgrade in Smithville	2022-2031	Baker Road	\$ 5,667,000				\$ 5,667,000	\$ 4,306,920	\$ 1,360,080	C4	
WW-SS-004	Gravity Sewer upgrade in Smithville	2022-2031	Baker Road	\$ 923,000				\$ 923,000	\$ 701,480	\$ 221,520	C4	
WW-SS-005	Gravity Sewer upgrade in Smithville	2022-2031	Baker Road	\$ 2,286,000				\$ 2,286,000	\$ 1,737,360	\$ 548,640	C4	
WW-TP-001	Baker Road WWTP Upgrade	2022-2031	Baker Road	\$ 41,730,000	\$ 4,173,000	\$ 4,173,000		\$ 33,384,000	\$ 25,371,840	\$ 8,012,160	A3	A3
WW-TP-002	South Niagara Falls WWTP	2022-2031	Niagara Falls	\$ 128,186,000	\$ 76,911,600	\$ 12,818,600		\$ 38,455,800	\$ 29,226,408	\$ 9,229,392	F1	A3
	Total			\$500,318,000	\$199,437,700	\$16,991,600	\$0	\$283,888,700	\$215,755,412	\$68,133,288		

Appendix H – Services Related to a Highway Servicing Needs – IBI Group

Appendix H – Services Related to a Highway Servicing Needs – IBI Group

1. Introduction

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

This report documents the approach to the deductions, allocations and costs for the roads and related capital program for input to the Development Charge Background Study for the update of the Region's D.C. By-law.

2. Deductions

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 four categories of improvements as described below. These four categories are consistent with the approach taken in the 2012 D.C.

1. **Capacity Improvement** – Projects that add capacity to the network (e.g. road widening, new links/connections, bikeways, etc.) are considered to be primarily growth-related as the need for the improvement is to address growing demand.
2. **Intersection Improvement** – 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 benefit to both existing and new development.
3. **Road Rehabilitation** – An existing road that undergoes major reconstruction, even without increasing the number of lanes, may increase the capacity of the roadway and provide benefit to both existing and new development.

4. **Structure Rehabilitation** – Bridge or culvert reconstruction projects may increase capacity and provide benefit to both existing and new development.

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.

The cost allocation by project category, which has been adopted from the 2012 D.C. Background Study with some modifications, is presented in Exhibit 1.

Exhibit 1: Cost Allocation to Existing Development

Category	Benefit to Existing	Charge to Growth	Remarks
Capacity Improvement	15%	85%	Includes new roads, road widenings, structure widening/improvements as part of road projects. The 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.
	75%	25%	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. <i>New for 2017.</i> Other A.T. facilities that may be constructed as part of a road capital project are considered to be a road capacity improvement project.
Intersection Improvement	0%	100%	Signals and intersection improvements associated with projects that add capacity to the road network to accommodate growth.
	50%	50%	Reconstruction, minor capacity improvements or operational improvements to increase capacity and improve traffic flow at an existing intersection.
Road Rehabilitation	100%	0%	Road rehabilitation/reconstruction with no capacity improvement nor intersection improvements on a roadway not commonly used for heavy trucks serving new development.
	90%	10%	Road rehabilitation/reconstruction with minor capacity improvement (<10%) and minor intersection improvements (5% of project cost) on a roadway occasionally used by heavy trucks serving new development.

	75%	25%	Road rehabilitation/reconstruction with moderate capacity improvement (10-50%) and moderate intersection improvements (5-10% project cost) on a roadway commonly used by heavy trucks serving new development.
	60%	40%	Road rehabilitation/reconstruction with significant capacity improvement (>50%) and significant intersection improvements (>10% project cost) on a roadway frequently used by heavy trucks serving new development.
Structure Rehabilitation	100%	0%	Rehab/replace structure to existing width.
	75%	25%	Rehab or Replace 2-lane structure to a wider cross-section or 3 lanes to allow for greater capacity and/or accommodation of pedestrians and cyclists.
	50%	50%	Rehab/replace 2-lane structure to 4 lanes.
	10%	90%	New rail/road grade separation structure to replace an existing at-grade rail crossing. <i>New for 2017.</i>
	0%	100%	New structure for system expansion and accommodation of pedestrians and cyclists.

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 25-50% has been allocated to capacity improvement projects in the last 10 years (2032-2041) of the planning period, with the exception of the Niagara Escarpment Crossing project, identified for 2022-2031, which has been allocated a 25% deduction to reflect its significance for the current planning period and beyond.

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 15 years (2017- 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.

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.

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 though the D.C. planning period. Exhibit 2 summarizes the anticipated growth in Niagara Region to 2041.

Exhibit 2: Anticipated Growth

Year	Population ¹	Employment ²	Work from Home (W.F.H.)	No-Fixed-Place- of-Work (N.F.P.O.W.)
2011	431,346	185,640	12,325	20,485
2017	441,135	204,584	12,700	22,400
2027	489,117	223,951	14,210	24,550
2037	565,250	251,082	16,650	27,410
2041	594,221	265,000	17,540	29,130
Growth 2017-2041	153,086	60,416	4,840	6,730

1. Excludes Census undercount

2. Includes W.F.H. and N.F.P.O.W.

An issue that was identified through discussion with the study team is the appropriate consideration for work-from-home employment and no-fixed-place-of-work employment in the calculation of the cost allocation.

Work from Home (W.F.H.)

For work-from-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-from-home employment is included under residential.

There was also discussion on whether a work-from-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 work day. 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.

Exhibit 3 summarizes the calculation of the residential / non-residential split.

Exhibit 3: Residential / Non-residential Split

Residential		Non-residential		Total
Population Growth	153,100	Employment Growth	60,400	
50% Work-at-home	+2,400	Work-at-home	-4,800	
50% No-fixed-place-of-work	+3,400	No-fixed-place-of-work	-6,700	
Total	158,900	Total	48,800	207,700
Allocation	76%	Allocation	24%	100%

4. Capital Expenditure Plan

The capital expenditure plan for the proposed improvements for the 2041 transportation system is summarized in Exhibit 4.

Exhibit 1: Capital Expenditure Plan

Proj#	Corridor	Section	Improvement	Phasing	Capital Cost Estimate	Benefit to Existing Development		Post Period Capacity		Prior Funding	Grants, Subsidies and Other Contributions	Total Deductions	Net Costs Benefiting New Development	Residential Share	Non-Residential Share
						\$	%	\$	%					76%	24%
Projects in Capital Budget															
10.1	Casablanca Blvd	QEW to Livingston Ave	Capacity Improvement	2017-2021	\$ 7,448,000	\$ 989,700	15%	\$ -	0%	\$ 850,000		\$ 1,839,700	\$ 5,608,300	\$ 4,262,308	\$ 1,345,992
27.2	East Main St	Hwy 140 to Moyer Rd	Capacity Improvement	2022-2031	\$ 2,970,000	\$ 445,500	15%	\$ -	0%			\$ 445,500	\$ 2,524,500	\$ 1,918,620	\$ 605,880
37.1	Merritt Rd	Rice Rd to Niagara St	New Road	2017-2021	\$ 8,610,000	\$ 1,291,500	15%	\$ -	0%			\$ 1,291,500	\$ 7,318,500	\$ 5,562,060	\$ 1,756,440
37.2	Merritt Rd	Niagara St to Hwy 406	Capacity Improvement	2017-2021	\$ 31,461,000	\$ 3,922,650	15%	\$ -	0%	\$ 3,210,000	\$ 2,100,000	\$ 9,232,650	\$ 22,228,350	\$ 16,893,546	\$ 5,334,804
38.1	Martindale Rd	QEW to Vansickle Rd	Capacity Improvement	2017-2021											
38.2	Martindale Rd	Vansickle Rd to Fourth Ave	Capacity Improvement	2017-2021											
38.3	Martindale Rd	Bridge widening over Hwy 406	Capacity Improvement	2017-2021											
49.1	McLeod Rd	Phase 1 - Montrose Rd, Pin Oak Dr to Hydro Canal	Capacity Improvement	2017-2021	\$ 14,392,000	\$ 711,300	15%	\$ -	0%	\$ 9,650,000		\$ 10,361,300	\$ 4,030,700	\$ 3,063,332	\$ 967,368
49.2	McLeod Rd	Phase 2 - Hydro Canal to Wilson Cr	Capacity Improvement	2017-2021	\$ 4,312,000	\$ 564,300	15%	\$ -	0%	\$ 350,000	\$ 200,000	\$ 1,114,300	\$ 3,197,700	\$ 2,430,252	\$ 767,448
49.3	McLeod Rd	Phase 3 - Wilson Cr to Stanley Ave	Capacity Improvement	2022-2031	\$ 3,640,000	\$ 501,000	15%	\$ -	0%		\$ 300,000	\$ 801,000	\$ 2,839,000	\$ 2,157,640	\$ 681,360
54.1	Rice Rd	Old Hwy 20 to Merritt Rd	Capacity Improvement	2017-2021	\$ 9,828,000	\$ 1,264,200	15%	\$ -	0%	\$ 900,000	\$ 500,000	\$ 2,664,200	\$ 7,163,800	\$ 5,444,488	\$ 1,719,312
54.2	Rice Rd	Merritt Rd to Quaker Rd	Capacity Improvement	2017-2021	\$ 16,200,000	\$ 2,430,000	15%	\$ -	0%			\$ 2,430,000	\$ 13,770,000	\$ 10,465,200	\$ 3,304,800
54.3	Rice Rd	Quaker Rd to Thorold Rd	Capacity Improvement	2017-2021											
55.2	Niagara Stone Rd	Concession 6 Rd to Line 2 Rd	Capacity Improvement	2017-2021	\$ 12,528,000	\$ 1,526,700	15%	\$ -	0%	\$ 1,600,000	\$ 750,000	\$ 3,876,700	\$ 8,651,300	\$ 6,574,988	\$ 2,076,312
55.3	Niagara Stone Rd	Penner St (Line 1 Rd) to East and West Line	Capacity Improvement	2017-2021											
56.1	Collier Rd	Hwy 58 to Beaverdams Rd	Capacity Improvement	2022-2031	\$ 5,616,000	\$ 842,400	15%	\$ -	0%			\$ 842,400	\$ 4,773,600	\$ 3,627,936	\$ 1,145,664
57.2	Thorold Stone Rd	Extension east of Stanley Ave to Gale Centre	New Road	2017-2021	\$ 11,088,000	\$ 418,200	15%	\$ -	0%	\$ 8,300,000		\$ 8,718,200	\$ 2,369,800	\$ 1,801,048	\$ 568,752
57.3	Thorold Stone Rd	Phase 2 - Gale Centre to Victoria Ave	New Road	2022-2031	\$ 11,200,000	\$ 1,680,000	15%	\$ -	0%			\$ 1,680,000	\$ 9,520,000	\$ 7,235,200	\$ 2,284,800
89.4	Glendale Ave	Interchange at QEW (1/3 contribution)	Capacity Improvement	2022-2031	\$ 3,333,000	\$ 349,950	15%	\$ -	0%	\$ 1,000,000		\$ 1,349,950	\$ 1,983,050	\$ 1,507,118	\$ 475,932
98.x	Montrose Road	Charnwood to McLeod	Capacity improvement	2017-2021	\$ 1,904,000	\$ 285,600	15%	\$ -	0%	\$ -	\$ -	\$ 285,600	\$ 1,618,400	\$ 1,229,984	\$ 388,416
406.1	Hwy 406 Interchange	At Third Ave Louth (1/3 contribution)	Highway Improvement	2022-2031	\$ 13,333,000	\$ 1,782,450	15%	\$ -	0%	\$ 1,450,000		\$ 3,232,450	\$ 10,100,550	\$ 7,676,418	\$ 2,424,132
512.1	Livingston Ave	Main St to Casablanca Blvd	New Road	2022-2031	\$ 8,456,000	\$ 1,200,900	15%	\$ -	0%	\$ 250,000	\$ 200,000	\$ 1,650,900	\$ 6,805,100	\$ 5,171,876	\$ 1,633,224
803.1	South Niagara East-West Arterial	South Niagara East-West Arterial (1/3 contribution)	New Road	2022-2031	\$ 16,275,000	\$ 2,366,250	15%	\$ -	0%	\$ 500,000		\$ 2,866,250	\$ 13,408,750	\$ 10,190,650	\$ 3,218,100
x.x	Canadian Motor Speedway Infrastructure Improvements			2017-2021	\$ 2,625,000	\$ 393,750	15%	\$ -	0%	\$ -	\$ -	\$ 393,750	\$ 2,231,250	\$ 1,695,750	\$ 535,500
	Subtotal - Projects in Capital Budget				\$ 185,219,000	\$ 22,966,350		\$ -		\$ 28,060,000	\$ 4,050,000	\$ 55,076,350	\$ 130,142,650	\$ 98,908,414	\$ 31,234,236

Proj#	Corridor	Section	Improvement	Phasing	Capital Cost Estimate	Benefit to Existing Development		Post Period Capacity		Prior Funding	Grants, Subsidies and Other Contributions	Total Deductions	Net Costs Benefiting New Development	Residential Share	Non-Residential Share
						\$	%	\$	%					76%	24%
Additional Projects Identified in TMP															
14.1	Bartlett Avenue extension	Muscat Dr to Park Rd (1/3 contribution)	New Road	2022-2031	\$ 38,733,000	\$ 5,479,950	15%	\$ 7,763,263	25%	\$ 2,200,000		\$ 15,443,213	\$ 23,289,788	\$ 17,700,239	\$ 5,589,549
14.2	Escarpment Crossing Improvement	Bartlett St Extension to Mud St (1/3 contribution)	Capacity Improvement	2022-2031											
20.1	Highway 20 Smithville	Smithville (1/3 contribution)	New Road	2022-2031	\$ 9,834,000	\$ 1,475,100	15%	\$ -	0%			\$ 1,475,100	\$ 8,358,900	\$ 6,352,764	\$ 2,006,136
20.2	Hwy 20	Kottmeier Rd to Davis Rd/Allanport Rd (1/3 contribution)	Capacity Improvement	2032-2041	\$ 25,019,000	\$ 3,752,850	15%	\$10,633,075	50%			\$ 14,385,925	\$ 10,633,075	\$ 8,081,137	\$ 2,551,938
27.3	Schisler Rd	Moyer Rd to Montrose Rd	Capacity Improvement	2032-2041	\$ 23,179,000	\$ 3,476,850	15%	\$ 9,851,075	50%			\$ 13,327,925	\$ 9,851,075	\$ 7,486,817	\$ 2,364,258
47.1	Lyons Creek Rd	Montrose Rd to Stanley Ave	Capacity Improvement	2032-2041	\$ 17,337,000	\$ 2,600,550	15%	\$ 3,684,113	25%			\$ 6,284,663	\$ 11,052,338	\$ 8,399,777	\$ 2,652,561
47.2	Lyons Creek Rd	Stanley Ave to Sodom Rd	Capacity Improvement	2022-2031	\$ 25,251,000	\$ 3,787,650	15%	\$ -	0%			\$ 3,787,650	\$ 21,463,350	\$ 16,312,146	\$ 5,151,204
55.1	Niagara Stone Rd	Airport Road to Concession 6	Capacity Improvement	2022-2031	\$ 7,180,000	\$ 1,077,000	15%	\$ -	0%			\$ 1,077,000	\$ 6,103,000	\$ 4,638,280	\$ 1,464,720
83.1	Carlton Street	Martindale Rd to Ontario St	Protect for New Crossing	2032-2041	\$ -	\$ -	15%	\$ -	25%			\$ -	\$ -	\$ -	\$ -
89.6	Glendale Ave	York Rd to Queenston Rd	New Road	2032-2041	\$ 13,732,000	\$ 2,059,800	15%	\$ 2,918,050	25%			\$ 4,977,850	\$ 8,754,150	\$ 6,653,154	\$ 2,100,996
90.1	Airport Road	Niagara Stone Road to York Road	Capacity Improvement	2022-2031	\$ 9,871,000	\$ 1,480,650	15%	\$ -	0%			\$ 1,480,650	\$ 8,390,350	\$ 6,376,666	\$ 2,013,684
98.1	Montrose Rd	Lyons Creek Rd to Schisler Rd	Capacity Improvement	2032-2041	\$ 8,917,000	\$ 1,337,550	15%	\$ 3,789,725	50%			\$ 5,127,275	\$ 3,789,725	\$ 2,880,191	\$ 909,534
98.2	Montrose Rd	Chippawa Creek Rd to Lyons Creek Rd	Capacity Improvement	2032-2041	\$ 18,113,000	\$ 2,716,950	15%	\$ 3,849,013	25%			\$ 6,565,963	\$ 11,547,038	\$ 8,775,749	\$ 2,771,289
102.2	Stanley Ave	Ferry St to Murray St	Capacity Improvement	2022-2031	\$ 5,897,000	\$ 884,550	15%	\$ -	0%			\$ 884,550	\$ 5,012,450	\$ 3,809,462	\$ 1,202,988
102.3	Stanley Ave	Marineland Pkwy to Lyons Creek Rd	Capacity Improvement	2022-2031	\$ 41,871,000	\$ 6,280,650	15%	\$ -	0%			\$ 6,280,650	\$ 35,590,350	\$ 27,048,666	\$ 8,541,684
116.1	Sodom Rd	Lyons Creek Rd to Netherby Rd	Capacity Improvement	2022-2031	\$ 27,879,000	\$ 4,181,850	15%	\$ -	0%			\$ 4,181,850	\$ 23,697,150	\$ 18,009,834	\$ 5,687,316
405.1	Hwy 405 interchange	Concession 6 Rd (1/3 contribution)	Highway Improvement	2022-2031	\$ 3,333,000	\$ 499,950	15%	\$ -	0%			\$ 499,950	\$ 2,833,050	\$ 2,153,118	\$ 679,932
406.2	Hwy 406 Extension	E Main St to NGTA corridor	Highway Improvement	2032-2041	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
451.2	QEW - Garden City Skyway	Bunting Road to York Rd	Highway Improvement	2022-2031	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
451.3	QEW	York Rd to Hwy 405	Highway Improvement	2022-2031	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
451.4	QEW	Hwy 405 to Mountain Rd	Highway Improvement	2022-2031	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
451.7	QEW	Hamilton to Hwy 406 (HOV Lanes)	Highway Improvement	2022-2031	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
461.1	NGTA (Mid-Peninsula)	Hwy 403 to Hwy 406 extension	Highway Improvement	2032-2041	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
461.2	NGTA East Area corridor	Hwy 406 extension to QEW	Highway Improvement	2032-2041	\$ -	\$ -		\$ -				\$ -	\$ -	\$ -	\$ -
601.1	Concession 6 Rd	York Rd to Warner Rd	Capacity Improvement	2022-2031	\$ 4,991,000	\$ 748,650	15%	\$ -	0%			\$ 748,650	\$ 4,242,350	\$ 3,224,186	\$ 1,018,164
601.2	Mewburn Rd	Warner Rd to Mountain Rd	Capacity Improvement	2022-2031	\$ 1,885,000	\$ 282,750	15%	\$ -	0%			\$ 282,750	\$ 1,602,250	\$ 1,217,710	\$ 384,540
601.3	Mewburn Rd bridge	Bridge over CN Rail	New structure	2022-2031	\$ 1,625,000	\$ 243,750	15%	\$ -	0%			\$ 243,750	\$ 1,381,250	\$ 1,049,750	\$ 331,500
605.1	Morrison St	New Crossing of QEW	Protect for New Crossing	2032-2041	\$ -	\$ -	15%	\$ -	25%			\$ -	\$ -	\$ -	\$ -
606.1	Future Road	New Crossing of Welland River	Protect for New Crossing	2032-2041	\$ -	\$ -	15%	\$ -	25%			\$ -	\$ -	\$ -	\$ -
607.1	Queenston Road realignment	Queenston Rd to York Rd	New Road	2022-2031	\$ 4,045,000	\$ 606,750	15%	\$ -	0%			\$ 606,750	\$ 3,438,250	\$ 2,613,070	\$ 825,180
901.1	West St. Catharines Grade Separation	Louth St / Vansickle Rd / First St Louth	Capacity Improvement	2022-2031	\$ 20,500,000	\$ -	0%	\$ -	0%	\$ 500,000		\$ 500,000	\$ 20,000,000	\$ 15,200,000	\$ 4,800,000
	AT Strategic Network Grant Program	Strategic Network		2017-2026	\$ 10,000,000	\$ 7,500,000	75%	\$ -	0%			\$ 7,500,000	\$ 2,500,000	\$ 1,900,000	\$ 600,000
	AT Infill Projects	Strategic Network		2017-2021	\$ 10,450,000	\$ 7,837,500	75%	\$ -	0%			\$ 7,837,500	\$ 2,612,500	\$ 1,985,500	\$ 627,000
	AT Infill Projects	Strategic Network		2022-2031	\$ 10,450,000	\$ 7,837,500	75%	\$ -	0%			\$ 7,837,500	\$ 2,612,500	\$ 1,985,500	\$ 627,000
	Subtotal - Additional Projects Identified in TMP				\$ 340,092,000	\$ 66,148,800		\$42,488,313		\$ 2,700,000	\$ -	\$ 111,337,113	\$ 228,754,888	\$ 173,853,715	\$ 54,901,173
	Subtotal - Capacity Improvement				\$ 525,311,000	\$ 89,115,150		\$42,488,313		\$ 30,760,000	\$ 4,050,000	\$ 166,413,463	\$ 358,897,538	\$ 272,762,129	\$ 86,135,409

