



 **Watson
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ECONOMISTS LTD.

Development Charges Background Study

Town of Essex

June 20, 2019

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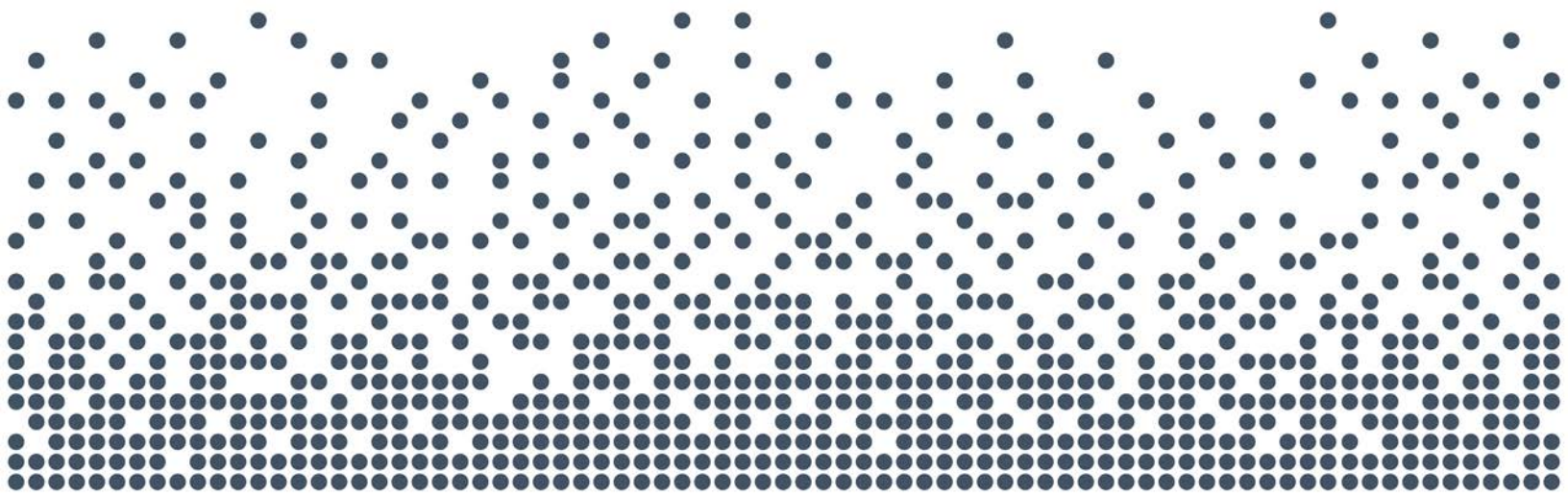
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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.P.	Asset management plan
D.C.	Development charge
D.C.A.	Development Charges Act, 1997, as amended
F.I.R.	Financial Information Return
G.F.A.	Gross floor area
L.P.A.T.	Local Planning Appeal Tribunal
O.I.P.C.	Ontario Infrastructure Projects Corporation
O.M.B.	Ontario Municipal Board
O.P.P.	Ontario Provincial Police
O.Reg.	Ontario Regulation
P.O.A.	Provincial Offences Act
P.P.U.	Persons per unit
S.B.R.	Sequencing batch reactor
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
sq.ft.	square foot
sq.m	square metre



Executive Summary



Executive Summary

1. The report provided herein represents the Development Charges (D.C.) Background Study for the Town of Essex required by the Development Charges Act, 1997 (D.C.A.). This report has been prepared in accordance with the methodology required under the D.C.A. The contents include the following:
 - Chapter 1 – Overview of the legislative requirements of the Act;
 - Chapter 2 – Review of present D.C. policies of the Town;
 - Chapter 3 – Summary of the residential and non-residential growth forecasts for the Town;
 - Chapter 4 – Approach to calculating the D.C.;
 - Chapter 5 – Review of historical service standards and identification of future capital requirements to service growth and related deductions and allocations;
 - Chapter 6 – Calculation of the D.C.s;
 - Chapter 7 – D.C. policy recommendations and rules; and
 - Chapter 8 – By-law implementation.
2. D.C.s provide for the recovery of growth-related capital expenditures from new development. The D.C.A. is the statutory basis to recover these charges. The methodology is detailed in Chapter 4; a simplified summary is provided below:
 - 1) Identify amount, type and location of growth;
 - 2) Identify servicing needs to accommodate growth;
 - 3) Identify capital costs to provide services to meet the needs;
 - 4) Deduct:
 - Grants, subsidies and other contributions;
 - Benefit to existing development;
 - Statutory 10% deduction (soft services);
 - Amounts in excess of 10-year historical service calculation;
 - D.C. reserve funds (where applicable);



- 5) Net costs are then allocated between residential and non-residential benefit; and
 - 6) Net costs divided by growth to provide the D.C. charge.
3. A number of changes to the D.C. process need to be addressed as a result of the Smart Growth for our Communities Act, 2015 (Bill 73). These changes have been incorporated throughout the report and in the updated draft by-law, as necessary. These items include:
- a. Area-rating: Council must consider the use of area-specific charges.
 - b. Asset Management Plan for New Infrastructure: The D.C. background study must include an asset management plan that deals with all assets proposed to be funded, in whole or in part, by D.C.s. The asset management plan must show that the assets are financially sustainable over their full lifecycle.
 - c. 60-day Circulation Period: The D.C. background study must be released to the public at least 60-days prior to passage of the D.C. by-law.
 - d. Timing of Collection of Development Charges: The D.C.A. now requires D.C.s to be collected at the time of the first building permit.
4. The growth forecast (Chapter 3) on which the Town-wide D.C. is based, projects the following population, housing and non-residential floor area for the 10-year (2019 to 2028) and 13-year (2019 to 2031) periods.