Proj#	Corridor	Section	Improvement	Phasing	Capital Cost Estimate	Benefit to Existing Development		Post Period Capacity		Prior Funding	Grants, Subsidies and Other Contributions	Total Deductions	Net Costs Benefiting New Development	Residential Share	Non-Residential Share
						\$	%	\$	%					76%	24%
Intersection Improvement Program															
	Thorold Stone Rd	@ Cardinal Drive	Left turning lane	2017-2021	\$ 1,500,000	\$ -	0%	\$ -	0%			\$ -	\$ 1,500,000	\$ 1,140,000	\$ 360,000
	Geneva St	@ St. Paul	Two way traffic reversion - Cost Sharing	2017-2021	\$ 7,000,000	\$ 1,650,000	50%	\$ -	0%	\$ 1,500,000	\$ 2,200,000	\$ 5,350,000	\$ 1,650,000	\$ 1,254,000	\$ 396,000
	Niagara Stone Rd	@ Airport Road and Concession 4	Traffic signal and turning lane	2017-2021	\$ 3,000,000	\$ 3,000,000	100%	\$ -	0%			\$ 3,000,000	\$ -	\$ -	\$ -
	McLeod Road	@ Drummond	Possible joint contract with NF	2017-2021	\$ 2,000,000	\$ 1,000,000	50%	\$ -	0%			\$ 1,000,000	\$ 1,000,000	\$ 760,000	\$ 240,000
	Four Mile Creek Rd	@ York Rd	New Signal and	2017-2021	\$ 1,400,000	\$ 700,000	50%	\$ -	0%			\$ 700,000	\$ 700,000	\$ 532,000	\$ 168,000
	Falls Ave / Bender Intersection Improvements		Turnging lanes and signal mod	2017-2021	\$ 900,000	\$ -	100%	\$ -	0%	\$ 900,000		\$ 900,000	\$ -	\$ -	\$ -
	Victoria Avenue	@ RR63 Canboro Rd	New signal and turning lane	2017-2021	\$ 1,650,000	\$ 1,650,000	100%	\$ -	0%	\$ -		\$ 1,650,000	\$ -	\$ -	\$ -
	Int. Imprv. - Regional Road 20 between Townline Road & South Grimsby Rd 6		Roundabouts EA & Design & Imprv for new school	2017-2021	\$ 1,100,000	\$ -	100%	\$ -	0%	\$ 1,100,000		\$ 1,100,000	\$ -	\$ -	\$ -
	Regional Road 20	Phase 1 - South Grimsby Rd 6 to Griffin	Roundabout and urbanization	2017-2021	\$ 4,250,000	\$ 3,400,000	100%	\$ -	0%	\$ 650,000	\$ 200,000	\$ 4,250,000	\$ -	\$ -	\$ -
	Regional Road 20	Phase 2 - Industrial Pard Rd to Townline Road	Roundabout and urbanization	2017-2021	\$ 3,800,000	\$ 3,300,000	100%	\$ -	0%	\$ 300,000	\$ 200,000	\$ 3,800,000	\$ -	\$ -	\$ -
	King Street	@ Main Street and Ninetenth Street	Cost Sharing for intersection improvement	2017-2021	\$ 2,400,000	\$ 2,400,000	100%	\$ -	0%	\$ -		\$ 2,400,000	\$ -	\$ -	\$ -
	Fourth Ave	@ First	Modifications and NB right	2017-2021	\$ 600,000	\$ 300,000	50%	\$ -	0%	\$ -		\$ 300,000	\$ 300,000	\$ 228,000	\$ 72,000
	Intersection Improvement Program - 2027-2041			2027-2041	\$ 33,825,000	\$ 16,912,500	50%	\$ -	0%	\$ -		\$ 16,912,500	\$ 16,912,500	\$ 12,853,500	\$ 4,059,000
	Subtotal - Intersection Improvement Program				\$ 63,425,000	\$ 34,312,500		\$ -		\$ 4,450,000	\$ 2,600,000	\$ 41,362,500	\$ 22,062,500	\$ 16,767,500	\$ 5,295,000
Road Rehabilitation Program															
	Canoboro Rd	@ Warner	Embankment stabilization	2017-2021	\$ 5,090,000	\$ -	100%	\$ -	0%	\$ 5,090,000	\$ -	\$ 5,090,000	\$ -	\$ -	\$ -
	Main Street	Cabernet to Baker Rd & Nelles to Orchard	Reconstruction - Urban	2022-2031	\$ 7,560,000	\$ 5,904,000	90%	\$ -	0%	\$ 500,000	\$ 500,000	\$ 6,904,000	\$ 656,000	\$ 498,560	\$ 157,440
	York Road	Reg Rd 55 to Airport	Rehabilitation	2017-2021	\$ 1,890,000	\$ 1,640,000	100%	\$ -	0%	\$ 250,000	\$ -	\$ 1,890,000	\$ -	\$ -	\$ -
	Old Hwy. 8	Vinehaven Trail to 23rd Street	Reconstruction/ streetscaping	2017-2021	\$ 5,270,000	\$ 1,920,000	60%	\$ -	0%	\$ 470,000	\$ 1,600,000	\$ 3,990,000	\$ 1,280,000	\$ 972,800	\$ 307,200
	Ontario Street	Lakeshore Road to Linwell Road	Reconstruction - Urban - 2 La	2017-2021	\$ 8,532,000	\$ 5,428,800	90%	\$ -	0%	\$ 500,000	\$ 2,000,000	\$ 7,928,800	\$ 603,200	\$ 458,432	\$ 144,768
	St. Paul Street West	Burgoyne Bridge to CNR Tracks	Reconstruction and intersecti	2022-2031	\$ 9,180,000	\$ 8,262,000	90%	\$ -	0%	\$ -	\$ -	\$ 8,262,000	\$ 918,000	\$ 697,680	\$ 220,320
	Louth Street	Between RR 81 (St. Paul W) & Crestcomb	Reconstruction - urban- 2 lane	2017-2021	\$ 6,156,000	\$ 3,273,600	60%	\$ -	0%	\$ -	\$ 700,000	\$ 3,973,600	\$ 2,182,400	\$ 1,658,624	\$ 523,776
	Lakeshore Rd	Townline Rd to Four Mile Creek Rd	Rehabilitation c/w bike lanes	2017-2021	\$ 8,500,000	\$ 6,750,000	100%	\$ -	0%	\$ 1,750,000	\$ -	\$ 8,500,000	\$ -	\$ -	\$ -
	Main Street West	Prince Charles Drive to Niagara Street	Rd Reconstruction / City WM	2017-2021	\$ 4,104,000	\$ 3,804,000	100%	\$ -	0%	\$ -	\$ 300,000	\$ 4,104,000	\$ -	\$ -	\$ -
	McLeod Road Storm P.S	@ Stanley Ave and CNR	Upgrades to Storm Pumping	2017-2021	\$ 1,250,000	\$ 1,250,000	100%	\$ -	0%		\$ -	\$ 1,250,000	\$ -	\$ -	\$ -
	Glendale Ave	Tremont Drive to Burliegh Hill	Road Reconstruct & Widening	2017-2021	\$ 9,396,000	\$ 3,537,600	60%	\$ -	0%	\$ 1,500,000	\$ 2,000,000	\$ 7,037,600	\$ 2,358,400	\$ 1,792,384	\$ 566,016
	Riverside Drive	Prince Charles Drive to Lincoln Street	Road Reconstruct / Download	2017-2021	\$ 5,778,000	\$ 4,480,200	90%	\$ -	0%	\$ 250,000	\$ 550,000	\$ 5,280,200	\$ 497,800	\$ 378,328	\$ 119,472
	Lakeshore Rd Phase 3	Lake St to Geneva & Bradmon Dr to O'Mara	Reconstruction - urban-2 lane	2017-2021	\$ 8,046,000	\$ 357,600	60%	\$ -	0%	\$ 7,450,000	\$ -	\$ 7,807,600	\$ 238,400	\$ 181,184	\$ 57,216
	Bridge Street	Victoria Ave to Erie	Cost Share with City	2017-2021	\$ 575,000	\$ 575,000	100%	\$ -	0%	\$ -	\$ -	\$ 575,000	\$ -	\$ -	\$ -
	Lakeshore Rd West	Third Street to Seventh Street	Reconstruction	2017-2021	\$ 5,778,000	\$ 4,278,000	100%	\$ -	0%	\$ 1,500,000	\$ -	\$ 5,778,000	\$ -	\$ -	\$ -
	Canborough Road	Baldwin Road to Coffey Bridge	Embankment stab & Road Re	2017-2021	\$ 3,277,800	\$ 2,777,800	100%	\$ -	0%	\$ 500,000	\$ -	\$ 3,277,800	\$ -	\$ -	\$ -
	Pelham Road Phase 2	Effingham Rd to Wessel Drive	Reconstruction	2017-2021	\$ 9,828,000	\$ 8,125,200	90%	\$ -	0%	\$ 800,000	\$ -	\$ 8,925,200	\$ 902,800	\$ 686,128	\$ 216,672
	Pelham Road Phase 3	Wessell Drive to Centre	Reconstruction	2017-2021	\$ 4,320,000	\$ 3,438,000	90%	\$ -	0%	\$ 500,000	\$ -	\$ 3,938,000	\$ 382,000	\$ 290,320	\$ 91,680
	Pelham Road Phase 4	Centre to 8th	Reconstruction	2017-2021	\$ 3,240,000	\$ 2,916,000	90%	\$ -	0%	\$ -	\$ -	\$ 2,916,000	\$ 324,000	\$ 246,240	\$ 77,760
	Niagara St	Carlton to Scott	Reconstruction - Urban - 2 La	2017-2021	\$ 7,344,000	\$ 6,609,600	90%	\$ -	0%	\$ -	\$ -	\$ 6,609,600	\$ 734,400	\$ 558,144	\$ 176,256
	St. David's Road	Hwy 406 to Collier Road	Reconstruction - Urban - 2 La	2017-2021	\$ 5,290,000	\$ 4,311,000	90%	\$ -	0%	\$ -	\$ 500,000	\$ 4,811,000	\$ 479,000	\$ 364,040	\$ 114,960
	Dominion Road	Helena to Lakeshore Rd	Reconstruction - Urban - 2 La	2017-2021	\$ 7,587,000	\$ 5,320,800	90%	\$ -	0%	\$ 1,125,000	\$ 550,000	\$ 6,995,800	\$ 591,200	\$ 449,312	\$ 141,888
	King Street	Durham Rd to Lincoln Avenue	Reconstruction rural - 2 Lane	2017-2021	\$ 6,669,000	\$ 5,304,600	90%	\$ -	0%	\$ 375,000	\$ 400,000	\$ 6,079,600	\$ 589,400	\$ 447,944	\$ 141,456
	Dick's Creek crossing	@ Glendale Ave	Culvert replacement	2017-2021	\$ 750,000	\$ -	90%	\$ -	0%	\$ 750,000	\$ -	\$ 750,000	\$ -	\$ -	\$ -
	Regional Road 20	Griffin St South to Industrial Park Road	Road Rehabilitation	2017-2021	\$ 2,268,000	\$ 1,951,200	90%	\$ -	0%	\$ -	\$ 100,000	\$ 2,051,200	\$ 216,800	\$ 164,768	\$ 52,032
	Creek Road	RR 4 (Wellandport Rd) to RR 63 Canborough	EA Study, Bridge Replaceme	2017-2021	\$ 405,000	\$ 27,000	90%	\$ -	0%	\$ 375,000	\$ -	\$ 402,000	\$ 3,000	\$ 2,280	\$ 720

Proj#	Corridor	Section	Improvement	Phasing	Capital Cost Estimate	Benefit to Existing Development		Post Period Capacity		Prior Funding	Grants, Subsidies and Other Contributions	Total Deductions	Net Costs Benefiting New Development	Residential Share	Non-Residential Share
						\$	%	\$	%					76%	24%
	Creek Road	RR 4 to RR7 & RR7 to RR63	Road Rehab - 2 Phases, incl Bridge Replacement	2017-2021	\$ 15,552,000	\$ 12,736,800	90%	\$ -	0%	\$ 1,400,000	\$ -	\$ 14,136,800	\$ 1,415,200	\$ 1,075,552	\$ 339,648
	Dominion Road	Burleigh Road to Buffalo Road	Road Rehabilitation	2017-2021	\$ 10,179,000	\$ 678,600	90%	\$ -	0%	\$ 9,425,000	\$ -	\$ 10,103,600	\$ 75,400	\$ 57,304	\$ 18,096
	Main Street	Locke Street to Ann Street	Road Rehabilitation	2017-2021	\$ 4,158,000	\$ 3,742,200	90%	\$ -	0%	\$ -	\$ -	\$ 3,742,200	\$ 415,800	\$ 316,008	\$ 99,792
	Glendale Ave	Welland Canal to Homer Road	Road Rehabilitation	2017-2021	\$ 3,780,000	\$ 3,222,000	90%	\$ -	0%	\$ 200,000	\$ -	\$ 3,422,000	\$ 358,000	\$ 272,080	\$ 85,920
	Townline Road	McLeod Road to Lundy's Lane	Reconstruction rural 2 lane	2022-2031	\$ 6,480,000	\$ 5,832,000	90%	\$ -	0%	\$ -	\$ -	\$ 5,832,000	\$ 648,000	\$ 492,480	\$ 155,520
	Stewart Road	Lakeshore Road to Carlton Street	Reconstruction rural 2 lane	2022-2031	\$ 7,560,000	\$ 6,804,000	90%	\$ -	0%	\$ -	\$ -	\$ 6,804,000	\$ 756,000	\$ 574,560	\$ 181,440
	Effingham Street	Webber Rd to River Rod	Reconstruction rural 2 lane	2017-2021	\$ 4,914,000	\$ 4,422,600	90%	\$ -	0%	\$ -	\$ -	\$ 4,422,600	\$ 491,400	\$ 373,464	\$ 117,936
	Canborough Road	RR27 Wellandport Rd to Community Centre	Reconstruction and Drainage Improvements	2017-2021	\$ 3,996,000	\$ 3,416,400	90%	\$ -	0%	\$ 200,000	\$ -	\$ 3,616,400	\$ 379,600	\$ 288,496	\$ 91,104
	Lundy's Lane	Highland Ave to Montrose Road	Cost Sharing with City CIP and W/M	2017-2021	\$ 3,450,000	\$ 3,105,000	90%	\$ -	0%	\$ -	\$ -	\$ 3,105,000	\$ 345,000	\$ 262,200	\$ 82,800
	Burleigh Hill	Glendale Ave to St. Davids	Cost Sharing with City Storm Sewer Works	2017-2021	\$ 2,000,000	\$ 1,800,000	90%	\$ -	0%	\$ -	\$ -	\$ 1,800,000	\$ 200,000	\$ 152,000	\$ 48,000
	Main Street Old Hwy 8	Oakes Road North to Casablanca Blvd	Reconstruction - Urban - 2 Lane	2017-2021	\$ 5,670,000	\$ 4,833,000	90%	\$ -	0%	\$ -	\$ 300,000	\$ 5,133,000	\$ 537,000	\$ 408,120	\$ 128,880
	Twenty Mile Road	RR24 Victoria Ave to Mountain Rd	Reconstruction - Rural - 2lane	2017-2021	\$ 8,856,000	\$ 7,790,400	90%	\$ -	0%	\$ 200,000	\$ -	\$ 7,990,400	\$ 865,600	\$ 657,856	\$ 207,744
	St. David's Road	@ Hwy 406 Interchange	Cost Sharing on MTO project	2017-2021	\$ 2,000,000	\$ 600,000	60%	\$ -	0%	\$ -	\$ 1,000,000	\$ 1,600,000	\$ 400,000	\$ 304,000	\$ 96,000
	Townline Road	Stanley Ave to Four Mile Creek Road	Reconstruction	2017-2021	\$ 2,052,000	\$ 1,846,800	90%	\$ -	0%	\$ -	\$ -	\$ 1,846,800	\$ 205,200	\$ 155,952	\$ 49,248
	Sodom Road	Lyons Creek Road to Willick Road	Reconstruction	2017-2021	\$ 2,484,000	\$ 2,235,600	90%	\$ -	0%	\$ -	\$ -	\$ 2,235,600	\$ 248,400	\$ 188,784	\$ 59,616
	Stanley Avenue	Hwy 420 to Ferry Street	Road Reconstructon and City CIP / Watermain	2022-2031	\$ 2,160,000	\$ 1,944,000	90%	\$ -	0%	\$ -	\$ -	\$ 1,944,000	\$ 216,000	\$ 164,160	\$ 51,840
	Stevensville Rd	Eagle Street to Bowen Road	Road Reconstruction - Urban	2017-2021	\$ 2,700,000	\$ 2,430,000	90%	\$ -	0%	\$ -	\$ -	\$ 2,430,000	\$ 270,000	\$ 205,200	\$ 64,800
	Bowen Road	QEW to Thompson Road	Road Reconstruction	2022-2031	\$ 3,780,000	\$ 3,402,000	90%	\$ -	0%	\$ -	\$ -	\$ 3,402,000	\$ 378,000	\$ 287,280	\$ 90,720
	Roads Reconstruction Program - 2017-2021		Road Reconstruction	2017-2021	\$ 22,680,000	\$ 20,412,000	90%	\$ -	0%	\$ -	\$ -	\$ 20,412,000	\$ 2,268,000	\$ 1,723,680	\$ 544,320
	Roads Reconstruction Program - 2022-2026		Road Reconstruction	2022-2026	\$ 58,320,000	\$ 52,488,000	90%	\$ -	0%	\$ -	\$ -	\$ 52,488,000	\$ 5,832,000	\$ 4,432,320	\$ 1,399,680
	Roads Reconstruction Program - 2027-2041		Road Reconstruction	2027-2041	\$ 273,026,700	\$ 245,724,030	90%	\$ -	0%	\$ -	\$ -	\$ 245,724,030	\$ 27,302,670	\$ 20,750,029	\$ 6,552,641
	Subtotal - Road Rehabilitation Program				\$ 583,881,500	\$ 481,707,430		\$ -		\$ 35,110,000	\$ 10,500,000	\$ 527,317,430	\$ 56,564,070	\$ 42,988,694	\$ 13,575,377
Annual Programs															
	Traffic Signal Annual Program			2017-2041	\$ 51,290,000	\$ 44,640,000	90%	\$ -	0%	\$ 1,690,000		\$ 46,330,000	\$ 4,960,000	\$ 3,769,600	\$ 1,190,400
	Illumination Annual Program			2017-2041	\$ 12,350,000	\$ 10,845,000	90%	\$ -	0%	\$ 300,000		\$ 11,145,000	\$ 1,205,000	\$ 915,800	\$ 289,200
	Transportation Studies			2017-2041	\$ 9,925,000	\$ 992,500	10%	\$ -	0%			\$ 992,500	\$ 8,932,500	\$ 6,788,700	\$ 2,143,800
	Road Facility Program / Yards			2017-2041	\$ 33,250,000	\$ -	0%	\$ -	0%	\$ 2,650,000		\$ 2,650,000	\$ 30,600,000	\$ 23,256,000	\$ 7,344,000
	Provision for Additional Vehicles			2017-2041	\$ 10,000,000	\$ -	0%	\$ -	0%			\$ -	\$ 10,000,000	\$ 7,600,000	\$ 2,400,000
	Subtotal - Annual Rehabilitation Program				\$ 116,815,000	\$ 56,477,500		\$ -		\$ 4,640,000	\$ -	\$ 61,117,500	\$ 55,697,500	\$ 42,330,100	\$ 13,367,400
	TOTAL				\$ 1,289,432,500	\$ 661,612,580		\$42,488,313		\$ 74,960,000	\$ 17,150,000	\$ 796,210,893	\$ 493,221,608	\$ 374,848,422	\$ 118,373,186

Appendix I – Asset Management Plan

Appendix I – Asset Management Plan

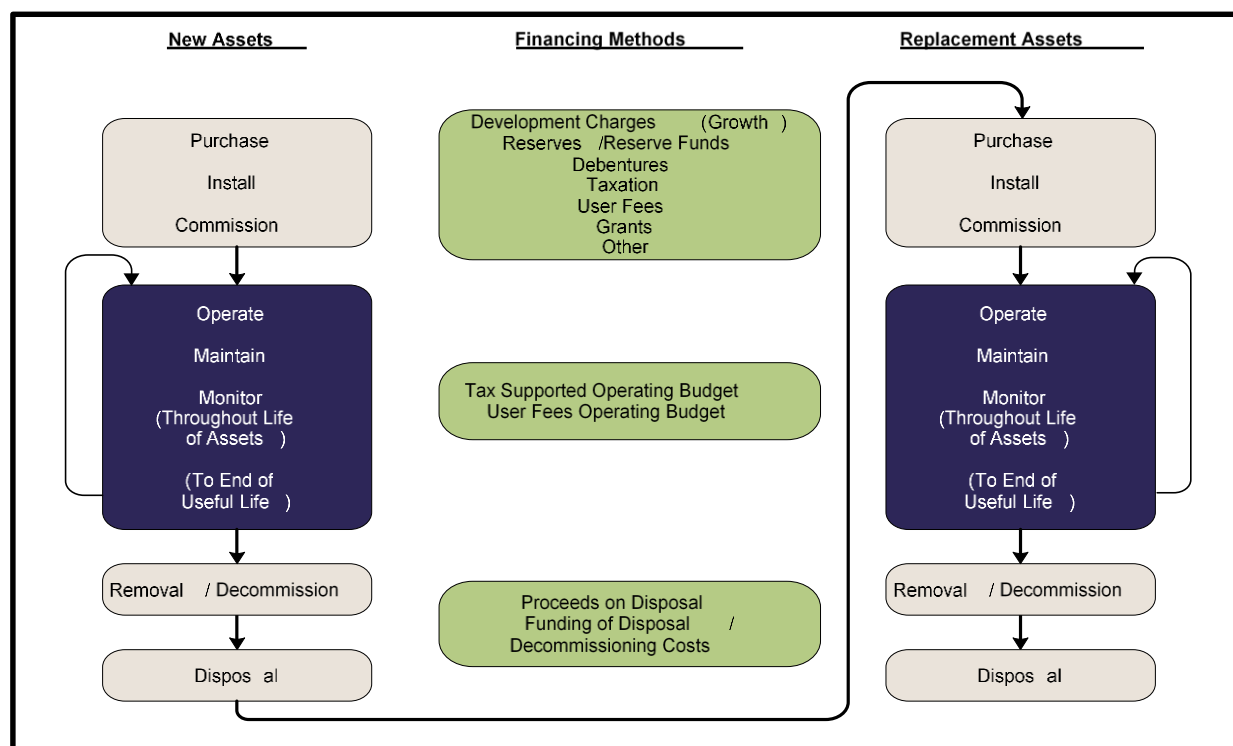
The recent changes to the D.C.A. (new section 10(2)(c.2)) require that the Background Study must include an asset management plan related to new infrastructure. Section 10 (3) of the D.C.A. provides:

The asset management plan shall,

- (a) deal with all assets whose capital costs are proposed to be funded under the development charge by-law;**
- (b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full life cycle;**
- (c) contain any other information that is prescribed; and**
- (d) be prepared in the prescribed manner.**

In regard to the above, section 8 of the Regulations was amended to include subsections (2), (3) and (4) which set out for specific detailed requirements for transit (only). For all services except transit, there are no prescribed requirements at this time thus requiring the municipality to define the approach to include within the Background Study.

At a broad level, the Asset Management Plan provides for the long term investment in an asset over its entire useful life along with the funding. The schematic below identifies the costs for an asset through its entire lifecycle. For growth-related works, the majority of capital costs will be funded by the D.C. Non-growth related expenditures will then be funded from non-D.C. revenues as noted below. During the useful life of the asset, there will be minor maintenance costs to extend the life of the asset along with additional program related expenditures to provide the full services to the residents. At the end of the life of the asset, it will be replaced by non-D.C. financing sources.



In 2012, the Province developed Building Together: Guide for municipal asset management plans which outlines the key elements for an asset management plan (A.M.P.), as follows:

State of local infrastructure: asset types, quantities, age, condition, financial accounting valuation and replacement cost valuation.

Desired levels of service: defines levels of service through performance measures and discusses any external trends or issues that may affect expected levels of service or the municipality's ability to meet them (for example, new accessibility standards, climate change impacts).

Asset management strategy: the asset management strategy is the set of planned actions that will seek to generate the desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

Financing strategy: having a financial plan is critical for putting an A.M.P. into action. By having a strong financial plan, municipalities can also demonstrate that they have made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting, and are making full use of all available infrastructure financing tools.

Commensurate with the above, the Region prepared an Asset Management Plan in 2014 for its existing assets, however, the plan does not include all assets categories

that are included in the capital forecast needs of the D.C. background study and for the services included, the plan only addresses non-growth costs of capital (i.e. does not include expansionary capital). 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 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 existing assets for the categories of assets included in the D.C. eligible capital costs are not included in the Region's Asset Management Plan, the present infrastructure gap and associated funding plan have not been considered at this time. Hence the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects which will require financing from Regional financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 10-year financing.
2. Lifecycle costs for the 2017 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 \$218.46 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 \$112.95 million. This amount, totalled with the existing operating revenues of \$933.40 million, provide annual revenues of \$1,046.35 million by the end of the period.

In consideration of the above, the capital plan is deemed to be financially sustainable for the future growth expenditures and revenues.

**Niagara Region
Asset Management
Future Expenditures and Associated Revenues**

	2041 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth Related Capital ¹	42,425,095
Annual Debt Payment on Post Period Capital ²	2,292,694
Lifecycle:	
Annual Lifecycle - Town Wide Services	\$62,808,711
Sub-Total - Annual Lifecycle	\$62,808,711
Incremental Operating Costs (for D.C. Services)	\$113,228,446
Total Expenditures	\$218,462,251
Revenue (Annualized)	
Total Existing Revenue ⁴	\$933,397,230
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$112,948,017
Total Revenues	\$1,046,345,247

¹ Non-Growth Related component of Projects including 10% mandatory deduction on soft services

² Interim Debt Financing for Post Period Benefit

³ All infrastructure costs included in Area Specific by-laws have been

⁴ As per Sch. 10 of FIR

Appendix J – Proposed Development Charge By-law

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

THE REGIONAL MUNICIPALITY OF NIAGARA

BY-LAW NO. 2017-98

A BY-LAW TO ESTABLISH DEVELOPMENT CHARGES
FOR THE REGIONAL MUNICIPALITY OF NIAGARA
AND REPEAL BY-LAW 2017-68

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 April 28, 2017 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 8, 2017;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara had before it a report entitled Development Charge Background Study dated April 28, 2017 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 20, 2017 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, based on the aforementioned process, the Council of the Corporation of The Regional Municipality of Niagara passed By-law 2017-68 on July 20, 2017;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara gave Notice on September 7, 2017 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;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

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 October 5, 2017;

AND WHEREAS the Council of the Corporation of The Regional Municipality of Niagara on October 5, 2017 determined that no additional public meeting was required to be held as part of the approval process;

AND WHEREAS the Council of The Corporation of The Regional Municipality of Niagara wish to repeal By-law 2017-68 and to pass a new Development Charge By-law to incorporate administrative changes as set out in Staff Report CSD 63-2017;

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;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

- (ii) services related to grooming, boarding or breeding of household pets; and
- (iii) marijuana processing or production facilities.

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

"archeological assessment" 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 larger than eight square metres, including a den, study, or other similar area, 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;

"calculation date" means the date on which the first building permit is issued by the local municipality;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

"commercial purpose" means 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, and includes hotels and motels;

"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 either:

- a) each bedroom used, designed or intended for use by one or more persons living together in a lodging home, dormitories, or
- b) in the case of a special care/special dwelling unit/room, each individual room or suite of rooms used, designed or intended for use by one or two persons with or without exclusive sanitary and/or culinary facilities.

"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. A "dwelling unit" does not include a Park Model Trailer conforming to National Standard of Canada #CAN/CSA - Z241.0-92 or equivalent standard;

"eligible costs of remediation" means work related to the following categories:

- (a) Phase 1 Environmental Site Assessments;
- (b) Phase 2 Environmental Site Assessments;
- (c) Environmental Remediation Work; and
- (d) Indirect Remediation Costs, all as detailed in the listing of eligible remediation costs by category in Schedule "D".

"existing industrial building" means a building or buildings existing on a site in the Regional Municipality of Niagara as of July 6, 2012 or the buildings or 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 the July

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

6, 2012 was passed for which development charges were exempted or paid for and means a building used for or in connection with:

- (a) manufacturing, producing, and processing goods for a commercial purpose, as well as storing and/or distribution of the goods manufactured, produced or processed on site;
- (b) research or development in connection with manufacturing, producing or processing something;
- (c) retail sales by a manufacturer, producer or processor of something 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 they are:
 - (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;

“granny flat” means a one-unit detached, temporary residential structure, containing culinary and sanitary facilities, that is ancillary to an existing residential structure and that is designed to be temporary;

“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.

“industrial use” means land, buildings or structures used for or in connection with manufacturing by:

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

- (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.

“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, 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;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

“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 storey 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 has a separate entrance to grade;

“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-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 dwelling room, including, but not limited to, row dwellings, multiplex, back-to-back townhouse dwelling, stacked townhouse dwelling, and the residential component of live/work units;

“parking structure” means buildings or structures uses for the parking of motor vehicles;
“place of worship” means any building or part thereof that is owned by a church or religious organization that is exempt from taxation as a place of worship pursuant to the *Assessment Act*, R.S.O. 1990, c. A.31, as amended;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

"premise" means one or more dwelling units and/or one or more square feet used for non-residential use;

"Region" means The Regional Municipality of Niagara;

"Regulation" means O. Reg. 82/98 under the Act, as amended;

"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, 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; and

"special care/special dwelling unit/room" means a residence

- (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

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

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 9, and 20 and 21.
- (b) The rules for determining exemptions, relief, credits and adjustments shall be in accordance with sections 10 through 17.
- (c) The rules for determining the phasing in of development charges shall be in accordance with section 8.
- (d) The rules for determining the indexing of development charges shall be in accordance with sections 20 and 21.
- (e) The rules respecting the redevelopment of land shall be in accordance with sections 18 and 19.

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

5. A development charge shall include:
- (a) a charge in respect of general government, police services, emergency medical services, 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 Schedules “C” and “C1”, 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 Schedules “C” and “C1”, as applicable.

Phasing in of Development Charges

8. The development charge schedule in Schedules “C” and “C1” shall be phased in as prescribed in Schedules C and C1.

TIMING AND CALCULATION AND PAYMENT

9. (a) The development charge under this By-law shall be calculated using the rate effective on the calculation date with respect to such development and shall be payable on the issuance of the first building permit with respect to the structure.
- (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.

EXEMPTIONS

10. The following are exempt from the payment of development charges under this By-law by reason of section 3 of the 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.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

11. Notwithstanding any other provision of this By-law, no development charge is imposed under this By-law respecting:

- (a) granny flats;
- (b) parking structures;
- (c) non-residential lands and buildings used for agricultural use;
- (d) that portion of a place of worship which is used exclusively as a place of worship for religious services and any reception and meeting areas used in connection with, or integral to the worship space.
- (e) lands and buildings used or intended to be used as municipal housing project 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, all as may be amended;
- (f) lands and buildings used for affordable housing projects that receive funding through an agreement with Niagara Regional Housing or a department or designated agency of the Niagara Region, provided that:
 - (i) this exemption shall only apply to that proportion or number of units in a development which are designated or identified as affordable housing and
 - (ii) the owner of the lands continues to use the lands and buildings for affordable housing.

If the owner ceases to use the proportionate share of the lands and buildings for affordable housing, the development charges exempted under this section shall become due and payable. The owner shall be required to enter into an agreement with the Region under section 27 of the Act respecting the timing and calculation of payment of development charges, notice of which the owner shall register on the title to the lands at its sole cost and expense with the intention that the provisions shall bind and run with title to the lands. And
- (g) canopies including gas station canopies and those intended for the parking and loading or unloading of vehicles;

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3Partial Exemptions

12. Notwithstanding any other provision of this By-law, the development charge imposed under this By-law respecting the development of a long-term care home shall be reduced by 50%.

Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Development within the Urban Areas

13. The rules with respect to Development located within the Designated Exemption Areas and to Brownfield Developments within the Urban Areas for Regional Development Charges Reduction are set out in Schedule "E" and supporting Schedules E1 to E10.

Rules with Respect to Brownfield Development located within the Urban Areas

14. The rules with respect to Brownfield Development located within the Urban Areas for Regional Development Charges Reduction are set out in Schedule "D" and supporting Schedules D1-11.

Rules with Respect to Exemptions for Intensification of Existing Housing

15. Pursuant to the Act, no development charge is payable if the development is only the enlargement of an existing dwelling unit.
16. Pursuant to the Act and Regulation, no development charge is payable if the development is only the creation of:
 - (a) one or two additional dwelling units in a single detached dwelling, where the total gross floor area of the additional dwelling unit or units is less than or equal to the gross floor area of the existing dwelling unit;
 - (b) one additional dwelling unit in a semi-detached dwelling or row dwelling, where the gross floor area of the additional dwelling unit is less than or equal to the gross floor area of the existing dwelling unit; or
 - (c) one additional dwelling unit in a dwelling other than a single detached dwelling, semi-detached dwelling or row dwelling, where the gross floor area of the additional dwelling unit is less than or equal to the gross floor area of the smallest existing dwelling unit in the residential building.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3Rules with Respect to Exemptions for Industrial Enlargement and Industrial Grant Program

17. (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 1 by the amount of the enlargement.
- (c) Notwithstanding the Industrial Development Charge rates as outlined in Schedule C, the Region shall during the life of this by-law maintain a grant program that shall be used to provide a grant towards any industrial development charges payable, in accordance with Development Charge Grant Program approved by the Region on July 20, 2017.

Rules With Respect to Redevelopment – Demolitions

18. (a) If application is made for a building permit in respect of a parcel of land upon which a premise existed within five years prior to the date of such application, but which premise has been demolished or destroyed before the date of such application, then the amount of development charges payable upon issuance of the said building permit shall be reduced by the

net amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the demolished or destroyed premise, provided that such reduction shall not exceed the development charges otherwise payable. For purposes of this subsection, "net" means the excess of the development charges for premises constructed, over the development charges for premises demolished or destroyed.

- (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 premise 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 premise on such parcel has indeed been so demolished (and the particulars of such demolished premise), 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 premise demolished, provided that such reduction shall not exceed the development charges actually paid.
- (c) Where demolition takes place on a brownfield, 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 18. (1) of this By-law. This application will be considered by Regional Council for approval.
- (d) Where the first use of a premises would be exempt from development charges by operation of s.10 of this By-law, the reduction available under 18.(1), 18(2), and 18(3) above shall be determined by assessing the first use of the premises at the Institutional rate set forth in Schedules "C" and "C1", as applicable, to this By-law.

Rules With Respect to Redevelopment – Conversions

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

19. (a) If a development includes the conversion of a premise 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 premises would be exempt from development charges by operation of s.10 of this By-law, the reduction available under 19.(1) above shall be determined by assessing the first use of the premises at the Institutional rate set forth in Schedules "C" and "C1", as applicable, to this By-law.

INDEXING

20. The amounts of development charges imposed pursuant to this By-law, as set out in Schedules "C" and "C1", as applicable, shall be adjusted annually without amendment to this By-law, in accordance with the Statistics Canada Quarterly Construction Price Statistics (catalogue number 62-007).
21. For greater certainty, on January 1st of each year, the annual indexation adjustment shall be applied to the development charge as set out in Schedules "C" and "C1", as applicable, plus the accumulated annual indexation adjustments from previous years, if any.

GENERAL

22. 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 November 16, 2017 – August 31, 2019

Schedule "C1" – Development Charges September 1, 2019 – August 31, 2022

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

- Schedule "D" – Rules with Respect to Brownfield Development located within Urban Areas for Regional Development Charges Reduction (subject to section 14)
- Schedule "D1" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Fort Erie
- Schedule "D2" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Grimsby
- Schedule "D3" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Lincoln
- Schedule "D4" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Niagara Falls
- Schedule "D5" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Niagara-on-the-Lake
- Schedule "D6" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Pelham
- Schedule "D7" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Port Colborne
- Schedule "D8" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of St. Catharines
- Schedule "D9" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Thorold
- Schedule "D10" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Welland

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

- Schedule "D11" – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Township of West Lincoln
- Schedule "E" – Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas for Regional Development Charges Reduction Program (subject to section 13)
- Schedule "E1" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– Town of Fort Erie
- Schedule "E2" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– Town of Grimsby
- Schedule "E3" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– Town of Lincoln
- Schedule "E4" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– City of Niagara Falls
- Schedule "E5" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– Town of Pelham
- Schedule "E6" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– City of Port Colborne
- Schedule "E7" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– City of St. Catharines
- Schedule "E8" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– City of Thorold

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "E9" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– City of Welland

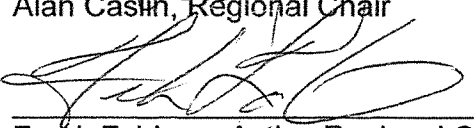
Schedule "E10" – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13)
– Township of West Lincoln

Schedule "F" – Regional Development Charges Reduction Transition Provisions

23. This By-law shall come into force and effect on November 16, 2017.
24. Pursuant to the Act, and unless it is repealed earlier, this By-law shall expire at 11:59 PM on August 31, 2022.
25. 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 Municipal Board or a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.
26. By-law 2017-68 is hereby repealed effective November 16, 2017.

THE REGIONAL MUNICIPALITY OF NIAGARA



Alan Castlin, Regional Chair

Frank Fabiano, Acting Regional Clerk

Passed: November 16, 2017

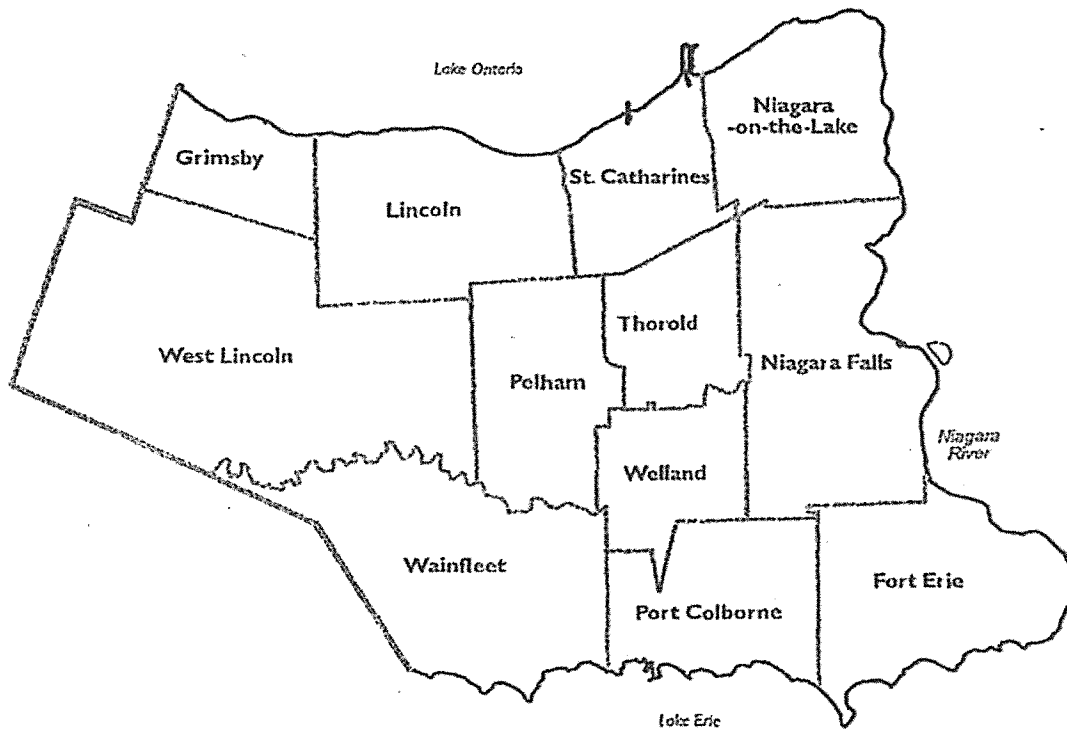
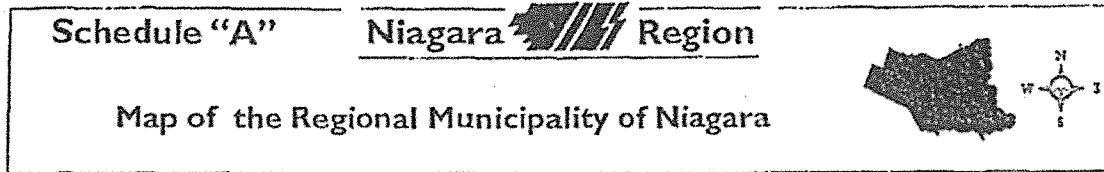
CERTIFIED A TRUE COPY



CLERK, REGIONAL MUNICIPALITY OF NIAGARA

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule B
To Regional Development Charges By-law
Region of Niagara
Components of Services Designated in Section 5

100% Eligible Services

Police Services

- Facilities
- Vehicles
- Equipment

Services Related to a Highway

- Services Related to a Highway
- Services Related to a Highway – Related Vehicles
- Services Related to a Highway – Related Facilities
- Services Related to a Highway – Previously Completed Unfunded Works

Water Services

- Supply
- Storage
- Treatment
- Distribution
- Previously Completed Unfunded Works

Wastewater Services

- Collection
- Treatment
- Previously Completed Unfunded Works

90% Eligible Services

Emergency Medical Services

- Ambulances
- Facilities

Health Services

- Facilities

Provincial Offences Act (P.O.A.)

- Facilities

Social and Child Services

- Facilities

Long-term Care

- Facilities

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule B
To Regional Development Charges By-law
Region of Niagara
Components of Services Designated in Section 5

Social Housing

- Facilities

Waste Diversion

- Facilities
- Vehicles and equipment
- Other equipment
- Containers

General Government

- Growth-related Studies

Schedule C
November 16, 2017 – August 31, 2019
Region of Niagara
Schedule of Development Charges

Service	RESIDENTIAL					NON-RESIDENTIAL				
	Single and Semi-Detached Dwelling	Apartments - 2 + Bedrooms	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units/Rooms	Commercial (per ft² of Gross Floor Area)	Industrial (per ft² of Gross Floor Area)	Institutional (per ft² of Gross Floor Area)	Wind Turbines	
Municipal Wide Services:										
Services Related to a Highway	6,297	4,371	2,596	4,587	2,380	4.45	1.85	3.17	6,297	
Police Services	376	261	155	274	142	0.27	0.12	0.20	376	
General Government	212	147	87	154	80	0.17	0.07	0.13	212	
Long Term Care	486	337	200	354	184	0.14	0.06	0.10	-	
Provincial Offences Act	35	24	14	25	13	0.03	0.01	0.02	-	
Health	107	74	44	78	40	0.04	0.01	0.02	-	
Social and Child Services	-	-	-	-	-	-	-	-	-	
Emergency Medical Services	121	84	50	88	46	0.03	0.01	0.03	121	
Social Housing	274	190	113	200	104	-	-	-	-	
Waste Diversion	88	61	36	64	33	0.07	0.04	0.04	-	
Total Municipal Wide Services	7,995	5,549	3,295	5,824	3,022	5.20	2.17	3.72	7,005	
Urban Services										
Wastewater Services	4,420	3,068	1,823	3,220	1,671	3.18	1.32	2.27	-	
Water Services	3,129	2,172	1,290	2,280	1,183	2.25	0.94	1.61	-	
Total Urban Services	7,549	5,240	3,113	5,500	2,854	5.43	2.26	3.88	-	
GRAND TOTAL RURAL AREA	7,995	5,549	3,295	5,824	3,022	5.20	2.17	3.72	7,005	
GRAND TOTAL URBAN AREA	15,544	10,789	6,408	11,324	5,876	10.63	4.43	7.60	7,005	

NOTE: EXCLUDING APPLICABLE INDEXING

Schedule C1
September 1, 2019 – August 31, 2022
Region of Niagara
Schedule of Development Charges

Service	RESIDENTIAL					NON-RESIDENTIAL			
	Single and Semi-Detached Dwelling	Apartments - 2 + Bedrooms	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units/Rooms	Commercial (per ft² of Gross Floor Area)	Industrial (per ft² of Gross Floor Area)	Institutional (per ft² of Gross Floor Area)	Wind Turbines
Municipal Wide Services:									
Services Related to a Highway	6,297	4,371	2,596	4,587	2,380	4.45	1.86	3.18	6,297
Police Services	377	262	155	275	143	0.27	0.12	0.20	377
General Government	212	147	87	154	80	0.19	0.07	0.13	212
Long Term Care	1,212	841	500	883	458	0.34	0.14	0.25	-
Provincial Offences Act	48	33	20	35	18	0.05	0.02	0.03	-
Health	148	103	61	108	56	0.04	0.02	0.03	-
Social and Child Services	-	-	-	-	-	-	-	-	-
Emergency Medical Services	166	115	68	121	63	0.04	0.02	0.03	166
Social Housing	1,199	832	494	873	453	-	-	-	-
Waste Diversion	362	251	149	263	137	0.31	0.12	0.22	-
Total Municipal Wide Services	10,020	6,955	4,130	7,299	3,788	5.68	2.37	4.07	7,052
Urban Services									
Wastewater Services	4,420	3,068	1,823	3,220	1,671	3.18	1.32	2.27	-
Water Services	3,129	2,172	1,290	2,280	1,183	2.25	0.94	1.61	-
Total Urban Services	7,549	5,240	3,113	5,500	2,854	5.43	2.26	3.88	-
GRAND TOTAL RURAL AREA	10,020	6,955	4,130	7,299	3,788	5.68	2.37	4.07	7,052
GRAND TOTAL URBAN AREA	17,569	12,195	7,243	12,799	6,642	11.11	4.63	7.95	7,052

NOTE: EXCLUDING APPLICABLE INDEXING

Schedule "D"**Rules with Respect to Brownfield Development located within the Urban Areas for
Regional Development Charges Reduction (subject to section 14)**

Owners of properties are eligible for the Brownfields Development Charge Reduction Program ("BDCRP") subject to meeting the following requirements:

- (a) Any Development Charges payable pursuant to this by-law may be reduced pursuant to this Schedule "D" in accordance with the BDCRP however in no case shall the total amount of the eligible reductions exceed the total eligible cost of remediation incurred to permit the lands to be developed.
- (b) Confirmation that a development will be considered a brownfield development in accordance with this by-law shall be determined by the Region in its sole discretion after submission by the owner of the subject lands of all requested information.
- (c) All costs associated with remediation of brownfields will be subject to verification, third party review, or independent audit, at the expense of the owner, if required by the Region and the final determination as to what costs if any may be eligible under the BDCRP and be permitted as a reduction against any development charges payable with respect to the subject lands where the remediation has occurred shall be made by the Region in its sole discretion.
- (d) All properties considered eligible for the BDCRP must submit a complete application with the Region under the BDCRP, within 12 months of the commencement of Environmental Rehabilitation, which, for greater certainty, is defined in paragraph 3 of this Schedule D.", Any property that has eligible remediation work completed prior to September 1, 2017 must submit a complete application with the Region within 12 months from the date of this By-law, to the Commissioner of Enterprise Resource Management Services, or his or her designate, which notice shall include but not be limited to an identification of the lands for which remediation has occurred and the owner of the lands: the nature of proposed development on the lands for which development charges are now payable; an estimate of the proposed development charges that will be payable; and, an identification of the nature of the remediation works, including the date upon which such remediation has commenced; and, the associated costs that have been or will be incurred to remediate the lands. All documentation as may be required by the Region to confirm eligibility for the BDCRP and the appropriateness of the amounts claimed, including but not limited to confirmation that Environmental Remediation Work has commenced shall be submitted to the

Schedule "D"

Region in a manner acceptable to the Commissioner of Enterprise Resource Management Services or his or her designate.