Measure	10 Year 2019-2028	13 Year 2019-2031
(Net) Population Increase	1,275	1,439
Residential Unit Increase	582	680
Non-Residential Gross Floor Area Increase (ft ²)	762,600	875,300

Source: Watson & Associates Economists Ltd. Forecast 2019

5. On August 25, 2014, the Town of Essex passed By-law 1344 under the D.C.A. This by-law was amended on December 19, 2016 via By-law 1558, December 18, 2017 via By-law 1657, and on May 7, 2018 via By-law 1686. The by-law (as



amended) imposes D.C.s on residential and non-residential uses. This by-law will expire on September 1, 2019. The Town is undertaking a D.C. public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for July 15, 2019 with adoption of the by-law on August 19, 2019.

6. The municipal wide D.C.s currently in effect are \$7,471 for single detached dwelling units. The current municipal wide non-residential development charges are \$2.03 per square foot of gross floor area. In addition to the municipal wide development charges, there is also a development charge for wastewater services which vary depending on the ward. The table below summarizes the current charges by ward.

Service	Residential	Non-Residential
	Single and Semi-Detached Dwelling	(per sq.ft. of Gross Floor Area)
Area Specific Charges - Wastewater		
Ward 1 - Essex Service Area	3,859	2.26
Ward 2 - Colchester North Service Area	828	-
Ward 3 - Colchester South Service Area	1,997	1.27
Ward 4 - Harrow Service Area	2,816	1.57

7. This report has undertaken a recalculation of the charges based on future identified needs (presented in Table ES-1 for residential and non-residential development) and has been provided on a municipal-wide basis for all services except wastewater which is calculated on an area specific basis by ward. For municipal wide services, the calculated single-detached unit charge is \$8,096 and the calculated non-residential charge is \$2.16 per square foot of building area. For wastewater services, the single detached unit charges and the non-residential charges by ward are presented below on a per square foot of building area basis. These rates are submitted to Council for its consideration.



Service	Residential	Non-Residential
	Single and Semi-Detached Dwelling	(per sq.ft. of Gross Floor Area)
Area Specific Charges - Wastewater		
Ward 1 - Essex Service Area	3,351	2.03
Ward 2 - Colchester North Service Area	872	0.00
Ward 3 - Colchester South Service Area	2,067	1.18
Ward 4 - Harrow Service Area	2,484	1.43

8. Charges are also in effect for Wind Turbines, Telecommunication Towers and Solar Farms. For each type of development, charges will be imposed for Services Related to a Highway, Fire Protection Services, Policing Services and Administration. The rates currently in effect are \$1.65 per square foot for solar farms and \$2,740 per unit for Wind Turbines and Telecommunication Towers. This report has undertaken a recalculation of the charges and solar farms will be charged on a \$1.93 per sq.ft. basis for the panel surfaces whereas the other two forms of development will be charged on a per unit basis of \$3,049 per unit.
9. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is provided by service and is presented in Table 6-5. A summary of these costs is provided below:

Total gross expenditures planned over the next five years	\$ 5,815,161
Less:	
Benefit to existing development	\$ 1,228,475
Post planning period benefit	\$ 1,588,090
Ineligible re: Level of Service	\$ -
Mandatory 10% deduction for certain services	\$ 85,953
Grants, subsidies and other contributions	\$ -
Net Costs to be recovered from development charges	\$ 2,912,643

This suggests that for the non-D.C. cost over the five-year D.C. by-law (benefit to existing development, mandatory 10% deduction, and the grants, subsidies and other contributions), \$2.90 million (or an annual amount of \$580,000) will need to be contributed from taxes and rates, or other sources. With respect to the post period benefit amount of \$1.59 million, it will be included in subsequent D.C. study updates to reflect the portion of capital that benefits growth in the post period D.C. forecasts.



Based on the above table, the Town plans to spend \$5.82 million over the next five years, of which \$2.91 million (50%) is recoverable from D.C.s. Of this net amount, \$2.01 million is recoverable from residential development and \$0.90 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

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

The following services are calculated based on an area-specific build-out forecast:

- Wastewater services.

The following services are calculated based on a 13-year forecast:

- Services Related to a Highway;
- Fire Protection Services; and
- Policing Services.

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

- Outdoor and Indoor Recreation Services;
- Library Services;
- Administration Studies – Essential Services; and
- Administration Studies – Community Based Services.

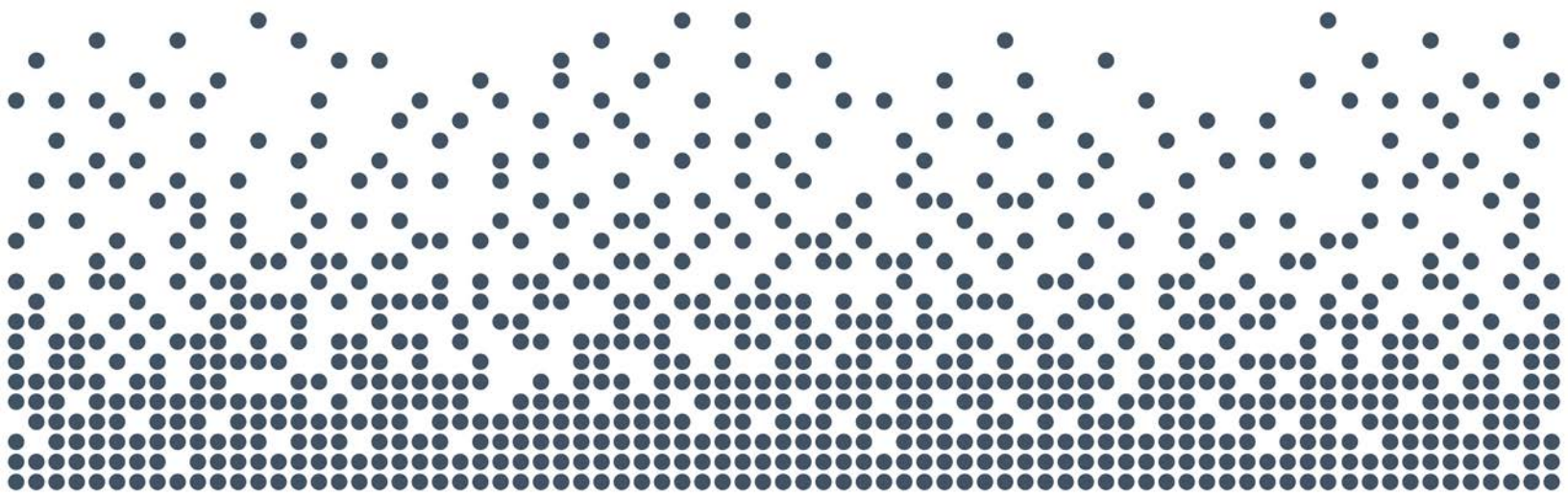
Council will consider the findings and recommendations provided in the report and, in conjunction with public input, approve such policies and rates it deems appropriate. These directions will refine the draft D.C. by-law which is appended in Appendix G. These decisions may include:

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



Table ES-1

Service	RESIDENTIAL					NON-RESIDENTIAL (per sq.ft. of Gross Floor Area)	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single and Semi- Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units			
Municipal Wide Services:								
Services Related to a Highway	1,552	783	653	940	554	0.73	1,552	0.73
Fire Protection Services	979	494	412	593	349	0.46	979	0.46
Policing Services	427	215	180	259	152	0.19	427	0.19
Administration - Essential Services Studies	90	45	38	55	32	0.04	90	0.04
Outdoor Recreation Services	1,473	743	619	892	525	0.06	-	-
Indoor Recreation Services	3,248	1,639	1,366	1,967	1,158	0.11	-	-
Library Services	225	114	95	136	80	0.01	-	-
Administration - Community Based Studies	101	51	42	61	36	0.05	-	-
Total Municipal Wide Services	8,095	4,084	3,405	4,903	2,886	1.65	3,048	1.42
Area Specific Charges - Wastewater								
Ward 1 - Essex Service Area	3,351	1,690	1,409	2,029	1,195	2.03	-	-
Ward 2 - Colchester North Service Area	872	440	367	528	311	0.00	-	-
Ward 3 - Colchester South Service Area	2,067	1,043	869	1,252	737	1.18	-	-
Ward 4 - Harrow Service Area	2,484	1,253	1,045	1,505	886	1.43	-	-



Report



Chapter 1

Introduction



1. Introduction

1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the D.C.A. (section 10) and, accordingly, recommends new D.C.s and policies for the Town of Essex.

The Town retained Watson & Associates Economists Ltd. (Watson), to undertake the D.C.s (D.C.) study process in 2019. Watson worked with Town staff in preparing this D.C. analysis and policy recommendations.

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

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

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

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

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



1.2 Summary of the Process

The public meeting required under section 12 of the D.C.A., has been scheduled for July 15, 2019. 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 Town's D.C.s.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on June 20, 2019.

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

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

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

Figure 1-1
Schedule of Key D.C. Process Dates for the Town of Essex

1. Data collection, staff review, engineering work, D.C. calculations and policy work	January to May 2019
2. Public meeting advertisement placed in newspaper(s)	No later than June 24, 2019
3. Background study and proposed by-law available to public	June 20, 2019
4. Public meeting of Council	July 15, 2019
5. Council considers adoption of background study and passage of by-law	August 19, 2019
6. Newspaper notice given of by-law passage	By 20 days after passage
7. Last day for by-law appeal	40 days after passage
8. Town makes pamphlet available (where by-law not appealed)	By 60 days after in force date



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

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

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 (subsection 10 (2) (c.2)). The asset management plan must deal with all assets that are proposed to be funded, in whole or in part, by D.C.s. The current regulations provide very extensive and specific requirements for the asset management plan related to transit services; however, they are silent with respect to how the asset management plan is to be provided for all other services. As part of any asset management plan, the examination should be consistent with the municipality's existing assumptions, approaches and policies on asset management planning. This



examination may include both qualitative and quantitative measures such as examining the annual future lifecycle contributions needs (discussed further in Appendix F of this report).

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

Previously the legislation required that a D.C. background study be made available to the public at least two weeks prior to the public meeting. The amended legislation now provides that the D.C. background study must 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 June 20, 2019 to ensure the new requirements for release of the study is met.