- (e) Only those lands located within the approved urban area as set out in Schedules "D1 to D11" to this By-law, as may be amended from time to time and approved by Council of the Region, without amendment to this By-law, and which are considered brownfield development in accordance with this by-law shall be considered eligible for the BDCRP.
- (f) Where funding, reimbursement or any other form of credits are provided for and available with respect to any eligible costs and for which the Owner has been or may be compensated from any other source or program whether by the Region, local municipality, Province, or Federal Government the reduction available under this BDCRP will be reduced to reflect that such amounts have been or may be recovered from other sources and/or programs so as to ensure that there has not been a duplication of remediation costs claimed.
- (g) Remediation costs may be assigned to subsequent owners of the lands subject to the remediation works in the first instance subject to notification to the Region a minimum of 90 days in advance of transfer of ownership or issuance of a building permit and that such land and remediation works continue to be eligible in accordance with the requirements above. Any assignment shall be subject to the consent and approval of the Region in writing. Verification of transfer or assignment of eligible remediation costs will require an affidavit or purchase and sale agreement that demonstrates that the purchaser has incurred the costs by way of assignment or transfer and that the seller waives rights to the eligible costs BDCRP.
- (h) Brownfield redevelopment that has commenced and previously approved for any development charge reduction program by the Region prior to September 1, 2017 may be transitioned pursuant to the provisions of Schedule F to this By-law and to have the former program continue to apply subject to the terms of any written agreement with the Region.
- (i) Determination of the amount of any reduction, and any conditions with respect to the application of such reductions, that may be available to any Owner under this program will be subject to and confirmed by way of a written agreement, in a form satisfactory to the Region, being finalized as between the Owner and the Region prior to the issuance of a building permit.

Schedule "D"

- (j) Potential Eligible Remediation Costs have been defined as work related to the following categories. The eligible costs categories below represent a guideline only, and do not constitute an exhaustive list of all possible eligible remediation costs.

1. Phase 1 Environmental Site Assessment (E.S.A.)

It is the responsibility of the applicant to ensure that all Phase 1 E.S.A. work is conducted in accordance with the O.Reg 153/04 (as amended) under the Environmental Protection Act (E.P.A.). Applicants should refer to the Regulation for specific Phase 1 requirements. Eligible costs include:

- i. Document Review
 - FOI Request
 - Aerial Photos and mapping (over time, development, topographic maps, physiographic maps, geological maps, well records).
 - Previous environmental studies
 - Relevant Government Information (Certificate of approval, certificates of property use, inventory of coal gasification plants, National Pollutant Release Inventory, waste management inventory, retail fuel storage tank info, etc.)
 - Other relevant documents (Insurance, ownership/land title)
- ii. Interviews
- iii. Site Reconnaissance
- iv. Conceptual Model Development (Per O. Reg. 511/09).
- v. Report

2. Phase 2 Environmental Site Assessment

It is the responsibility of the applicant to ensure that all Phase 2 E.S.A. work is conducted in accordance with the O.Reg 153/04 (as amended) under the Environmental Protection Act (E.P.A.). Applicants should refer to the Regulation for specific Phase 2 requirements. Eligible costs include:

- i. Field Work
 - Site Visit/Investigation
 - Utility locates
 - Drilling/excavation/ other methods of intrusive sampling
 - Geological Study

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3**Schedule "D"**

- Soil Sampling – Stockpile sampling/sampling of excavation
 - Test Pit Excavation and observation
 - Geophysical testing
- Hydrogeology Study
 - Water level and Well Condition survey
 - Observation of Borehole Drilling, Well abandonment, Well Repairs
 - Surveying – Elevation survey of wells and associated data analysis
 - Groundwater Sampling
- Field Supervision (monitoring, sample selection and quality control)
- Field Equipment (consumables)
- ii. Data Compilation/Analysis
 - Data Reduction, Analysis and Review
 - GIS Support, Site Plans Preparation
- iii. Contract/Laboratory Fees
 - Soil and Water chemical analysis
- iv. Administrative Assistance
- v. Disbursements
- vi. Reporting
- vii. Qualified Person Review
- viii. Supplemental Phase 2
 - Delineation of contamination
- ix. Project Management
 - Meetings
 - Bid Preparation
 - Region Application
 - Bid Preparation
 - Peer Review
 - Data Gap Analysis

3. Environmental Remediation Work

Remediation work may include, but is not limited to:

- i. **Remedial Action Plan/ Remedial Work Plan** (Prepared by a Qualified Person as defined by Ontario Regulation 153/04)
 - Options Review/Assessment

Schedule “D”

- Remedial Cost Analysis
 - Development of Plan
- ii. **Risk Assessment** (Prepared by a Qualified Person as defined by Ontario Regulation 153/04)
- Preliminary RA data gap analysis
 - Risk Assessment Pre-Submission for
 - Site Characterization
 - Report Review
 - Data Evaluation
 - Preparation of Figures
 - Toxicological Profiles
 - Report Preparation
 - Project Management
 - Data Gap Assessment
 - Service clearances
 - Surveying
 - Drilling Services
 - Monitoring Well Supplies
 - Chemical Analysis
 - Field equipment
 - Analysis
 - Hydrogeological Assessment
 - Ecological Risk Assessment (ERA)
 - Human Health Risk Assessment (HHRA)
 - Risk Management Plan
 - Public Communication Plan
 - Reporting and MOE Submission
- iii. **Environmental Rehabilitation**
- Defined as the use of various techniques to reduce, eliminate or mitigate contaminants of concern or designated substances in the ground (soil, water) or buildings to allow for the filing of a Record of Site Condition (RSC) and fulfilling the conditions of a Certificate of Property Use (CPU) if applicable.
- Alternative Techniques (Not intended to be a comprehensive list.)
- Activated Carbon Treatment
 - Air Stripping

Schedule “D”

- Bioremediation
- Capping
- Chemical Dehalogenation
- Chemical Oxidation
- Soil Excavation
- Fracturing
- In-Situ Flushing
- In-Situ Thermal Treatment
- Incineration
- Monitored Natural Attenuation
- Permeable Reactive Barriers
- Phytoremediation
- Pump and Treat
- Soil Vapour Extraction and Air Sparging
- Soil Washing
- Solidification/Stabilization
- Solvent Extraction
- Thermal Desorption
- Verification
- Geotechnical studies and shoring costs associated with the environmental rehabilitation; and
- The treatment of Designated Substances on a case-by-case basis, where required to address other contamination.

“Designated Substance” means a biological, chemical or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled; (Occupational Health and Safety Act). O.Reg. 490/09 Designated Substances. O. Reg. 278/05 Designated Substances - Asbestos on Construction Projects and in Building and Repair Operations.

iv. **Risk Mitigation Measures (R.M.M.s)**

Risk Management Measures (R.M.M.s) are those measures required on a specific site in order to allow filing a Record of Site Condition and outlined by a Certificate of Property Use (C.P.U.).

- Pump and Treat Systems
- Capping (must be remediation related)

Schedule “D”

- Hard cap, soil cap, landscaping
- Monitoring
 - Indoor Air Monitoring Plan
 - Groundwater
 - Soil Vapour
 - Outdoor Air
- Soil and Groundwater Management Plan
- Health and Safety Plan
- Subsurface barriers

Note: Only the costs associated with the implementation of these measures (such as the design costs, capital costs and installation) will be considered eligible. **Operating and maintenance costs are not eligible.** Determination of eligibility will be made on a case by case basis.

Note: If capping is required on the site for remediation purposes as well as redevelopment, the applicant should be prepared to demonstrate what percentage of the cost is attributed to the remediation of the site and not the overall landscaping plan. Eligible costs will be limited to the basic elements needed to meet the technical requirements of the cap as per the CPU.

v. **Disposal of Contaminated Soil**

Soil that does not meet the applicable generic Ontario Ministry of Environment (MOE) site condition standards (SCS) for soil as defined in Ontario Regulation 153/04 (as amended) OR the lowest effects-based property specific standards (PSS) developed through the use of a risk assessment approach completed in accordance with Ontario Regulation 153/04 (as amended), whichever is less stringent

- Tipping Fees
- Trucking Fees

Note: Costs related to the disposal of contaminated soil may be subject to the submission and review of a Soil Management Plan. Costs related to “impacted soil” are not eligible. Applicants should be prepared to provide documentation related to the segregation and tracking of contaminated soil (including hours and weigh tickets). Inadequately tracked activities may be deemed ineligible.

Schedule "D"

Impacted Soil is defined as soil that does not meet the revised Ontario Ministry of the Environment Table 1 "Full Depth Background Site Condition Standards" BUT does meet the applicable generic M.O.E. site condition standards (S.C.S.) as defined in Ontario Regulation 153/04 (as amended) under the Environmental Protection Act of Ontario OR the lowest effects-based property specific standards ("P.S.S.") developed through the use of a risk assessment in accordance with Ontario Regulation 153/04 (as amended) for the purposes of filing of a RSC with the MOE in accordance with Ontario Regulation 153/04, whichever is less stringent.

vi. Placing of Clean Fill and Grading**vii. Building Demolition Related to Remediation**

Note: The applicant should be prepared to demonstrate how the demolition was required as part of the remedial plan and not simply part of the overall redevelopment of the site.

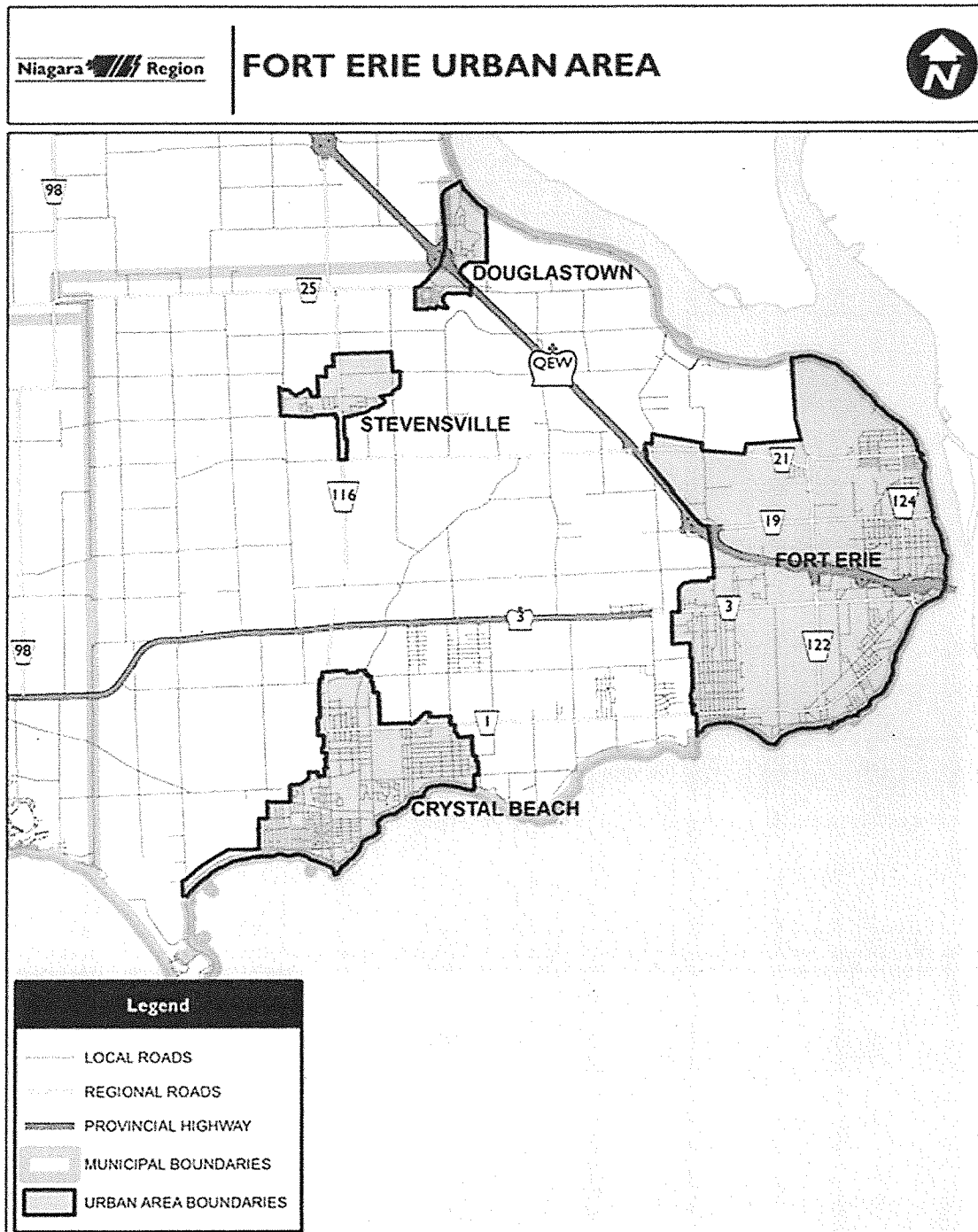
4. Indirect Remediation Costs

- i. Planning fees
- ii. Insurance Premiums
- iii. Assessment Estimates
- iv. Preparation of Record of Site Condition and Certificate of Approval
- v. Archaeological assessment

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D1"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Fort Erie

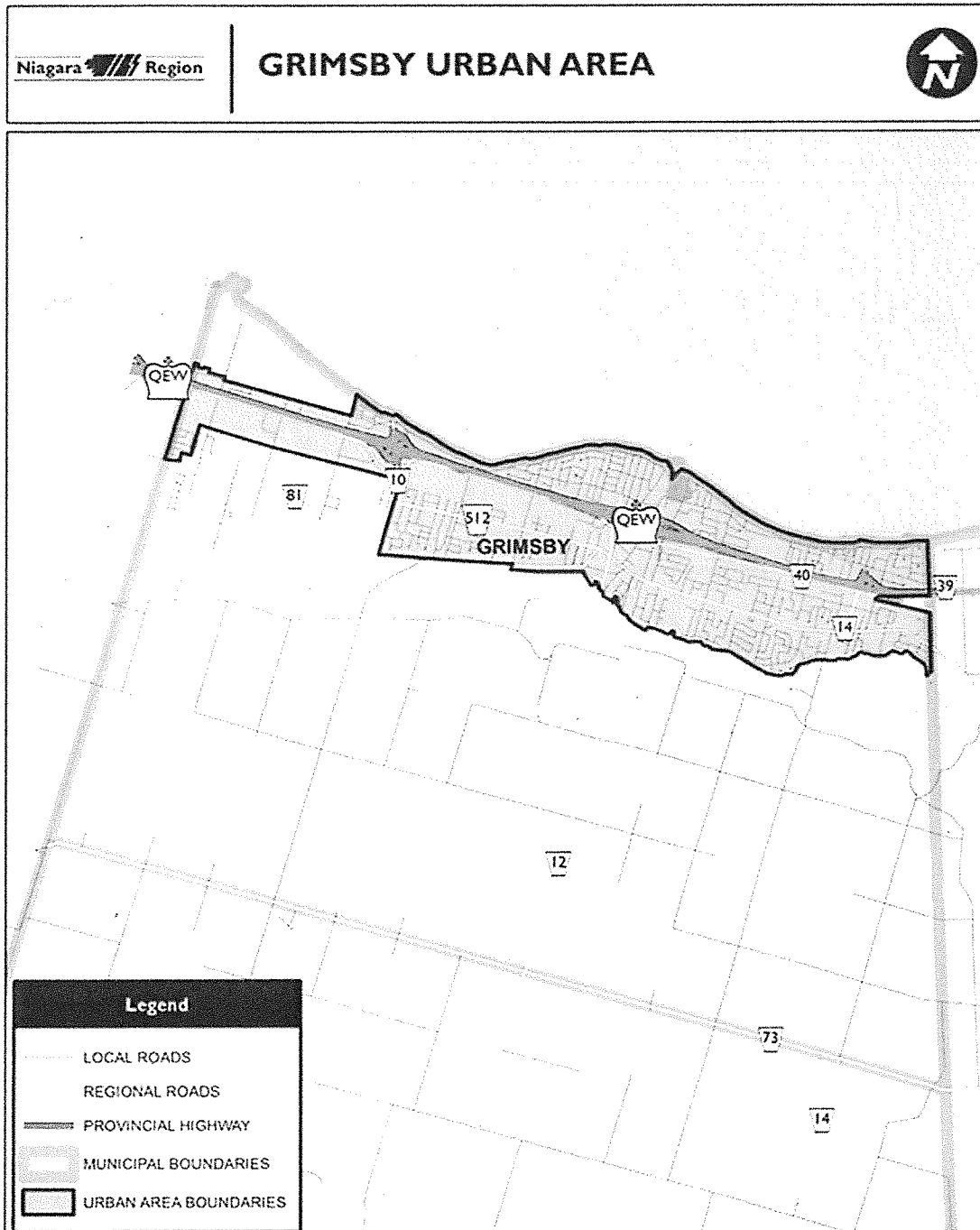


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D2"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Grimsby

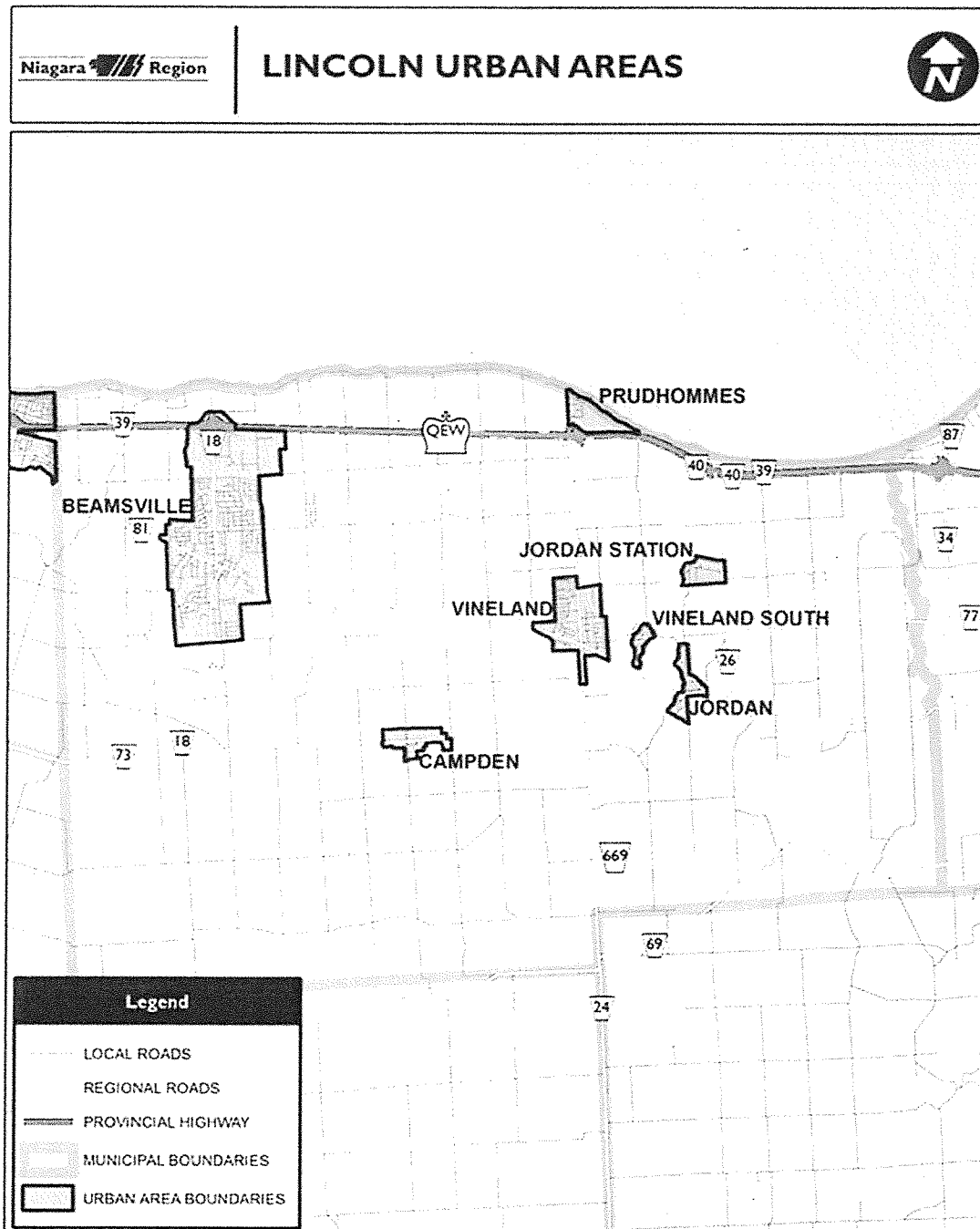


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D3"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Lincoln

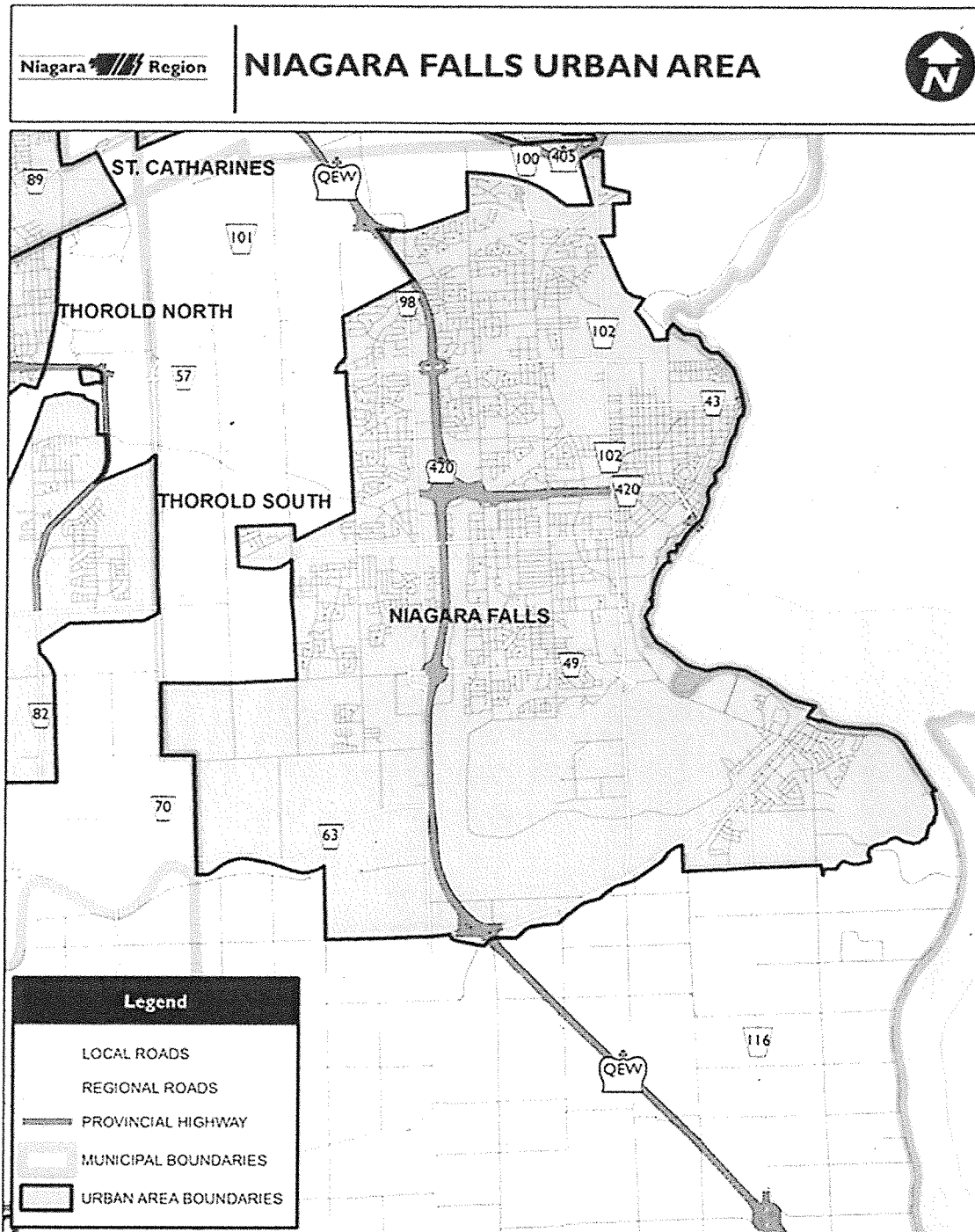


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D4"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Niagara Falls