1.3.4 Timing of Collection of D.C.s

The D.C.A. has been refined by Bill 73 to require that D.C.s are collected at the time of the first building permit. For the majority of development, this will not impact the Town's present process. There may be instances, however, 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 Town 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; however, these sections do not impact the Town's D.C.

1.4 Proposed Changes to the D.C.A.: Bill 108 – An Act to Amend Various Statutes with Respect to Housing, Other Development and Various Other Matters

On May 2, 2019, the Province introduced Bill 108 which proposes changes to the D.C.A. The Bill has been introduced as part of the Province's *"More Homes, More Choice"*.



Ontario's Housing Supply Action Plan". The Bill received Royal Assent on June 6, 2019, however, a number of schedules in the Bill do not come into force until the date of proclamation. As of the date of this report, no scheduled timeline for proclamation has been provided. Draft regulations for this Bill are anticipated to be released over the next month and the Province will be considering feedback on the draft regulations before proclamation.

The Act proposes that any D.C. by-laws passed after May 2, 2019 will be affected by these proposed changes. Any by-laws which were passed prior to this date will remain in effect until it is either repealed or expires. A summary of the proposed changes to the D.C.A. is provided below:

Changes to Eligible Services – the Bill will remove "Soft Services" from the D.C.A. These services will be considered as part of a new Community Benefit Charge (discussed below) imposed under the *Planning Act*. Eligible services which will remain under the D.C.A. are as follows:

- Water supply services, including distribution and treatment services;
- Wastewater services, including sewers and treatment services;
- Storm water drainage and control services;
- Services related to a highway as defined in subsection 1 (1) of the *Municipal Act, 2001* or subsection 3 (1) of the *City of Toronto Act, 2006*, as the case may be;
- Electrical power services;
- Policing services;
- Fire protection services;
- Toronto-York subway extension, as defined in subsection 5.1 (1) of the D.C.A.;
- Transit services other than the Toronto-York subway extension;
- Waste diversion services;
- Ambulance services; and
- Other services as prescribed.

Waste Diversion – the Bill will remove the mandatory 10% deduction for this service.

Payment in Installments – the Bill proposes that Rental Housing and Commercial/Industrial/Institutional developments pay their development charges in six equal annual payments commencing the earlier of the date of issuance of a building permit or occupancy. Non-Profit Housing will pay their development charges in 21



equal annual installments. If payments are not made, interest may be charged (at a prescribed rate) and may be added to the property and collected as taxes.

When D.C. Amount is Determined – the Bill proposes that the D.C. amount for all developments proceeding by Site Plan or requiring a zoning amendment, shall be determined based on the D.C. rates in effect on the day of the application for Site Plan or zoning amendment. If the development is not proceeding via these planning approvals then the amount is determined the earlier of the date of issuance of a building permit or occupancy.

Soft Services to be Included in a new Community Benefit Charge under the Planning Act – it is proposed that a municipality may by by-law impose community benefits charges against land to pay for the capital costs of facilities, services and matters required because of development or redevelopment in the area to which the by-law applies. These services may not include services authorized by the D.C.A. Various provisions are provided as follows:

- Before passing a community benefits charge by-law, the municipality shall prepare a community benefits charge strategy that:
- (a) identifies the facilities, services and matters that will be funded with community benefits charges
- (b) complies with any prescribed requirements;
- The amount of a community benefits charge payable shall not exceed an amount equal to the prescribed percentage of the value of the land as of the valuation date;
- The valuation date is the day before building permit issuance;
- Valuations will be based on appraised value of land. Various requirements are set out in this regard;
- All money received by the municipality under a community benefits charge by-law shall be paid into a special account;
- In each calendar year, a municipality shall spend or allocate at least 60 percent of the monies that are in the special account at the beginning of the year;
- Requirements for annual reporting shall be prescribed; and
- Transitional provisions are set out regarding the D.C. reserve funds and D.C. credits.



Chapter 2

Current Town of Essex Policy



2. Current Town of Essex Policy

2.1 Schedule of Charges

On August 25, 2014, the Town of Essex passed By-law 1344 under the D.C.A. This by-law was amended on December 19, 2016 via By-law 1558, December 18, 2017 via By-law 1657, and on May 7, 2018 via By-law 1686.

This by-law imposes D.C.s for residential and non-residential uses. The table below provides the rates currently in effect, as at January 1, 2019.

Table 2-1
Town of Essex
Current D.C. Rates

Service	Residential				Non-Residential	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single & Semi Detached	Multiples	Apartments with >= 2 Bedrooms	Apartments with < 2 Bedrooms	per sq.ft.		
Municipal Wide Services							
Roads and Related	1,477	1,019	858	656	0.90	1,477	0.90
Fire Protection Services	624	431	362	276	0.38	624	0.38
Police Services	528	364	307	235	0.31	528	0.31
Outdoor Recreation Services	895	618	519	396	0.08	-	-
Indoor Recreation Services	3,640	2,513	2,110	1,615	0.29	-	-
Library Services	196	135	113	86	0.01	-	-
Administration	112	77	65	50	0.05	112	0.05
Total Municipal Wide Services	7,471	5,157	4,333	3,312	2.02	2,740	1.64
Area Specific Charges - Wastewater							
Ward 1	3,859	2,580	2,168	1,658	2.26	-	-
Ward 2	828	552	465	356	-	-	-
Ward 3	1,997	1,335	1,121	857	1.27	-	-
Ward 4	2,816	1,882	1,582	1,209	1.57	-	-

2.2 Services Covered

The following services are covered under By-law 1344:

Municipal-wide Services:

- Roads and Related (now Services Related to a Highway);
- Fire Protection Services;
- Policing Services;
- Outdoor Recreation Services;
- Indoor Recreation Services;
- Library Services; and
- Administration.



Urban Services:

- Wastewater Services.

2.3 Timing of D.C. Calculation and Payment

D.C.s are calculated, payable, and collected upon issuance of a building permit in relation to a building or structure on land to which a development charge applies.

2.4 Indexing

Rates shall be indexed on January 1st of each year by the percentage change recorded in the average annual Non-Residential Building Construction Price Index produced by Statistics Canada.

2.5 Redevelopment Allowance

As a result of the redevelopment of land, a building or structure existing on the same land within 48 months prior to the date of payment of D.C.s in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land, in order to facilitate the redevelopment, the D.C.s otherwise payable with respect to such redevelopment shall be reduced by the following amounts:

- (a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C. under subsections 3.11 by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
- (b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C.s under subsection 3.12 by the gross floor area that has been or will be demolished or converted to another principal use;

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



2.6 Exemptions

The following non-statutory exemptions are provided under By-law 1344 (as amended):

- Lands, buildings or structures used or to be used for a place of worship or for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act;
- A public hospital receiving aid under the Public Hospitals Act, R.S.O. 1190, Chap. P.40, as amended, or any successor thereof;
- The development of non-residential farm buildings constructed for bona fide farm uses, which qualify as a farm business, being that which operates with a valid Farm Business Registration Number and is assessed in the Farmland Realty Tax Class;
- Non-residential industrial and institutional development is exempt from D.C.s; and
- Residential development within Ward 4 is exempt from D.C.s.



Chapter 3

Anticipated Development in the Town of Essex



3. Anticipated Development in the Town of Essex

3.1 Requirement of the Act

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

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which the Town of Essex will be required to provide services, over a 10-year (mid-2019 to mid-2029), and longer time horizons to mid-2031.

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

The D.C. growth forecast has been derived by Watson & Associates Economists Ltd. (Watson) from the County of Essex Official Plan, August 2011 forecast for the Town of Essex – Low Population Growth Scenario, alongside the 2014 D.C growth forecast. In preparing the 2019 D.C. growth forecast, the following additional information sources were consulted to further assess the residential and non-residential development potential for the Town of Essex over the forecast period, including:

- Discussions with Town staff regarding the anticipated amount, type, and rate of residential and non-residential development within the Town;
- 2006, 2011 and 2016 Statistics Canada Census population, housing and employment data.
- 2006, 2011 and 2016 Census commuting and employment data; and
- Historical residential and non-residential building permit data over the 2006 to 2018 period; and
- A review of planned and anticipated residential development within the Town.



3.3 Summary of Growth Forecast

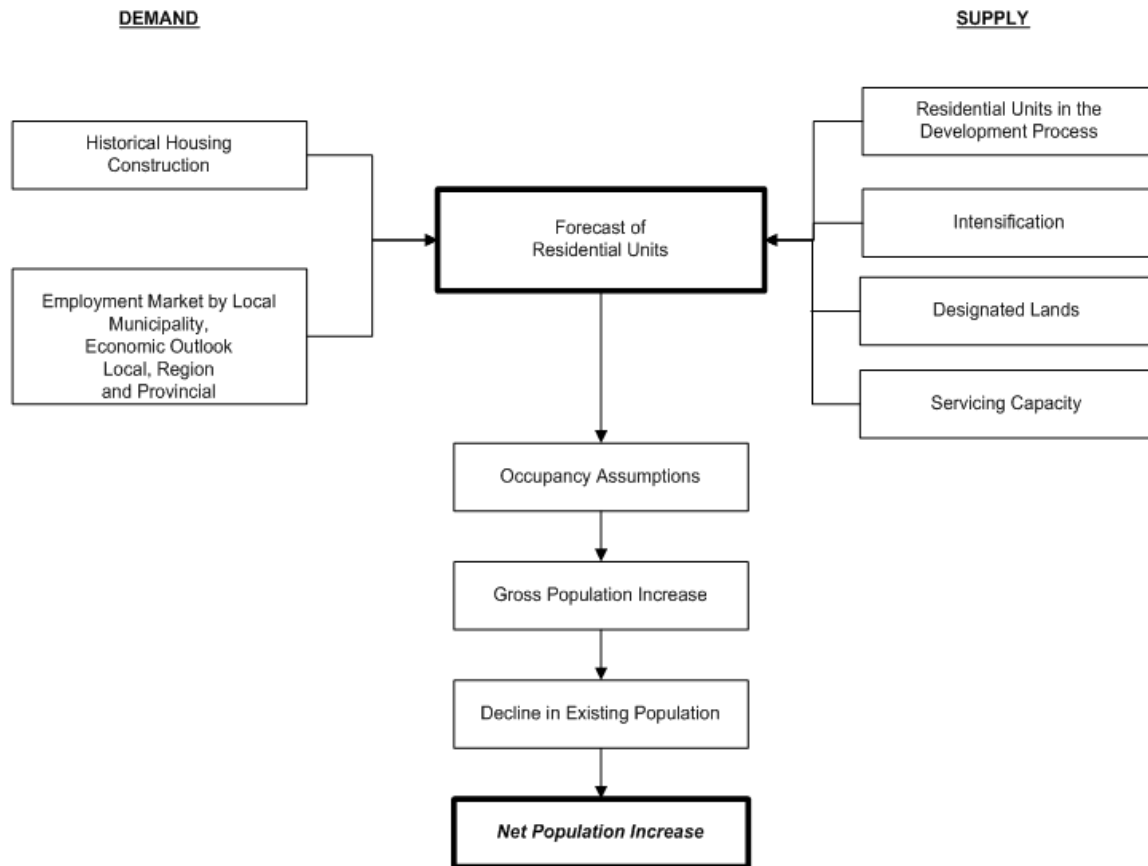
A detailed analysis of the residential and non-residential growth forecasts is provided in Appendix A and the methodology employed is illustrated in Figure 3-1. The discussion provided herein summarizes the anticipated growth for the Town and describes the basis for the forecast. The results of the residential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