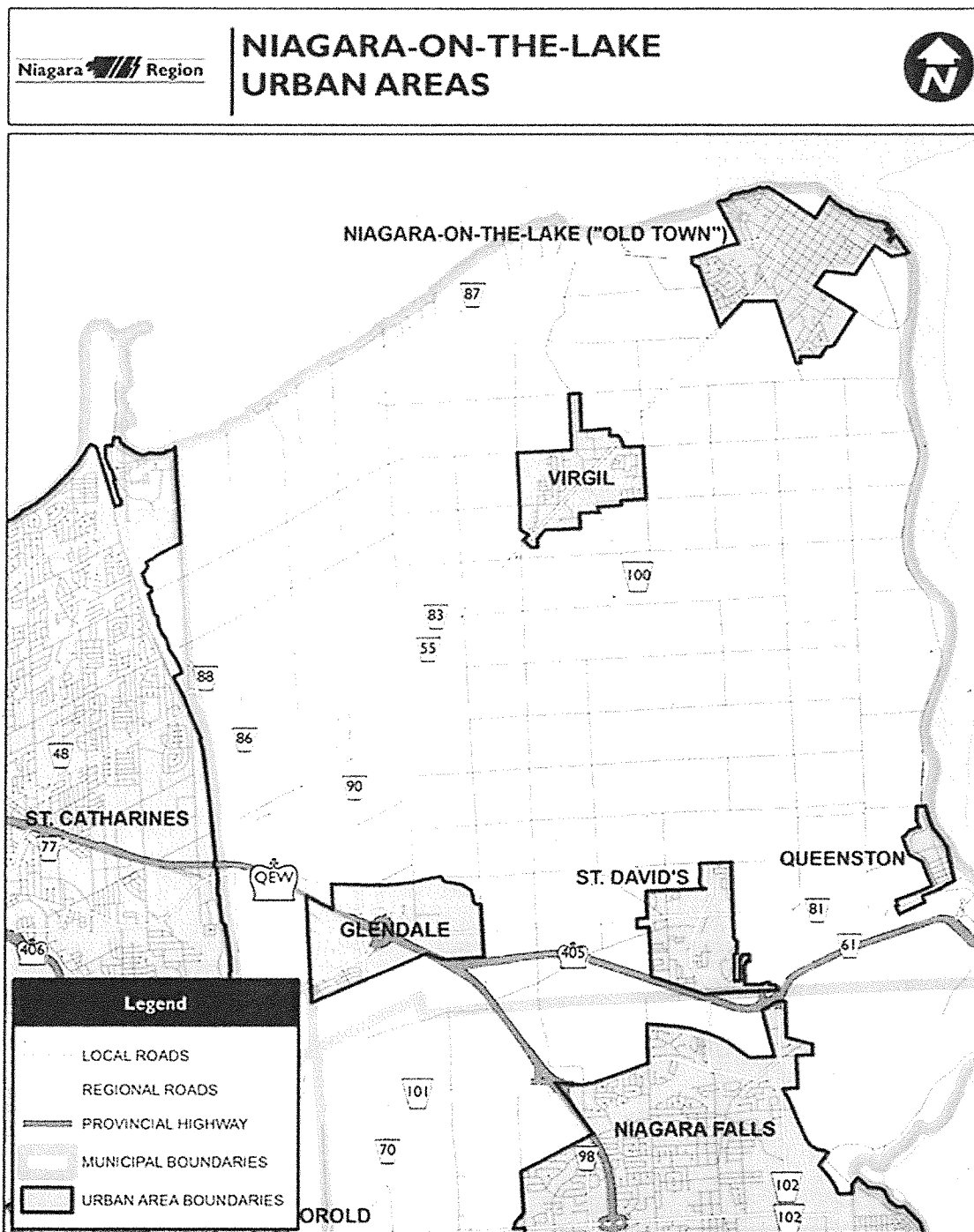


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D5"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Niagara-on-the-Lake

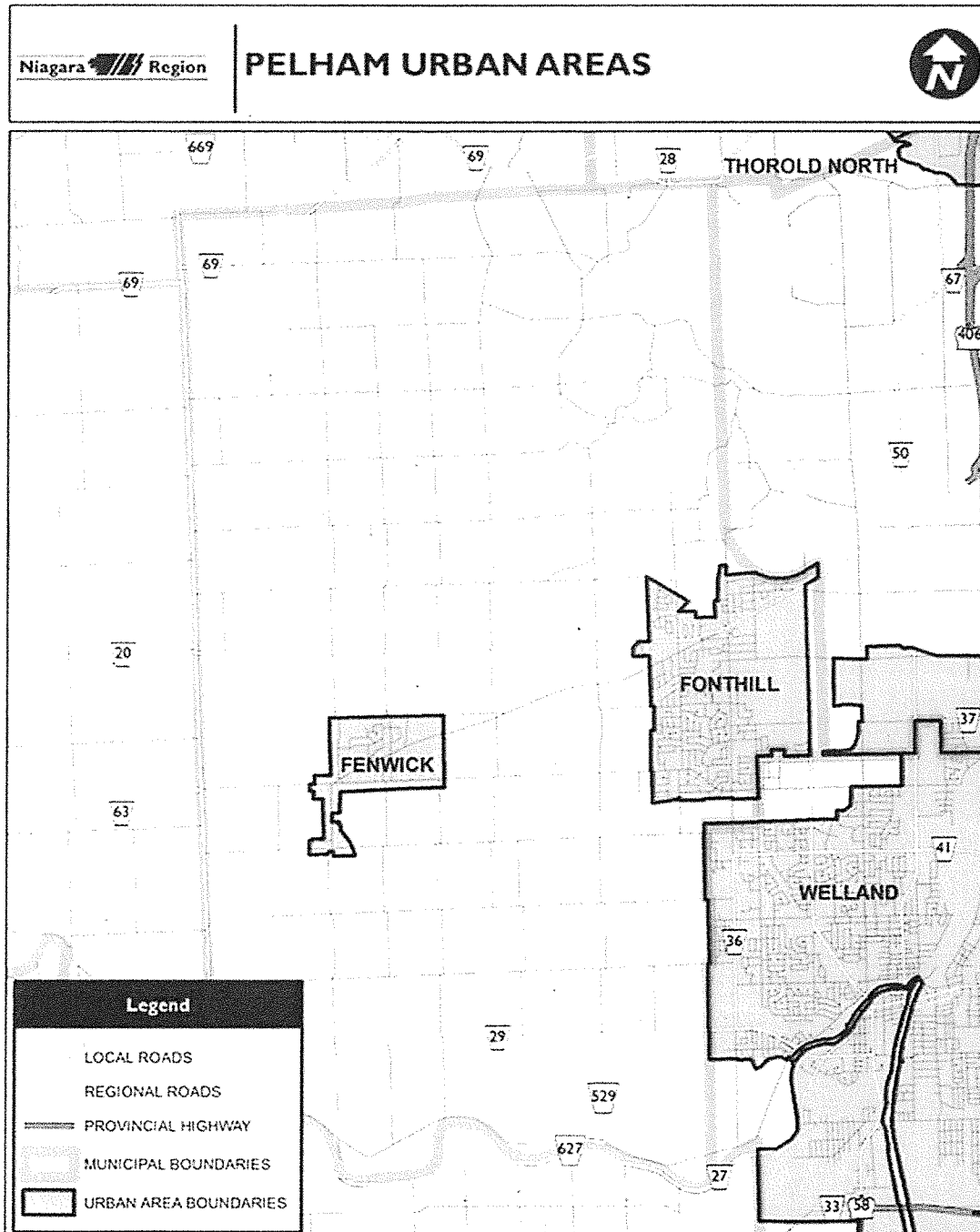


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D6"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town Pelham

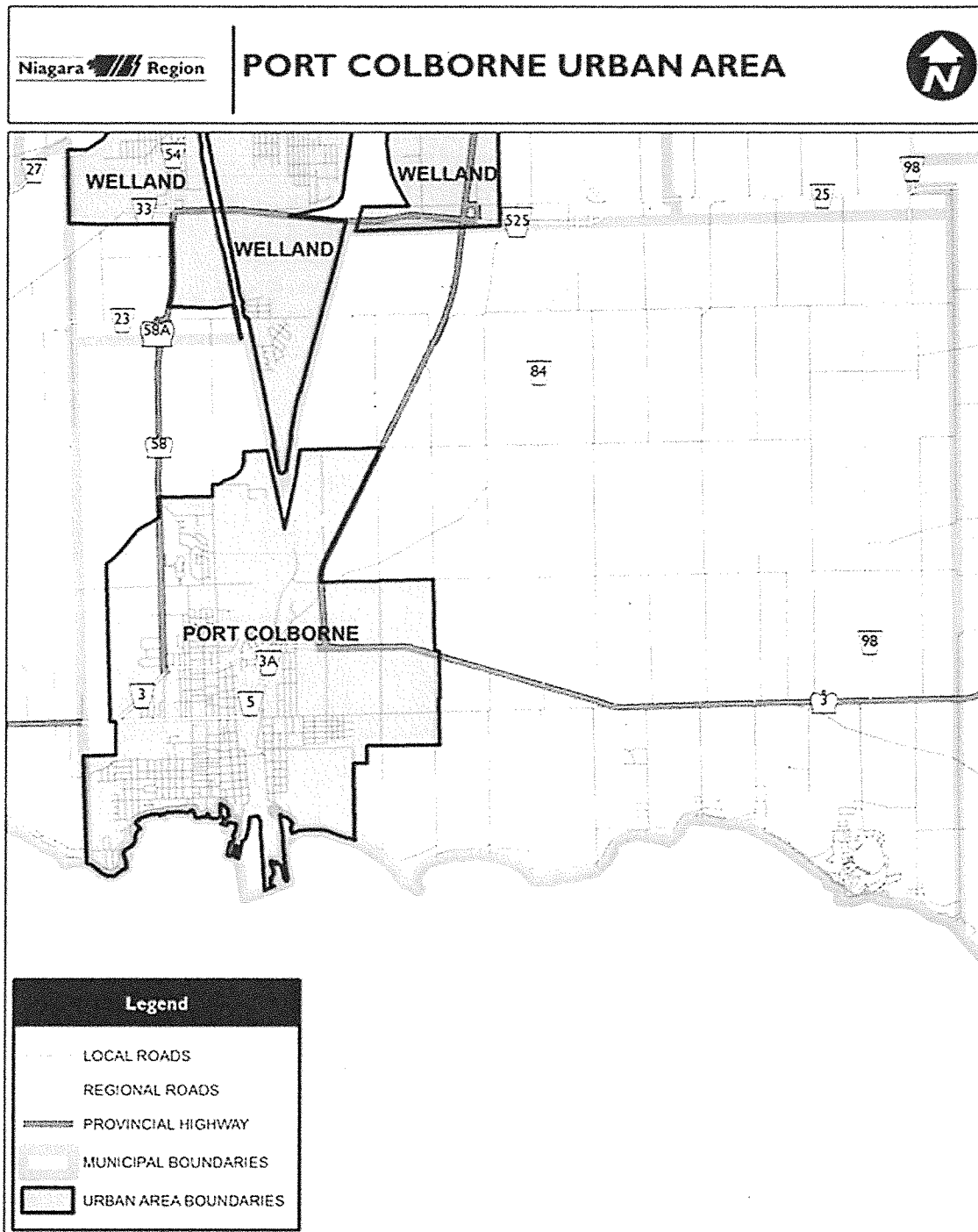


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D7"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Port Colborne

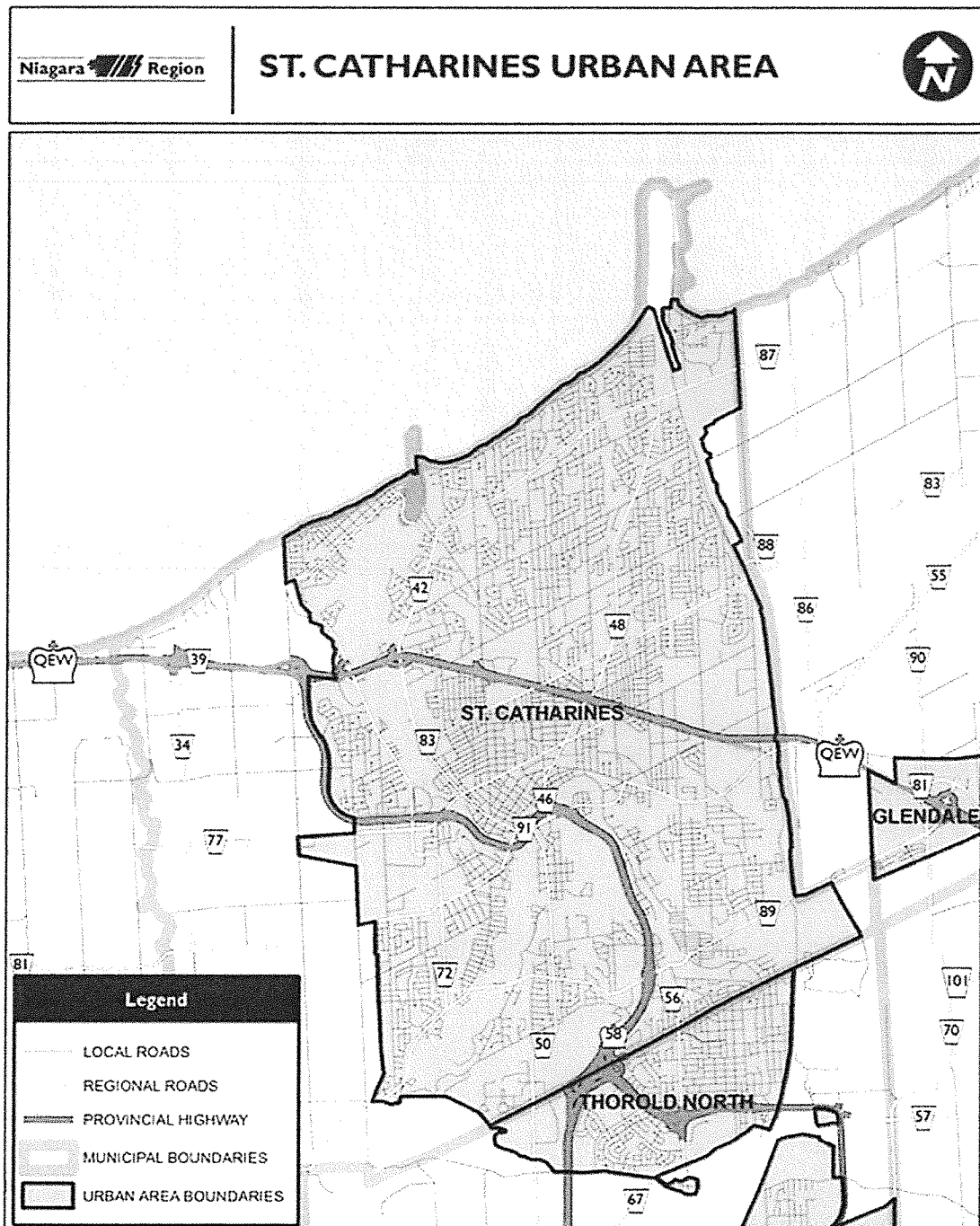


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D8"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of St. Catharines

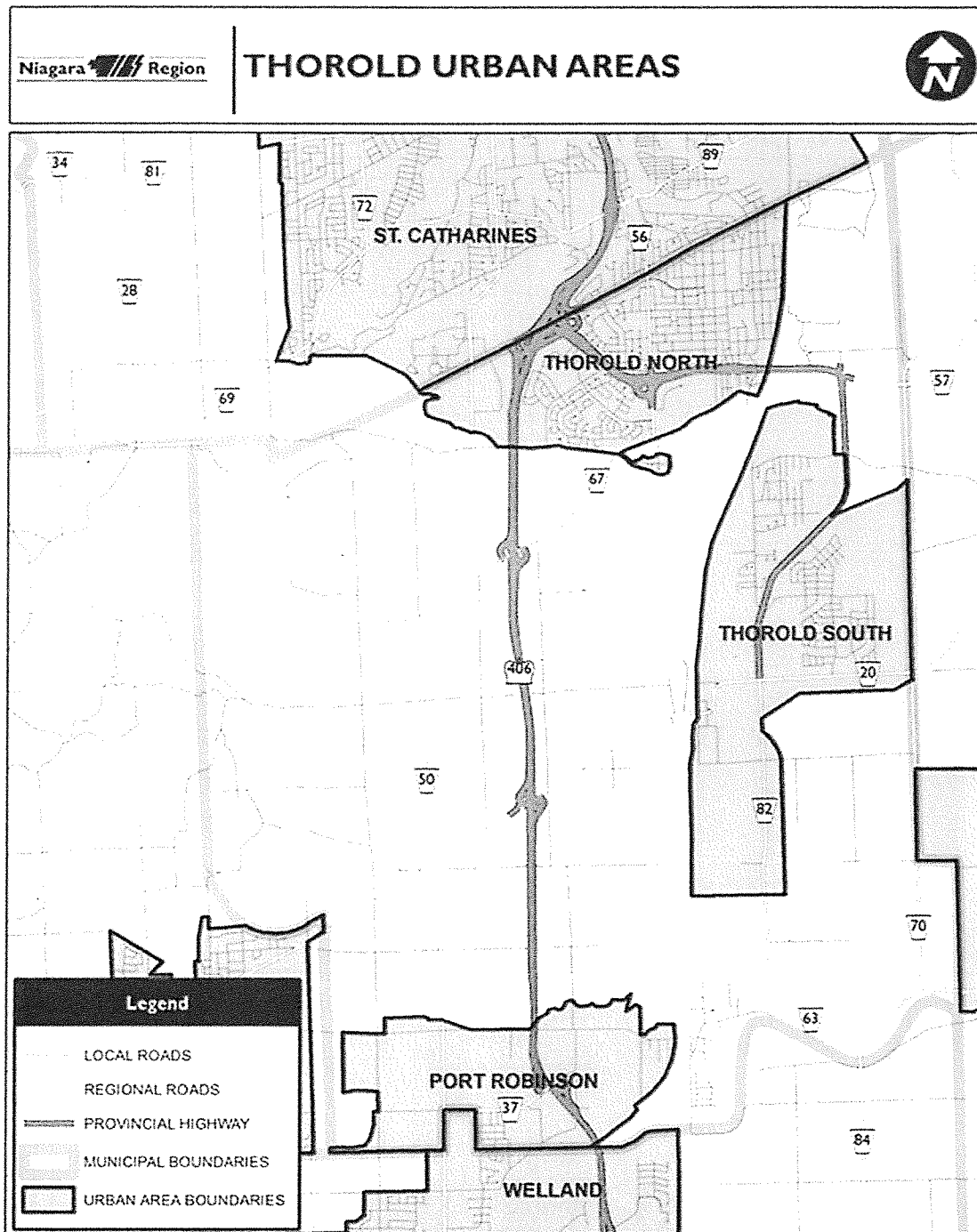


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D9"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Thorold

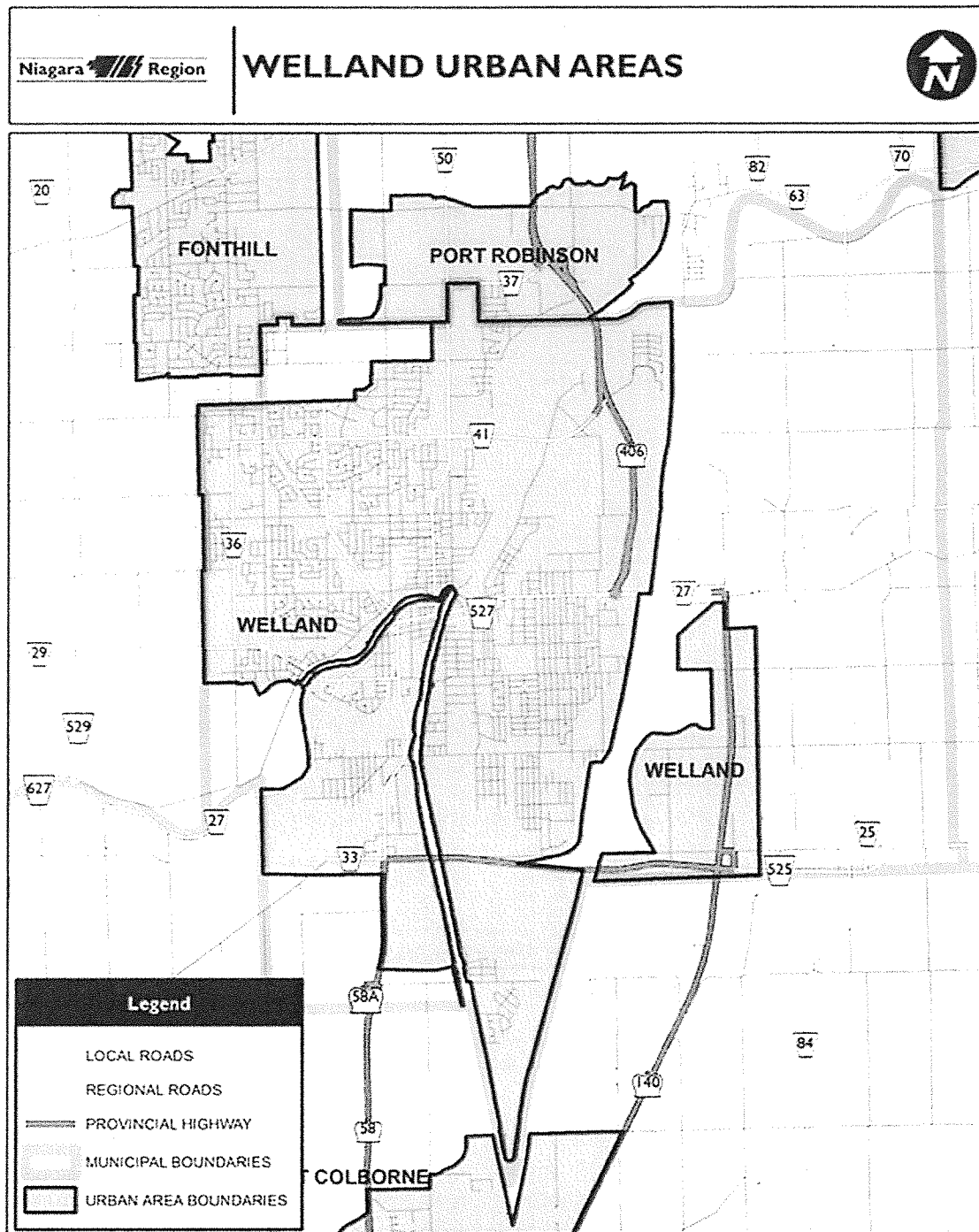


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D10"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Welland