As identified in Table 3-1 and Appendix A, *Schedule 1*, the Town's population is anticipated to reach approximately 22,000 by mid-2029 and 22,150 by mid-2031, resulting in an increase of approximately 1,280 and 1,440 persons, respectively, over the 10-year and longer term (2019 to 2031) forecast periods.¹

¹ The population figures used in the calculation of the 2019 D.C. exclude the net Census undercount, which is estimated at approximately 1.03%.



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





**Table 3-1
Town of Essex
Residential Growth Forecast Summary**

Year		Excluding Census Undercount			Housing Units					Person Per Unit (P.P.U.): Total Population/ Total Households
		Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi- Detached	Multiple Dwellings ¹	Apartments ²	Other	Total Households	
Historical	Mid 2006	20,032	337	19,695	7,020	260	350	15	7,645	2.620
	Mid 2011	19,600	400	19,200	6,708	335	374	376	7,793	2.515
	Mid 2016	20,427	852	19,575	6,830	365	455	440	8,090	2.525
Forecast	Mid 2019	20,711	866	19,845	6,956	369	455	440	8,220	2.520
	Mid 2029	21,986	925	21,061	7,462	381	519	440	8,802	2.498
	Mid 2031	22,150	925	21,225	7,557	383	521	440	8,900	2.489
Incremental	Mid 2006 - Mid 2011	-432	63	-495	-312	75	24	361	148	
	Mid 2011 - Mid 2016	827	452	375	122	30	81	64	297	
	Mid 2016 - Mid 2019	284	14	270	126	4	0	0	130	
	Mid 2019 - Mid 2029	1,275	59	1,216	506	12	64	0	582	
	Mid 2019 - Mid 2031	1,439	59	1,380	601	14	66	0	680	

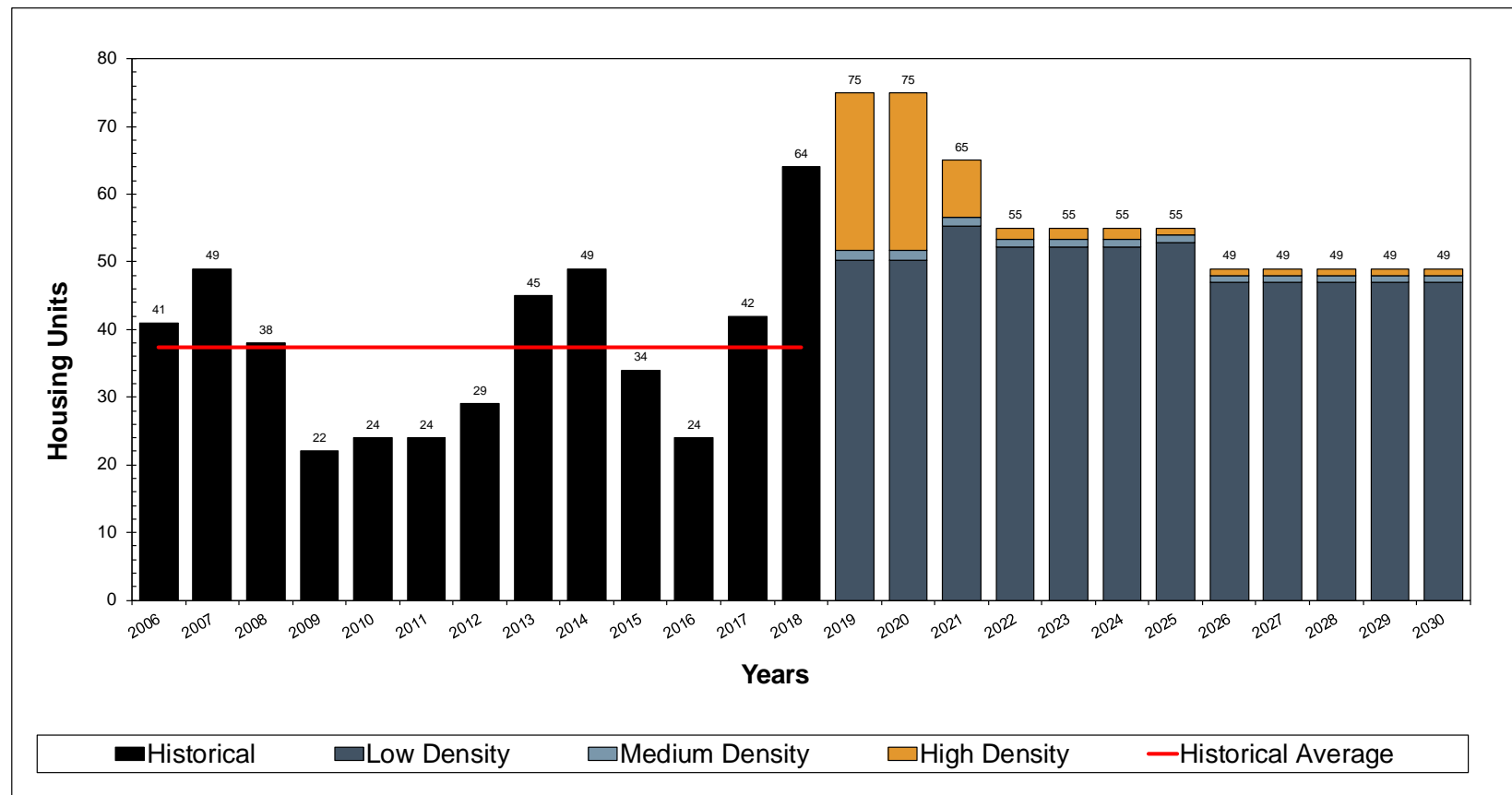
Derived from Foundation Report: Essex County Official Plan Review, the County of Essex, August 2011 forecast for the Town of Essex Low Population Growth Scenario, May 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes bachelor, 1-bedroom and 2-bedroom+ apartments.