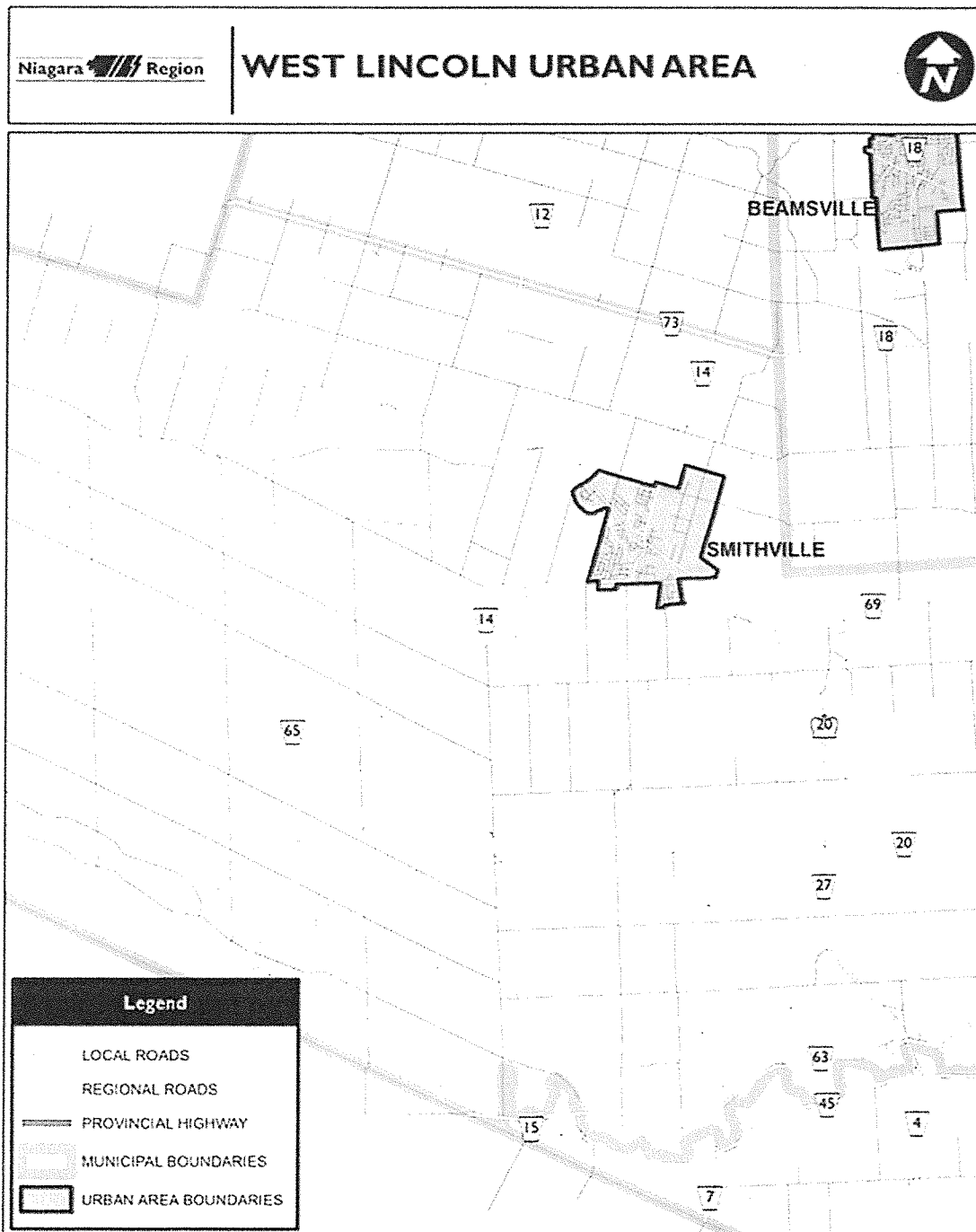


© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "D11"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Township of West Lincoln



© 2017 Niagara Region and its suppliers. Projection is UTM, NAD 83, Zone 17. Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.

Schedule “E”

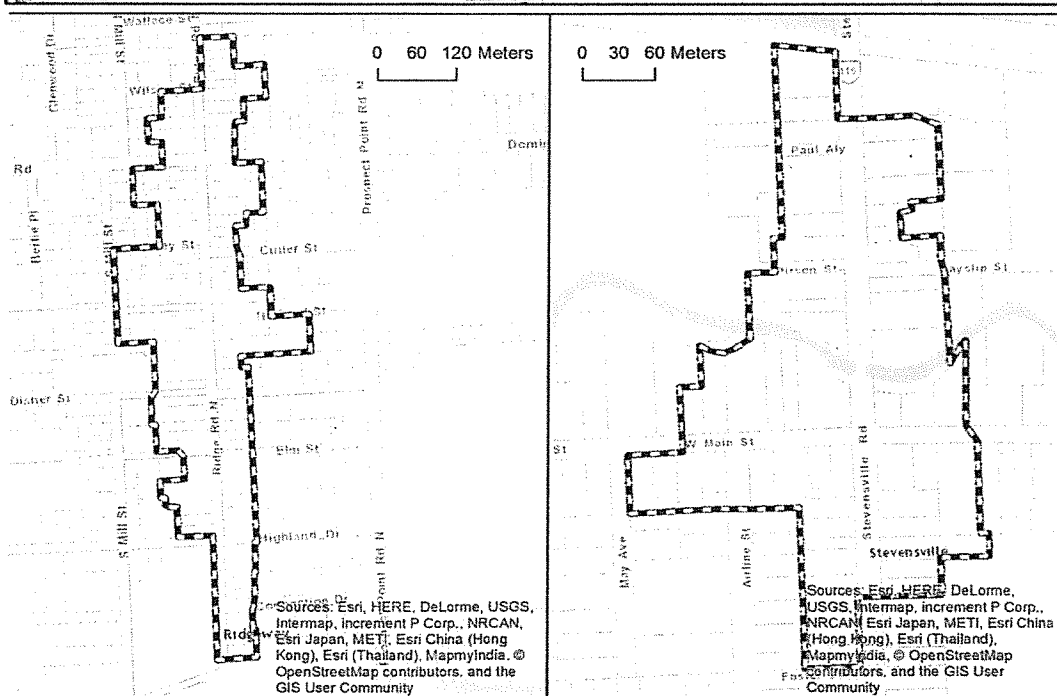
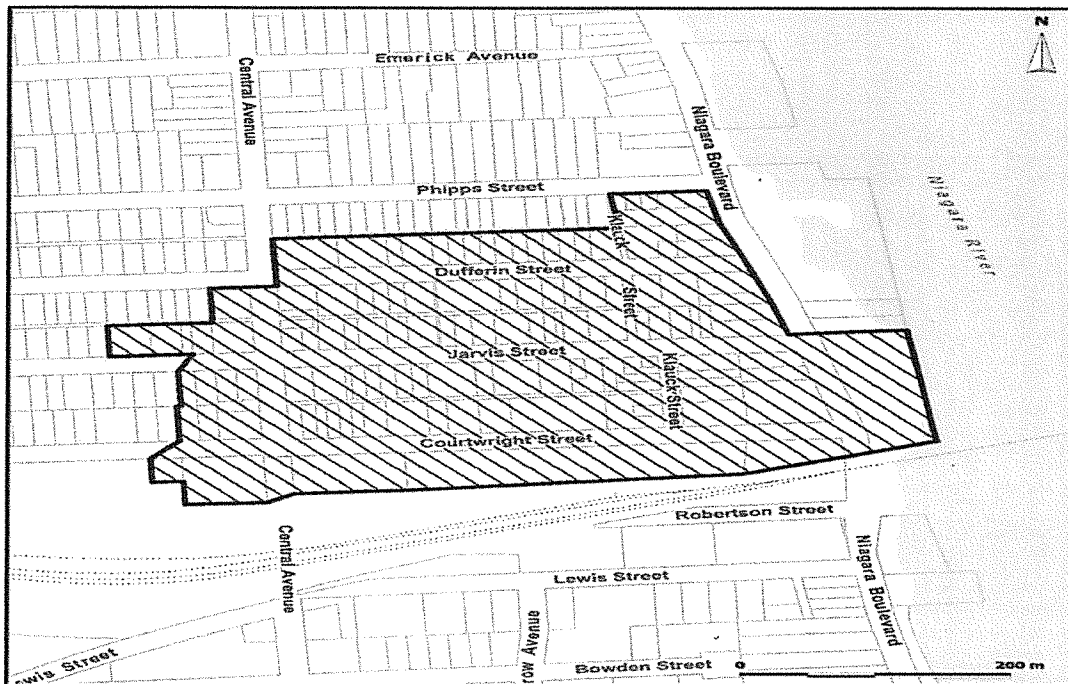
Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas for Regional Development Charges Reduction (subject to section 13)

- (a) For all development located within the Designated Exemption Areas, as set out in Schedules “E1 to E10” and to Brownfield Developments within the Urban Areas, as set out in Schedules D1 to D11 to this By-law, a maximum 50% reduction in Development Charges, after any demolition credits are applied, will apply provided the Smart Growth Design Criteria endorsed by Council of the Region and/or any level of LEED certification are achieved.
- (b) The Smart Growth Design Criteria may be amended or eliminated at the discretion of Regional Council in which case the development charge reductions granted under this Schedule may also be amended or eliminated without amendment to this By-law..
- (c) In the case of a project that qualifies for reduction under Schedules D and E, the total benefit reduction shall not exceed the total Development Charges payable.
- (d) Brownfield redevelopment that has commenced prior to September 1, 2017 may continue to be eligible to the transition provisions of Schedule F of this By-law.

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

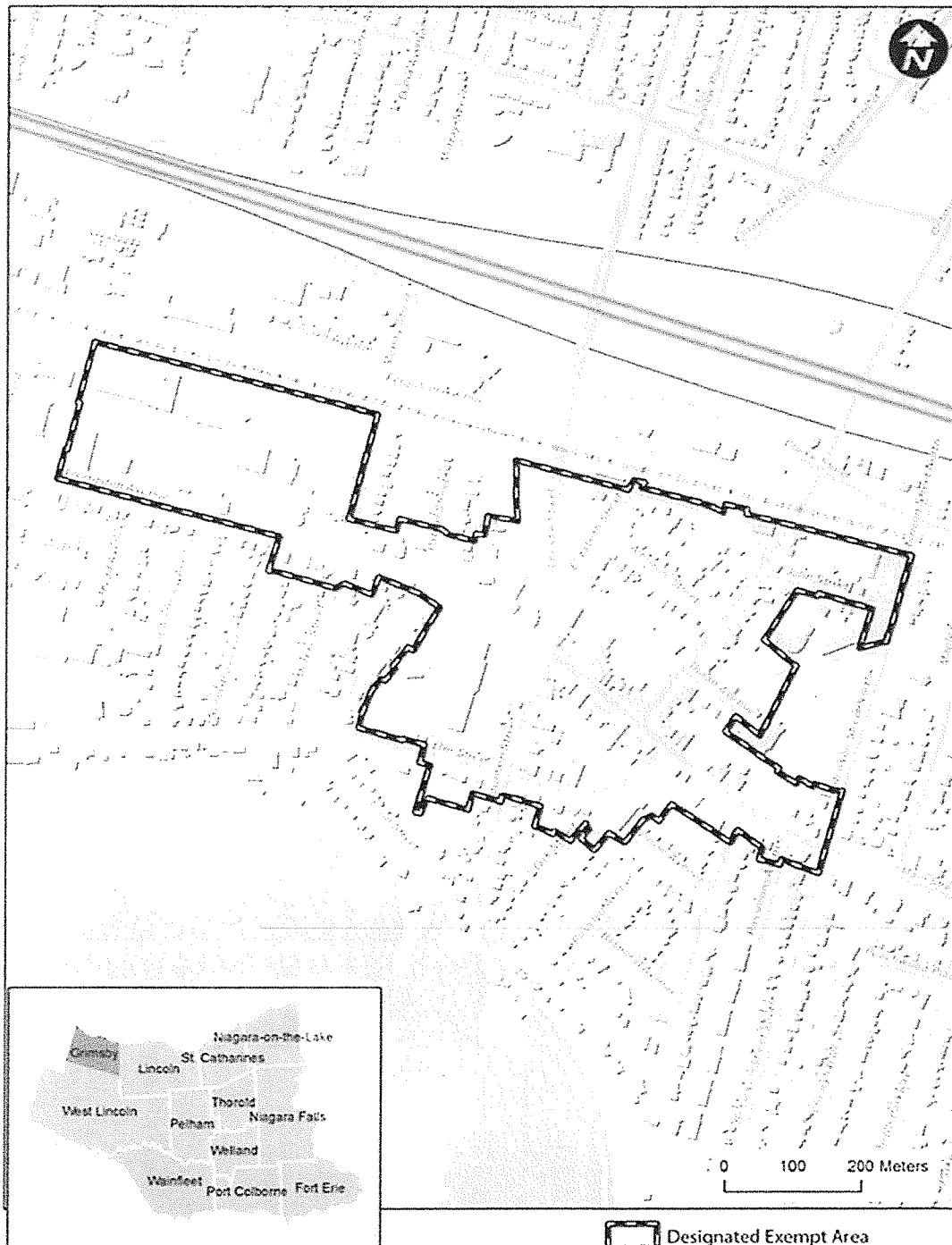
Schedule "E1"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Fort Erie



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

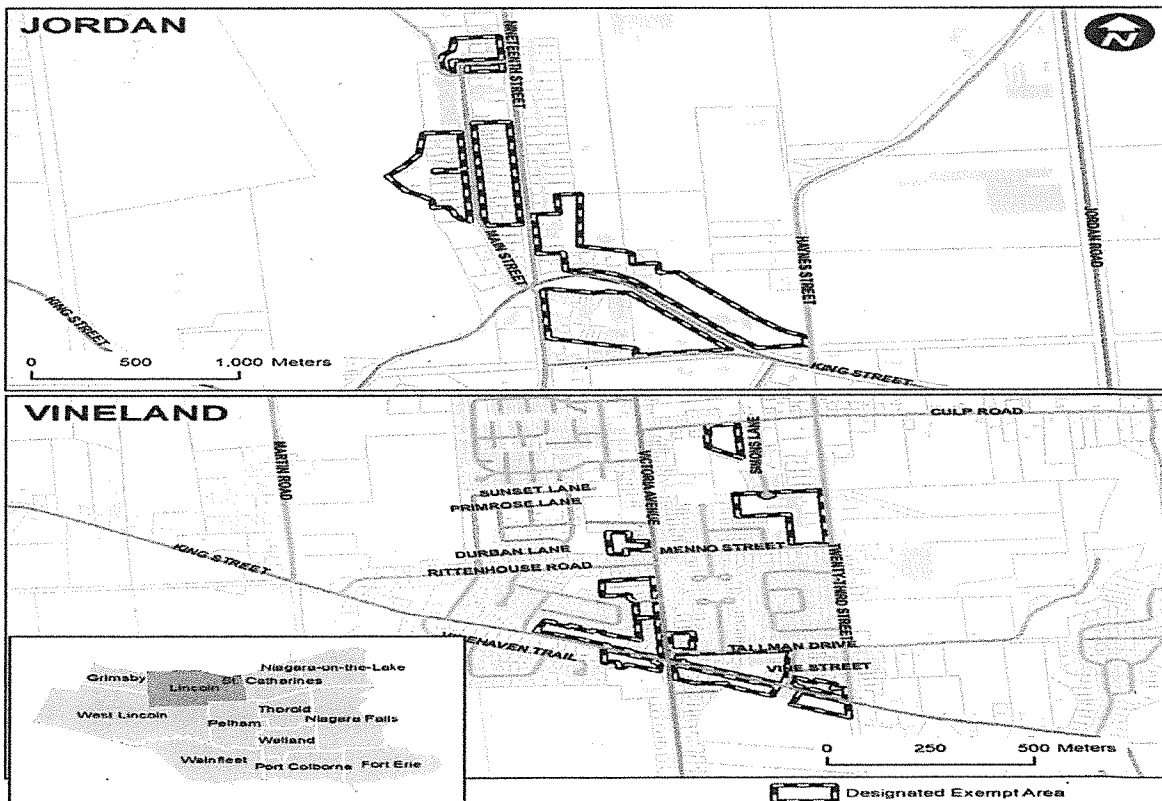
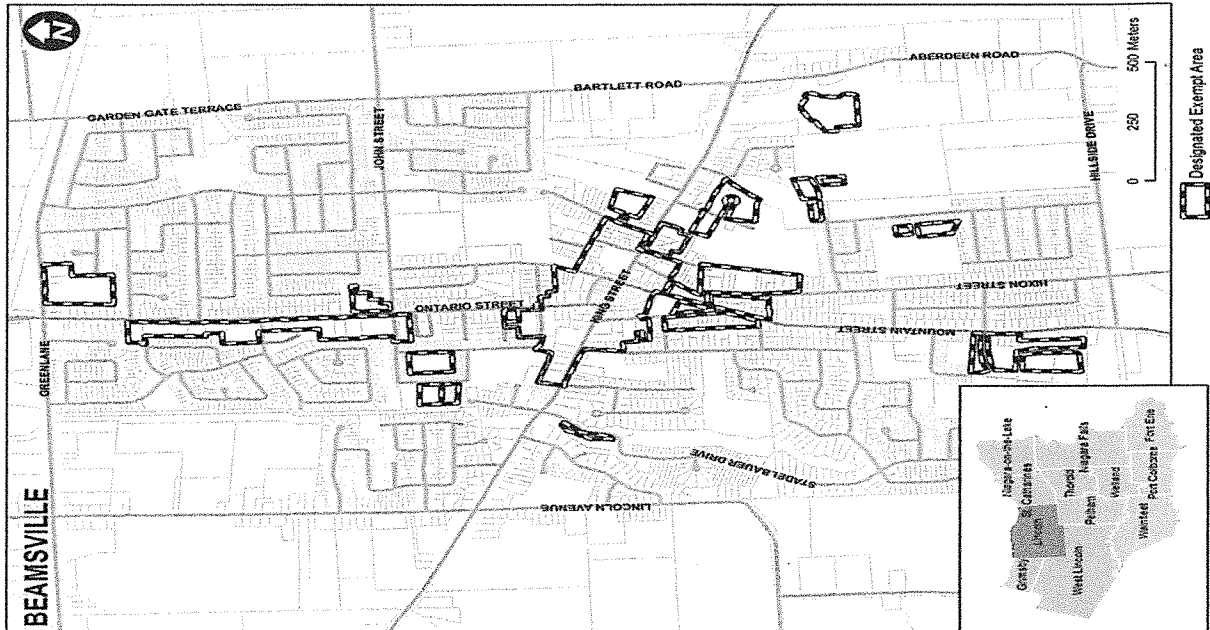
Schedule "E2"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Grimsby



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

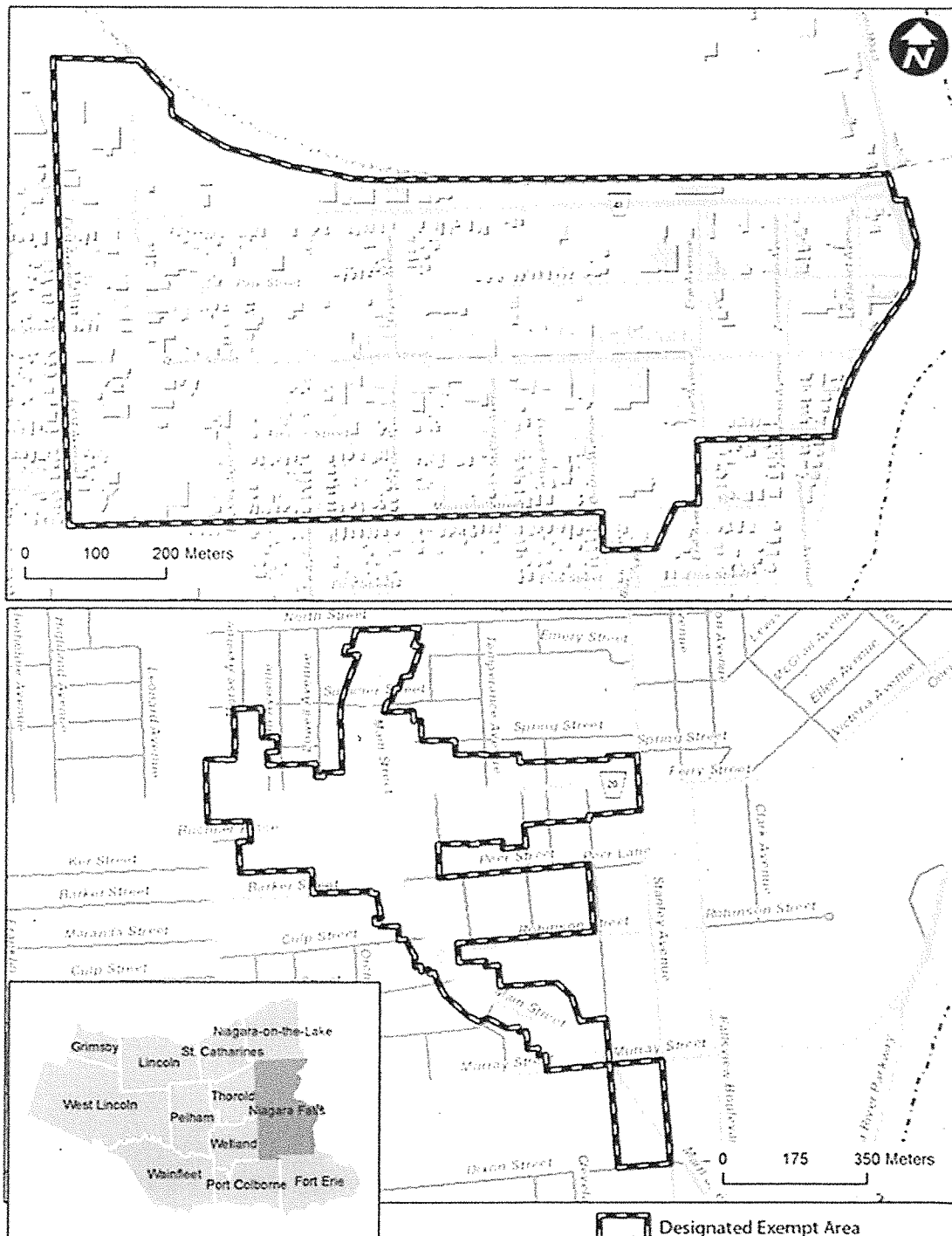
Schedule "E3"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13) Town of Lincoln



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

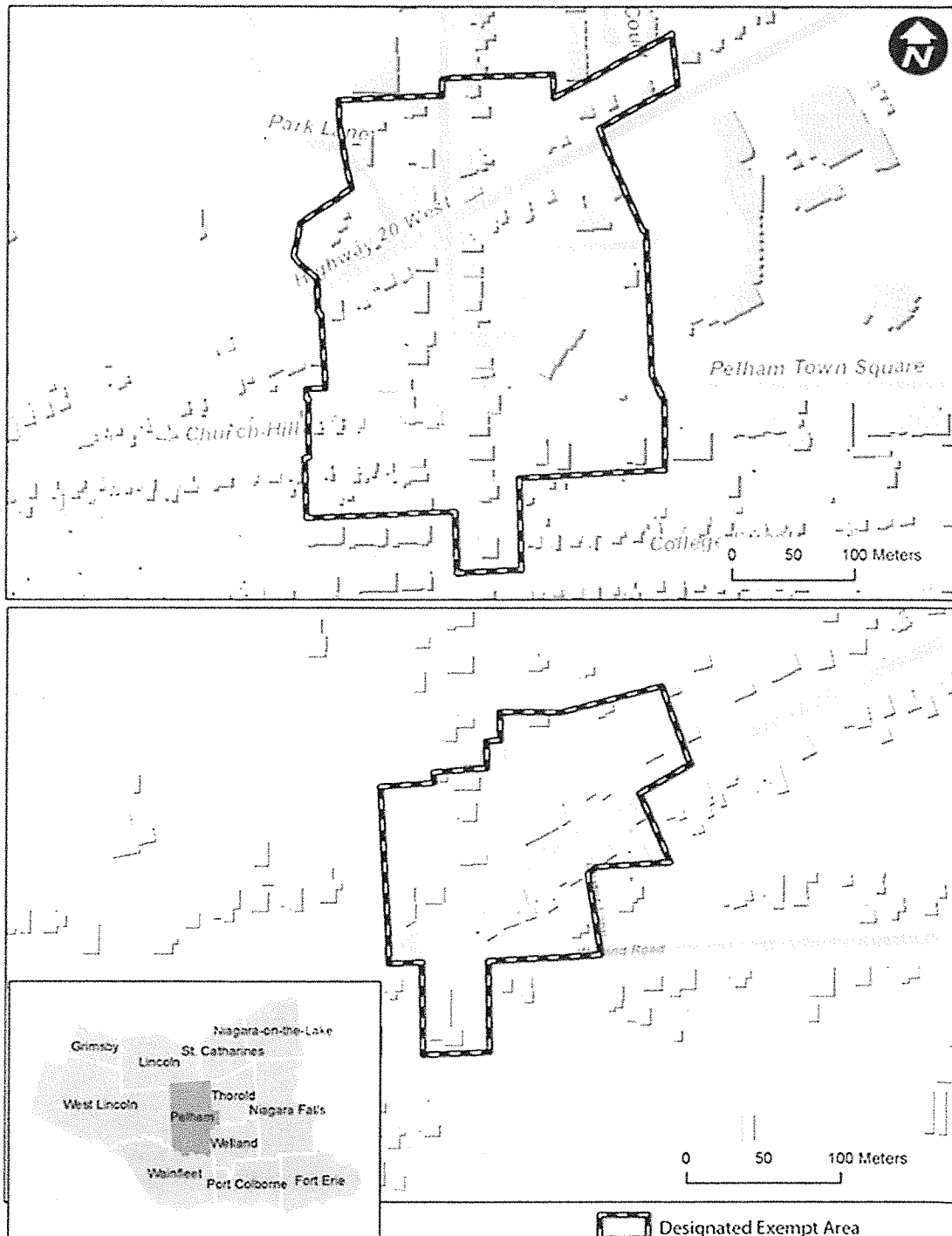
Schedule "E4"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Niagara Falls



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

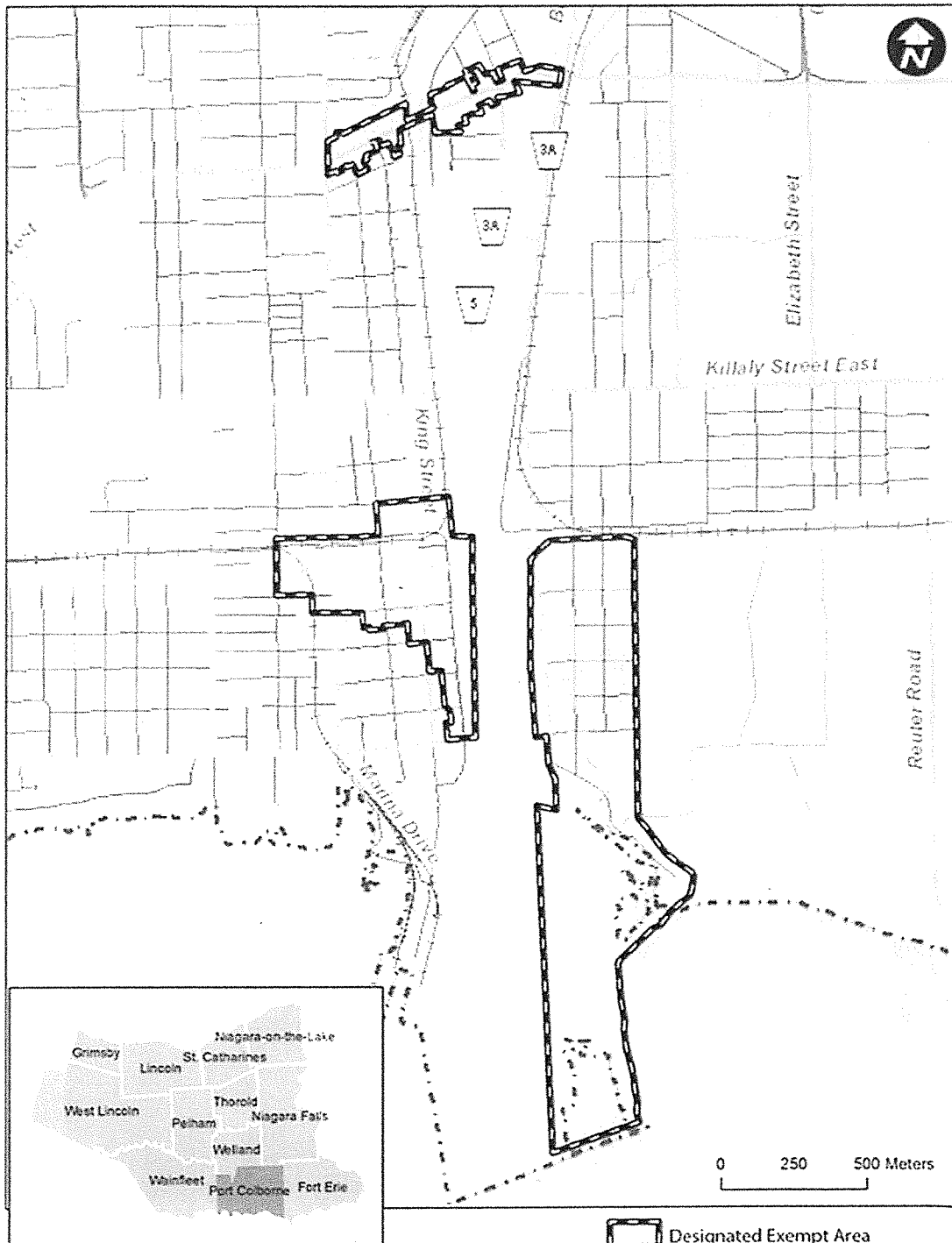
Schedule "E5"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Pelham



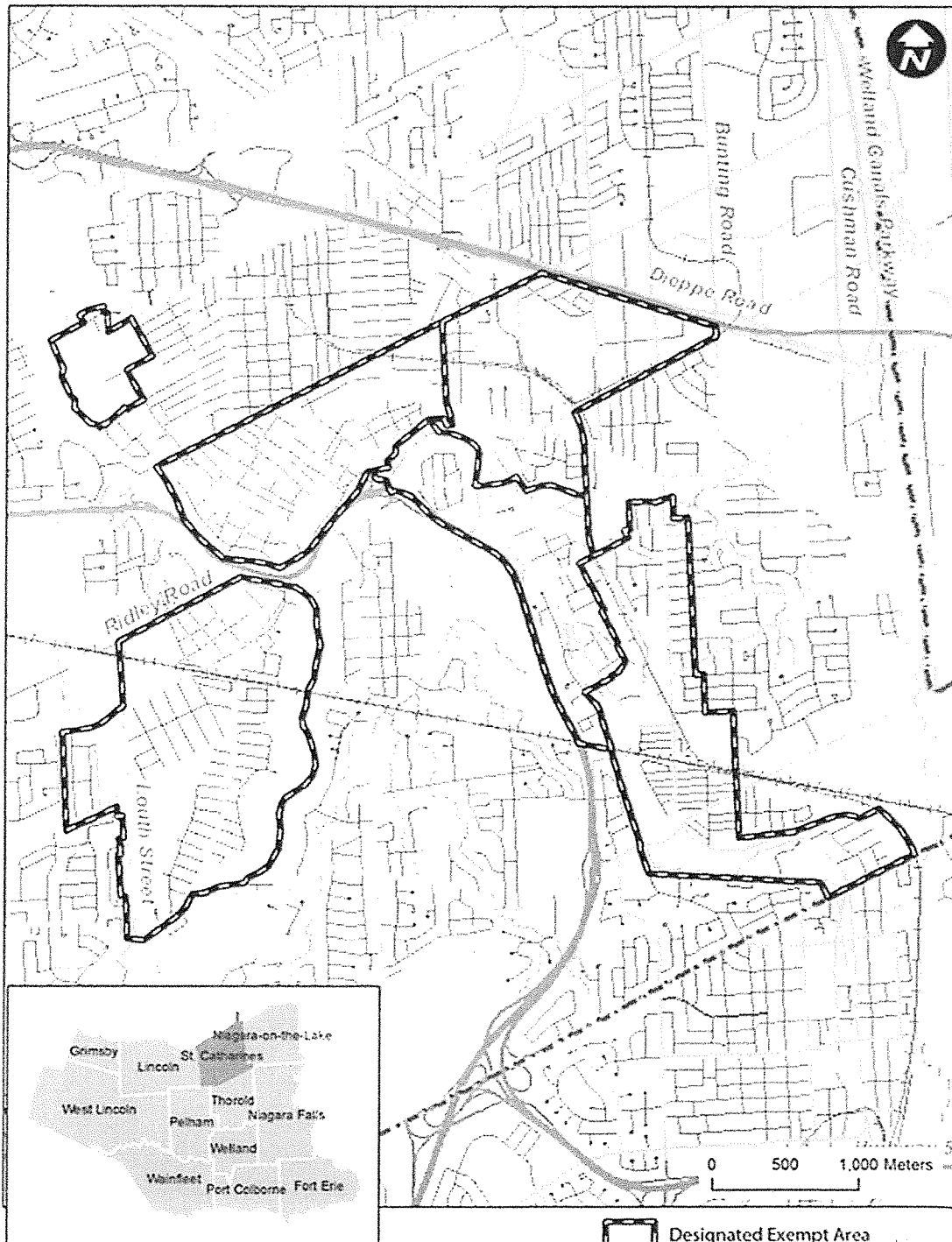
Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "E6"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Port Colborne



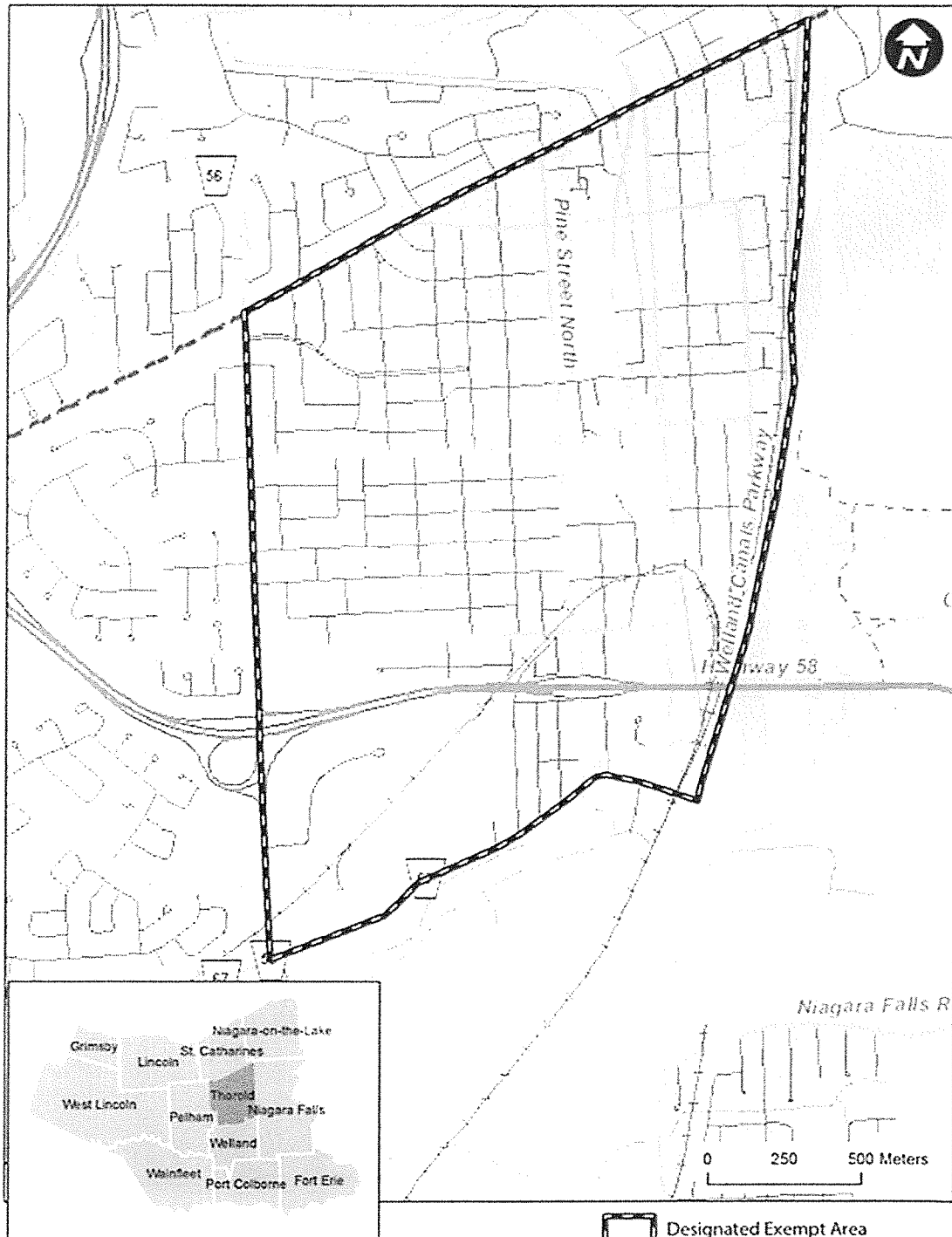
Schedule "E7"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of St. Catharines



Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

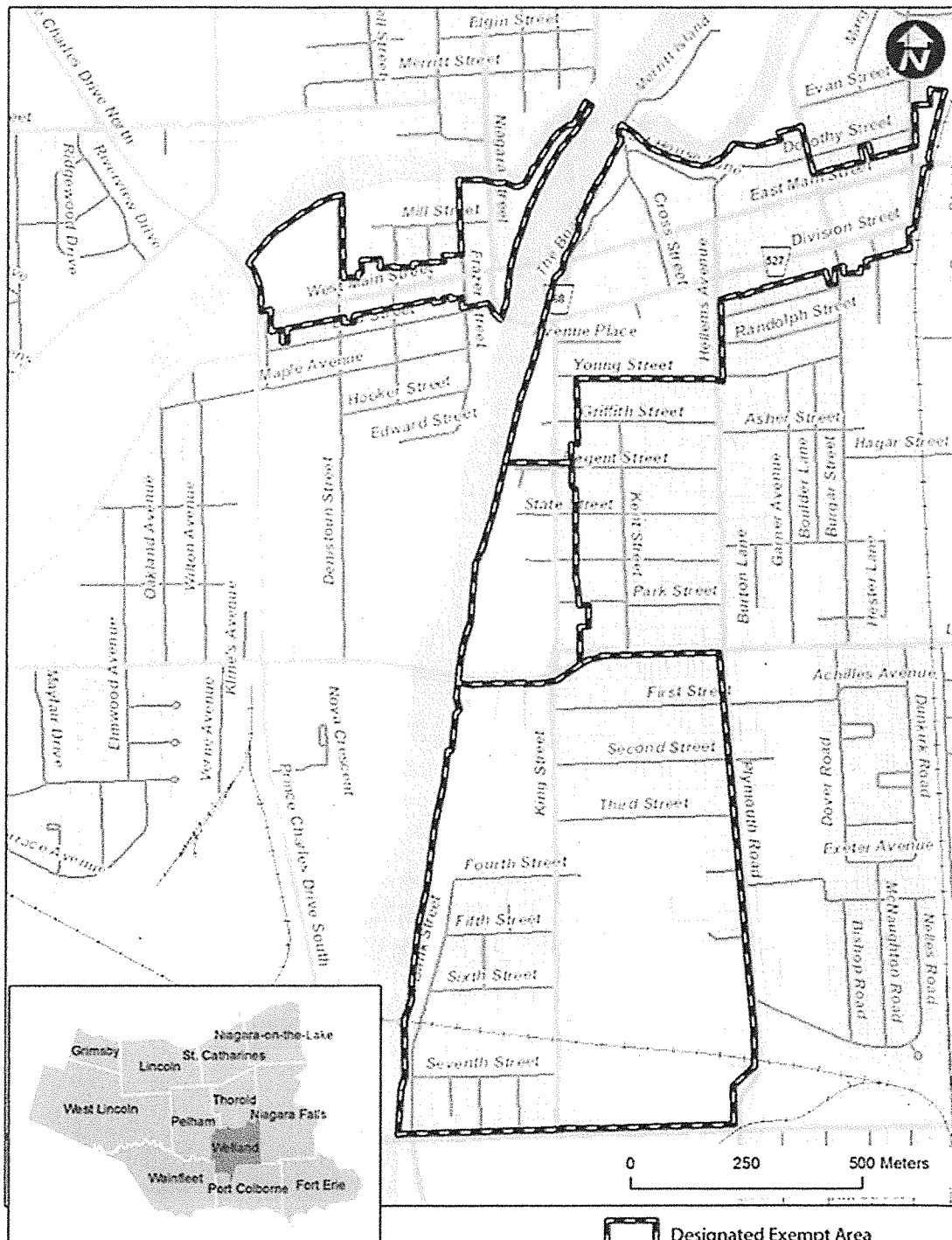
Schedule "E8"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Thorold



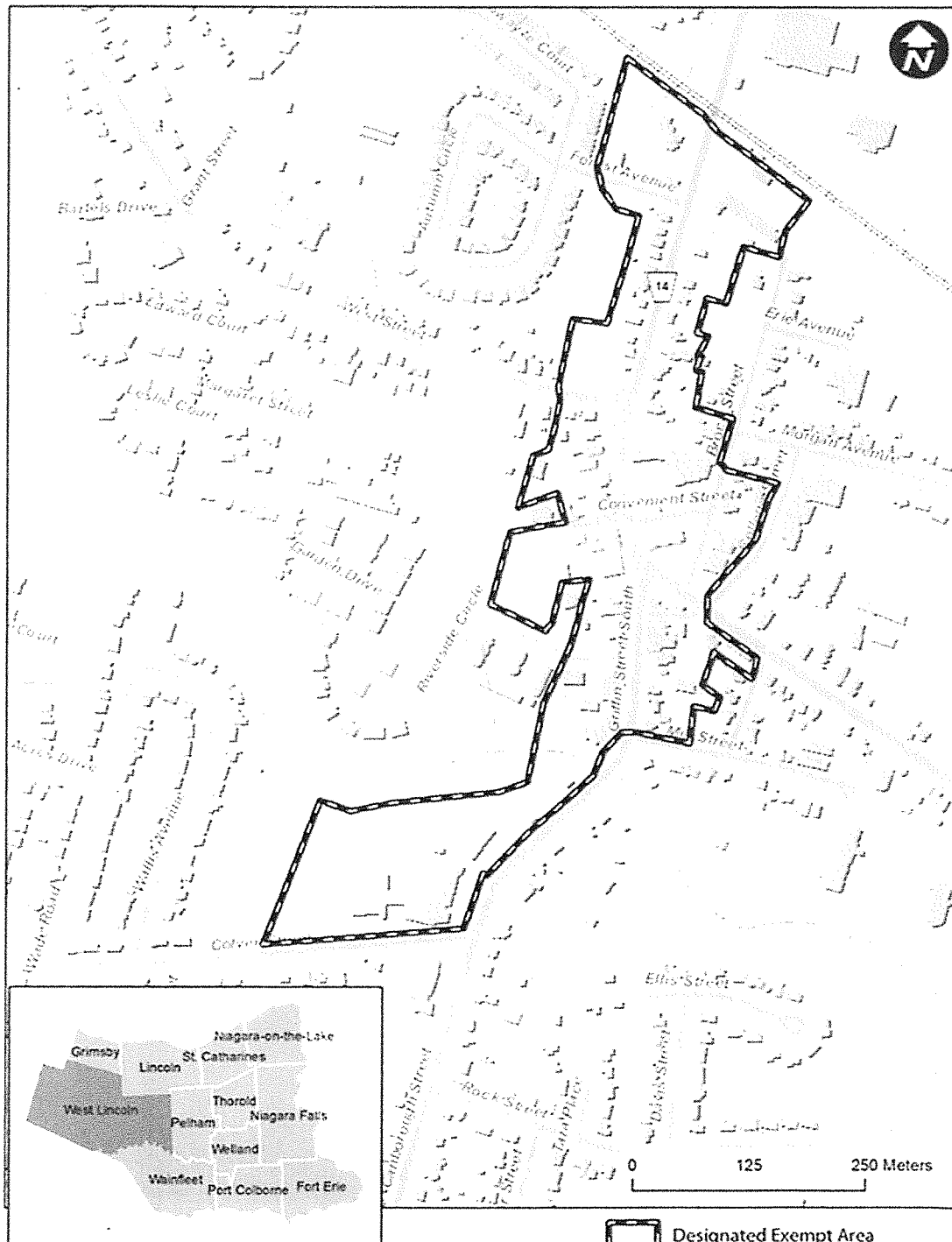
Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3

Schedule "E9"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Welland



Schedule "E10"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Township of West Lincoln



Schedule "F"

Regional Development Charges Reduction TRANSITION PROVISIONS

Please Note All of the Following:

- These Transition Provisions expire on August 31, 2022.
 - Any development proposal grandfathered under this policy will not receive a further extension.
 - Any transition agreement required pursuant to this Schedule will be registered on title to the land and can be transferred to subsequent purchaser(s) of the same land.
1. Only those lands for which an application has been submitted in accordance with this Schedule shall be transitioned so as to continue to have any Development Charge Reductions contained in Development Charges By-law 62-2012, Schedule B1(a) and calculated using the rate in effect on August 31, 2017 and as per Section 3 of this Schedule. Specially, all of the following conditions must be satisfied to the satisfaction of the Region:
 - a. Application shall have been received prior to the expiry of Development Charges By-law 62-2012 on August 31, 2017 and shall contain the following required documentation:
 - i. Proof of land transaction/ownership of land;
 - ii. A completed Phase 2 ESA¹ for the subject site that identifies mandatory remediation to meet MOECC Standards;
 - iii. Proof that remediation has commenced and is in progress or a contract for the remediation works has been awarded;
 - iv. Details of the proposed development including total units, unit type and/or total square footage of any proposed non-residential development.
 - v. An estimate of the potential Total Development Charges Payable as of August 31st, 2017 for the proposed development as identified in (iv) above.
 - b. Upon verification of all elements of Section 1(a) (above) and prior to December 31, 2017 an agreement in a form acceptable to the Niagara Region must be executed that shall contain, *inter alia*, the following terms:

¹ Prepared and signed by a Qualified Person (QP) as per Ontario Regulation 153/04, as amended.