Figure 3-2
Town of Essex
Annual Housing Growth Forecast¹



Source: Historical housing activity derived from Statistics Canada building permit data for the Town of Essex, 2006-2018.

¹ Growth forecast represents calendar year.



Provided below is a summary of the key assumptions and findings regarding the Town of Essex D.C. growth forecast.

1. Housing Unit Mix (Appendix A – Schedules 1, and 5)

- The housing unit mix for the Town has been derived from a detailed review of historical development activity (as per Schedule 5), as well as residential development potential applications.
- In accordance with the above indicators, the 2019 to 2029 household growth forecast is comprised of a unit mix of 87% low density (single detached and semi-detached), 2% medium density (multiples except apartments) and 11% high density (bachelor, 1-bedroom and 2-bedroom apartments).

2. 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 parks, recreation and libraries, to a 10-year planning horizon. Services related to a highway, public works, fire, water and wastewater services can utilize a longer planning period.

3. Population in New Units (Appendix A - Schedules 2, 3 and 4)

- Over the 2019 to 2029 forecast period, the Town is anticipated to average approximately 58 new housing units per year. From 2019 to 2031 forecast period, the Town is anticipated to average 56 units per year with the majority of high-density developments anticipated to occur within the first 5-years.
- The institutional population¹ is anticipated to grow by 59 persons between 2019 to 2029.
- Population in new units is derived from Schedules 2, 3, and 4, which incorporate historical development activity, anticipated units (see unit mix

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



discussion) and average persons per unit (P.P.U.) by dwelling type for new units.¹

- Schedules 8a and 8b summarize the P.P.U. assumed for the new housing units by age and type of dwelling based on 2016 custom Census data. The total calculated P.P.U. for all density types has been adjusted accordingly to account for the P.P.U. trends which has been recently experienced in both new and older units. Forecasted 20-year average P.P.U.s by dwelling type are as follows:
 - Low density: 3.084
 - Medium density: 1.868
 - High density¹: 1.498

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

- Existing households for 2019 are based on the 2016 Census households, plus estimated residential units constructed between mid-2016 and mid-2019 assuming a 6-month lag between construction and occupancy (see Schedule 2).
- The decline in average occupancy levels for existing housing units is calculated in Schedules 2 through 4, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2019 to 2029 forecast period is approximately 460.

5. Employment (Appendix A, Schedules 10a, 10b and 11)

- Employment projections are largely based on the activity rate method, which is defined as the number of jobs in a municipality divided by the number of residents. Key employment sectors include primary, industrial, commercial/ population-related, institutional, and work at home, which are considered individually below.

¹ Includes bachelor, 1-bedroom and 2 or more bedroom apartments



- 2016 employment data¹ (place of work) for the Town of Essex is outlined in Schedule 10a. The 2016 employment base is comprised of the following sectors:
 - 135 primary (2%);
 - 525 work at home employment (9%);
 - 1,290 industrial (23%);
 - 2,315 commercial/population related (41%); and
 - 1,405 institutional (25%).
- 2016 employment by usual place of work, including work at home, is estimated at 5,670.
- Total employment, including work at home for the Town is anticipated to reach approximately 6,710 by mid-2029 and 6,890 by mid-2031. This represents an employment increase of 940 for the 10-year forecast period and 1,120 for the 12-year forecast.
- Schedule 10b, Appendix A, summarizes the employment forecast, excluding work at home employment, which is the basis for the D.C. employment forecast. The impact on municipal services from work at home employees has already been included in the population forecast. Furthermore, since these employees work at place home, they cannot be captured in the non-residential gross floor area (G.F.A.) calculation.
- Total employment for the Town of Essex (excluding work at home) is anticipated to reach approximately 6,050 by 2029 and 6,175 by 2031. This represents an employment increase of approximately 810 and 940 over the 10-year and 2019 to 2031 forecast periods, respectively.