Schedule "F"

- i. A building permit for the development must be issued or development charges prepaid prior to August 31, 2022, otherwise any agreement related to this Schedule shall become null and void and all development charges payable and any available development charge reductions, if applicable, will be calculated in accordance with the applicable development charges by-law in force at the time said charges would normally be payable.
 - ii. The manner and time by which the Owner must elect to calculate any available Development Charge Reduction pursuant to this schedule by confirming the reduction as either:
 - (a) Unit Cap being the total number of residential units and the total square footage of non-residential development proposed, which numbers may not exceed the numbers provided in Section 1(a)(iv) for purposes of the calculation in Section 3; or
 - (b) Financial Cap being the Total Development Charges Payable as calculated using the development charge rates in effect as of the date of the election, multiplied by the total number and type of residential units and the total square footage of non-residential development proposed, which dollar value may not exceed the amounts provided in Section 1(a) (v) for the purposes of the calculation in Section 3.
 - iii. The agreement shall be registered on title to the land and may be assigned to subsequent purchaser(s) of the said land with the written consent of the Niagara Region, which consent shall not be unreasonably withheld.
2. The Development Charge Reductions contained in this Development Charge By-law, Schedule E are based on Smart Growth Design Criteria approved by Regional Council on May 14th, 2014 and shall continue to apply to lands transitioned under this Schedule until August 31, 2022.
 3. Calculation of the amount to be paid under the agreement will be:

$$\text{AMOUNT TO BE PAID PURSUANT TO ANY AGREEMENT} = A - (B \times 50\%)$$

A shall be the Total Development Charges Payable less demolition credits. The Total Development Charge Payable will be calculated at the rate in effect at the time of permit issuance or prepayment, as the case may be, pursuant to any agreement multiplied by the total number of units and types, and square footage as set out in any plan submitted in support of a building permit application or agreement regarding prepayment and within the limits as per Section 1(b)(ii)

Bill 2017-98

Authorization Reference: PEDC 9-2017;
Minute Item 5.3**Schedule "F"**

B shall be the Development Charge calculated using the applicable rates in effect as of August 31st, 2017 multiplied by the number of units and types, and/or square footage as set out in any plan submitted in support of a building permit application or agreement regarding prepayment and within the limits as per Section 1(b)(ii)

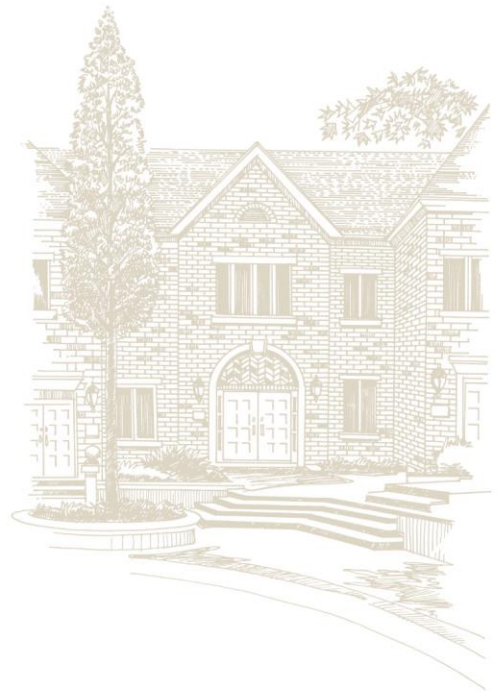
4. The agreement will provide for the administration and payment of any Smart Growth Design Criteria Reduction that may eligible to be refunded after development, shall be provided in a manner and form satisfactory to the Region.
5. Any Development Charge for any lands covered by any agreement pursuant to this Schedule which may be payable after September 1, 2022 will be determined at the time of building permit issuance less any amount prepaid on or before August 31, 2022 in accordance with any written agreement between the Region and the Owner. If the pre-payment exceeds the actual development charge payable a refund without interest will be issued by the Region to the party that originally made the prepayment.

May 5, 2017 Update Report

Niagara Region Correction to:

“Region of Niagara Development Charge Background Study”

May 5, 2017



Plaza Three
101–2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 Planning for growth

Background

This document is being provided to accompany the Niagara Region Development Charge Background study dated April 28, 2017 to update wording in Chapter 7 to reflect the most recent version of the draft by-law.

Section 7.3.4 “Exemptions (full or partial)” of the existing report should be replaced with the following:

a) Statutory exemptions

- industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to development charges (s.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 (s.3);
- residential 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 s.2 of O.Reg. 82/98).

b) Non-statutory exemptions

- Granny flats;
- parking structures;
- non-residential lands and buildings used for agricultural use;
- the portion of a place of worship used for religious services;
- lands and buildings used or intended to be used as municipal housing project facilities;
- the proportionate share of lands and buildings used for affordable housing projects;
- gas station canopies; and
- long-term care homes (reduced by 50%).

c) Rules with Respect to Brownfield Development located within the Urban Areas for Regional Development Charges Reduction

- For all Development Charges reductions pursuant to this Schedule “D”, the total amount of the reduction shall not exceed the total cost of remediation. For confirmation that a development is to be considered a Brownfield development, costs associated with remediation of brownfields may be subject to verification, third party review, or independent audit, at the expense of the applicant, if required by the Region.
- Brownfield Development Located within the Urban Areas
 - The applicable development charge shall be reduced by the total cost of remediation for brownfield development located within the approved Urban Area as set out in Schedule “D1 to D11” to this By-law, as may be amended from time to time; as approved by Council of the Region, without amendment to this Bylaw.
 - In the case of a qualifying project under this schedule, the costs associated with remediation may be applied to other Regional, local or Provincial programs but only for those eligible costs over and above eligible costs not paid under Schedule “D”.
 - Where funding for eligible costs have been or will be compensated from another funding source, those costs will be ineligible for a reduction under Schedule “D”.

d) Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas for Regional Development Charges Reduction Program

- For all Development Charge reductions pursuant to this Schedule “E”, the interim Development Charge Reduction Program for development located with the Designated Exemption Areas, as set out in Schedule “E1 to E10” and to Brownfield Developments within the Urban Areas, as set out in Schedule D1 to D11 to this By-law, will provide a maximum 50% reduction in Development Charges provided the Smart Growth Design Criteria endorsed by Council of the Region on May 14, 2014 and/or any level of LEED certification are achieved.
- The interim Development Charge Reduction Program will remain in effect until a revised Development Charge Reduction Program is approved by Council of the Region.

- The interim Development Charge Reduction Program may be eliminated or modified as approved by Regional Council without amendment to the By-Law.
- In the case of a qualifying project under Schedule D, the total benefit shall not exceed the total Development Charges payable.

October 4, 2017 Addendum #1

Addendum to:

**Region of Niagara
Development Charge
Background Study**

October 4, 2017



Plaza Three
101-2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 **Planning for growth**

List of Acronyms and Abbreviations

D.C.	Development Charge
D.C.A.	Development Charges Act
E.A.	Environmental Assessment
F.I.R.	Financial Information Return
G.F.A.	Gross floor area
P.P.U.	Persons per unit
P.S.	Pumping Station
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
sq.ft.	Square foot

Addendum Report to April 28, 2017 Development Charges Background Study

1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the Region has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The following provides a summary of the key dates in the development charge by-law process:

April 28, 2017 – Release of the D.C. Background Study Update and draft by-law

May 4, 2017 – Notice of Public Meeting and release of study

May 5, 2017 – Correction to April 28th report released

June 8, 2017 – Scheduled date of Public Meeting

July 2, 2017 – D.C. Taskforce meeting for final review of D.C.s, recommendations to reduce the capital program and charges, as well, to discuss phase-in and grandfathering of Brownfield reduction program from one to four years

July 20, 2017 – Passage of Development Charges By-law

The purpose of this addendum report is to provide for changes to the April 28, 2017 D.C. Background Study, as corrected May 5, 2017 and as determined at the July 4, 2017 D.C. Taskforce meeting. Subsequently the changes were approved at the July 20, 2017 Council meeting at which time the revised D.C. By-law was passed. These refinements are in relation to:

- a. Reduction of provision for social housing units;
- b. Removal of provisions for social and children's services and police services; and
- c. Updates to policies in the approved by-law.

These refinements have formed the basis for the currently approved by-law (2017-68).

2. Discussion

This section of the addendum report provides an explanation for the above-noted refinements. It is noted that the refinements have impacted the calculated development charges and therefore the corresponding tables have been updated.

2.1 Reduction of Provision for Social Housing Units

Upon further review of the background study by the D.C. Taskforce, it was determined that the provision for additional social housing units be reduced by 50%. The recalculation reduces the amount to include in the D.C. calculations to \$23.56 million.

2.2 Removal of Provisions for Social and Child Services and Police Facilities

Upon further review of the background study by the D.C. Taskforce, it was determined that the provisions for additional social and child services space, as well as additional police facilities be removed from the calculations. Studies are currently underway regarding the need to expand facility space for these services. Therefore any growth-related capital needs identified will be included in subsequent development charge studies.

Removing the provision from social and child services results in no capital costs being included for this service. Removing the provision for police facilities results in the net growth-related amount for Police being reduced from \$43.21 million to \$20.61 million.

2.3 Changes in Policies in the Approved By-law

A number of revisions to the draft by-law occurred after the release of the background study based on further consultation with the local area municipalities and the development community. The background study and draft by-law were reviewed by the D.C. Taskforce, Council, and staff and the following revisions were provided:

1. Removal of charitable institutions from the list of exemptions
2. Inclusion of a two-step phase-in provision which provides for a reduced charge from September 1, 2017 to August 31, 2019 and the fully calculated rate, as amended, from September 1, 2019 to August 31, 2022
3. Rules with Respect to Brownfield Development located within the Urban Areas
 - a. Wording was added such that Schedule D is subject to the applicable transition provisions included in Schedule G of the by-law

4. Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Development within the Urban Areas
 - a. Changed wording to add that the Smart Growth Design Criteria may be amended or eliminated at the discretion of Regional Council in which case the development charge reductions granted under this Schedule may also be amended or eliminated without amendment to the By-law.
5. Addition of Schedule F – Development Charges Reduction Program for Brownfield Redevelopment
 - a. Schedule F was added to provide details regarding the eligible remediation costs under the Brownfield Redevelopment reduction program.
6. Addition of Schedule G – Regional Development Charges Reduction Transition Provisions
 - a. Schedule G was added to provide transition provisions to the changes in policies.

2.4 Overall Change in the D.C. Calculation

Based on the changes noted above, the calculated development charge (single/semi-detached unit) has decreased from \$19,006 to \$17,569. In regard to the non-residential development charge, the calculated charge per square foot of gross floor area has decreased from \$11.41 for commercial, \$4.73 for industrial, and \$8.15 for institutional to \$11.11 for commercial, \$4.63 for industrial, and \$7.95 for institutional.

The above changes have been incorporated into the calculations. The following summary outlines the charges as calculated in the 2017 D.C. report dated April 28, 2017 and the charges calculated in this addendum report.

Residential (Single Detached) Comparison

Service	Calculated Charge Based on April 28, 2017 Background Study	Calculated Charge Based on July 20, 2017 By-law
Municipal Wide Services:		
Services Related to a Highway	6,297	6,297
Police Services	696	377
General Government	212	212
Long Term Care	1,212	1,212
Provincial Offences Act	48	48
Health	148	148
Social and Child Services	194	-
Emergency Medical Services	166	166
Social Housing	2,123	1,199
Waste Diversion	362	362
Total Municipal Wide Services	11,457	10,020
Urban Specific Services:		
Wastewater Services	4,420	4,420
Water Services	3,129	3,129
Total Area Specific Services	7,549	7,549
Grand Total - Urban Area	19,006	17,569

Non-Residential (per ft².) Comparison

Service	Commercial		Industrial		Institutional	
	Calculated Charge Based on April 28, 2017 Background Study	Calculated Charge Based on July 20, 2017 By-law	Calculated Charge Based on April 28, 2017 Background Study	Calculated Charge Based on July 20, 2017 By-law	Calculated Charge Based on April 28, 2017 Background Study	Calculated Charge Based on July 20, 2017 By-law
Municipal Wide Services:						
Services Related to a Highway	4.45	4.45	1.85	1.86	3.18	3.18
Police Services	0.50	0.27	0.21	0.12	0.36	0.20
General Government	0.19	0.19	0.07	0.07	0.13	0.13
Long Term Care	0.35	0.34	0.14	0.14	0.25	0.25
Provincial Offences Act	0.04	0.04	0.02	0.02	0.03	0.03
Health	0.05	0.05	0.02	0.02	0.03	0.03
Social and Child Services	0.06	-	0.02	-	0.04	-
Emergency Medical Services	0.04	0.04	0.02	0.02	0.03	0.03
Social Housing	-	-	-	-	-	-
Waste Diversion	0.31	0.31	0.12	0.12	0.22	0.22
Total Municipal Wide Services	5.98	5.68	2.47	2.37	4.27	4.07
Area Specific Services:						
Wastewater Services	3.18	3.18	1.32	1.32	2.27	2.27
Water Services	2.25	2.25	0.94	0.94	1.61	1.61
Total Area Specific Services	5.43	5.43	2.26	2.26	3.88	3.88
Grand Total - Urban Area	11.41	11.11	4.73	4.63	8.15	7.95

2.5 Changes to the Background Report

Based upon the above, the following revisions are made to the pages within the background study (new pages are appended to this report):

- a. Page (iii) – updated summary of calculated charges to reflect decreased charge and phase-in amounts.
- b. Page (iv) – updated summary of gross capital costs and the net costs to be recovered over the life of the by-law.
- c. Page (vi) – updated Table ES-1 for phase-in amount and added Table ES-2 to show fully phased-in amount.
- d. Page 5-10 – updated wording to remove provision for social and child services facility space.
- e. Page 5-11 – updated capital infrastructure detail sheet to remove provision for additional social and child services space.
- f. Page 5-15 – updated wording to reflect 50% reduction of provision for additional units.
- g. Page 5-16 – updated capital infrastructure detail sheet to reduce the provision by 50%.
- h. Page 5-29 – updated wording to remove the provision for additional facility space.
- i. Page 5-31 – updated capital infrastructure detail sheet to remove the provision for additional facility space.
- j. Pages 6-4 to 6-7 – updated D.C. calculation tables for calculation of reduced charges, as noted above.
- k. Pages 7-5 & 7-6 – updated policies to reflect changes in the by-law, as approved, as discussed in section 2.3 above.
- l. Page C-3 – updated table C-1 to reflect the removal and reduction of the provisions mentioned above.
- m. Page I-4 – updated annualized expenditure amount based on the removal and reduction of the provisions, as mentioned above.
- n. Page I-5 – updated table to reflect removal and reduction of the provisions, as mentioned above.
- o. Approved By-law – the by-law, as approved, was updated to add-in the phasing provision, as well as to incorporate the policy changes as identified in section 2.3 above.

3. Administrative Revisions Anticipated

Sections 1 & 2 provide for a summary of the revisions to the calculations and by-law policies that were adopted by Council in By-law 2017-68. Since the passage of By-law 2017-68, staff have continued to review policies contained in the by-law and have determined that there are a few administrative revisions necessary to provide clarity to the application of the by-law. Therefore, a second public meeting has been scheduled for October 5, 2017. Notice of the Public Meeting was provided on September 7, 2017. Upon receipt of feedback, a recommended new by-law will be provided to Council for their consideration on October 5, 2017. Upon passage of the new by-law, the current by-law (2017-68) will be repealed. Once the new by-law is passed, required notice, as per the D.C.A., will be given and the 40-day appeal period will begin. Staff report CSD 63-2017 outlines the recommendations.

Amended Pages

(Inserted throughout the body of the report)

December 7, 2017 Addendum #2

Addendum #2 to:

**Region of Niagara
Development Charge
Background Study**

December 7, 2017



Plaza Three
101-2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 **Planning for growth**

List of Acronyms and Abbreviations

D.C.	Development Charge
D.C.A.	Development Charges Act
E.A.	Environmental Assessment
F.I.R.	Financial Information Return
G.F.A.	Gross floor area
P.P.U.	Persons per unit
P.S.	Pumping Station
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
sq.ft.	Square foot

Addendum Report #2 to April 28, 2017 Development Charges Background Study

1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the Region has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The following provides a summary of the key dates in the development charge by-law process:

April 28, 2017 – Release of the D.C. Background Study and draft by-law

May 4, 2017 – Notice of Public Meeting and release of study

May 5, 2017 – Correction to April 28th report released

June 8, 2017 – Date of first Public Meeting

July 4, 2017 – D.C. Taskforce meeting for review of D.C.s, recommendations to reduce the capital program and charges, as well, to discuss phase-in and grandfathering of Brownfield reduction program from one to four years

July 20, 2017 – Passage of Development Charges By-law 2017-68

August, 2017 – Staff determination that By-law 2017-68 should be amended based on input from stakeholders

September 7, 2017 – Notice of second Public Meeting

October 5, 2017 – Second Development Charges Public Meeting to consider revised By-law

October 18, 2017 – Corporate Services Committee consideration of the Development Charges By-law

October 26, 2017 – Consideration of the Development Charges By-law by Council

November 8, 2017 – Planning and Development Committee Consideration of the Development Charges By-law

November 16, 2017 – Council Passage of Development Charges By-law 2017-98
(and repeal of By-law 2017-68)

The purpose of this addendum report is to provide for changes to the April 28, 2017 D.C. Background Study, as updated May 5, 2017, and amended October 4, 2017. Subsequent changes were discussed at the October 4th, October 18th, October 26th, November 8th and November 16th Council and Committee meetings. The changes were approved at the November 16, 2017 Council meeting at which time the new D.C. By-law was passed. These refinements are in relation to:

- a. Removal of the 4+ bedroom category for apartments and resulting update to the calculated 2+ bedroom charge,
- b. Correction to the table in the Executive Summary under item 6 and Table 6-6, and
- c. Revisions to the policies outlined in the by-law.

These refinements have formed the basis for the currently approved (November 16, 2017) by-law (2017-98).

2. Discussion

This section of the addendum report provides an explanation for the above-noted refinements. It is noted that the refinements have impacted the calculated development charges for the apartment categories and therefore the corresponding tables have been updated.

2.1 Removal of the 4+ Bedroom Category for Apartments

Subsequent to the adoption of By-law 2017-68, further discussions were undertaken between staff and Council, with additional feedback from stakeholders, regarding the 4+ bedroom category for apartments. Based on the discussions, it was decided to remove this category and that the 2 and 3 bedroom category be changed to 2+ bedrooms. Based on this change, the following table provides for a comparison of the apartment categories provided in By-law 2017-68 and the updated adopted apartment categories.

Residential (Apartments) Comparison

Service	Calculated Charge Based on By-law 2017-68		Calculated Charge Based on By-law 2017-98
	Apartments - 4+ Bedrooms	Apartments - 2 & 3 Bedrooms	Apartments - 2+ Bedrooms
Municipal Wide Services:			
Services Related to a Highway	8,655	4,068	4,371
Police Services	518	244	262
General Government	291	137	147
Long Term Care	1,666	783	841
Provincial Offences Act	66	31	33
Health	203	96	103
Social and Child Services	-	-	-
Emergency Medical Services	228	107	115
Social Housing	1,648	775	832
Waste Diversion	497	234	251
Total Municipal Wide Services	13,772	6,475	6,955
Urban Specific Services:			
Wastewater Services	6,076	2,856	3,068
Water Services	4,301	2,021	2,172
Total Area Specific Services	10,377	4,877	5,240
Grand Total - Urban Area	24,149	11,352	12,195

2.2 Correction to: 1) Table in the Executive Summary Under Item 6; and 2) Table 6-6 of the Background Study

Upon further review of the background study, it was determined that there was a calculation error in determining the costs to be incurred over the life of the by-law with regard to services related to a highway. The corresponding tables have been updated.

2.3 Revisions to Policies in the Approved By-law

Subsequent to the adoption of By-law 2017-68, a number of revisions were made to the D.C. By-law based on further consideration and discussion by staff and Council. The following revisions are provided below:

1. Definition of agricultural use – removed wording that required a development to have a farm business registration number or be assessed in the Farmland Realty Tax Class to be defined as an agricultural use.
2. Rules with Respect to Exemptions for Industrial Enlargement and Industrial Grant Program – added wording to note that the Region shall maintain a grant program as a grant towards industrial development charges in accordance with Development Charge Grant Program approved by the Region on July 20, 2017.

3. Rules with Respect to Brownfield Development located within the Urban Areas (Schedule D) – revised wording to provide further detail and clarity to the requirements of eligibility for the Brownfields Development Charge Reduction Program.
4. Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas (Schedule E) – added wording to include that redevelopment that commenced prior to September 1, 2017 may continue to be eligible under the transition provisions outlined in Schedule F of the by-law.
5. Development Charges Reduction Program for Brownfield Redevelopment (Schedule F) – This schedule has now been incorporated into Schedule D and includes some revised wording.
6. Regional Development Charges Reduction Transition Provisions (Schedule G) – This schedule now becomes Schedule F and includes some revised wording.

2.5 Changes to the Background Report

Based upon the above, the following revisions are made to the pages within the background study (new pages are appended to this report):

- a. Page (iv) – updated summary of gross capital costs and the net costs to be recovered over the life of the by-law.
- b. Page (vii) and (viii) – updated Table ES-1 and Table ES-2 which provides for only two categories of apartments.
- c. Pages 1-3 and 1-4 – updated Figure 1-1 to include additional key dates in the D.C. process.
- d. Pages 6-1 to 6-5 – updated to remove the 4+ bedroom and 2&3 bedroom categories and replace with 2+ bedroom category for the D.C.s calculated.
- e. Page 6-7 – revised Table 6-6 to reflect corrected numbers for costs to be incurred over the life of the by-law with respect to services related to a highway.
- f. Page 7-5 and 7-6 – revised reference to schedule F instead of Schedule G and revised wording regarding the designated exemptions areas outlined in Schedules D and E.
- g. Appendix J – approved By-law 2017-98.

Amended Pages

(Inserted throughout the body of the report)