7. Non-Residential Sq.ft. Estimates (Gross Floor Area (G.F.A.), Appendix A, Schedule 10b)

- Square footage estimates were calculated in Schedule 10b based on the following employee density assumptions:
 - 1,250 sq.ft. per employee for industrial;

¹ 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset by Watson & Associates Economists Ltd.



- 550 sq.ft. per employee for commercial/population-related; and
 - 700 sq.ft. per employee for institutional employment.
- The Town-wide incremental Gross Floor Area (G.F.A.) increase is anticipated to be 762,600 sq.ft. over the 10-year forecast period and 875,300 sq.ft. over the 2019 to 2031 forecast period.
- In terms of percentage growth, the 2019 to 2029 incremental G.F.A. forecast by sector is broken down as follows:
 1. industrial – 67%;
 2. commercial/population-related – 15%; and
 3. institutional – 18%.



Chapter 4

The Approach to the Calculation of the Charge



4. The Approach to the Calculation of the Charge

4.1 Introduction

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

4.2 Services Potentially Involved

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

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

4.3 Increase in the Need for Service

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



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

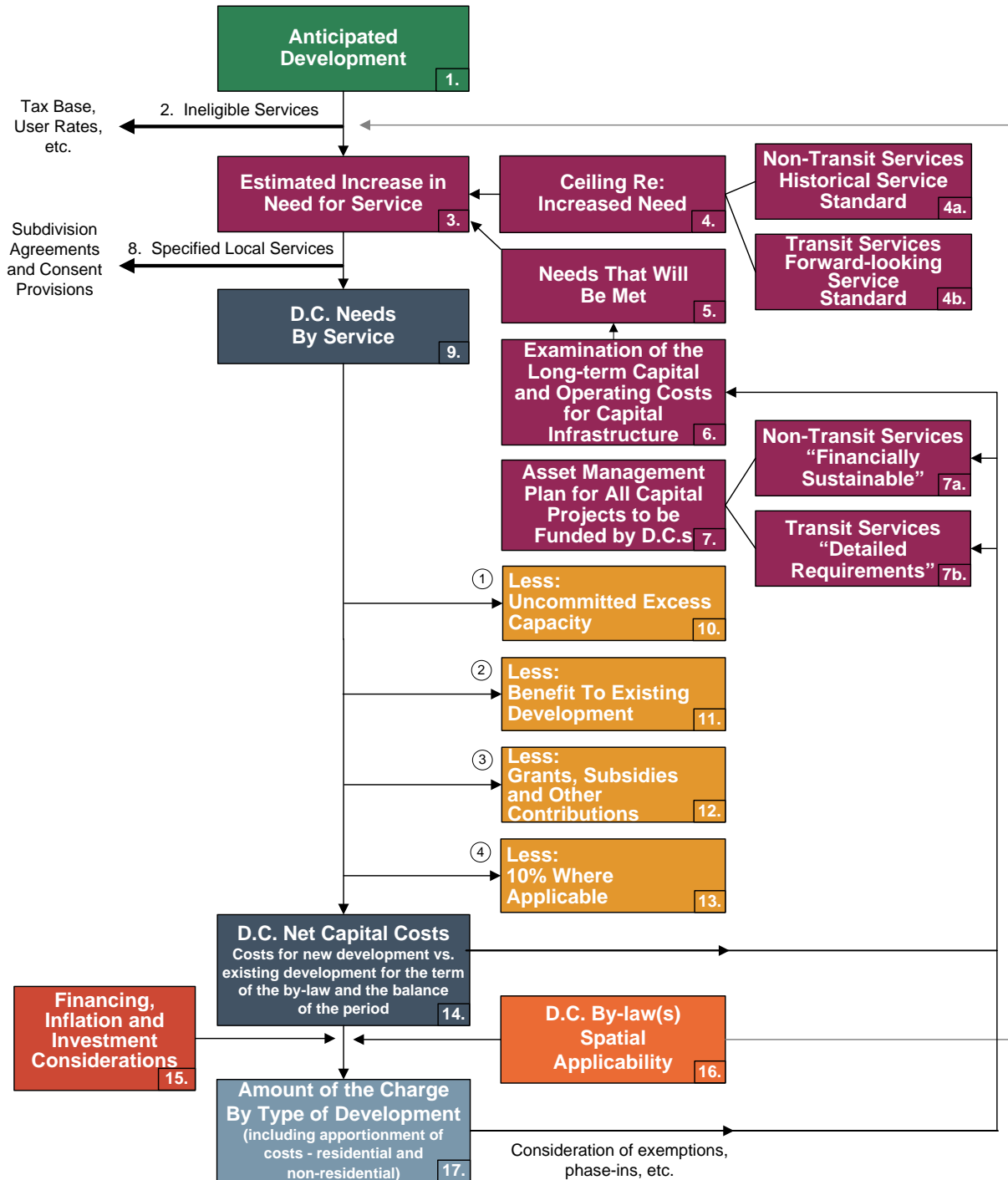




Table 4-1
Categories of Municipal Services to be Addressed as Part of the Calculation

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

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
1. Services Related to a Highway	Yes	1.1 Arterial roads	100
	Yes	1.2 Collector roads	100
	Yes	1.3 Bridges, Culverts and Roundabouts	100
	No	1.4 Local municipal roads	0
	Yes	1.5 Traffic signals	100
	Yes	1.6 Sidewalks and streetlights	100
	Yes	1.7 Active Transportation	100
2. Other Transportation Services	n/a	2.1 Transit vehicles ¹ & facilities	100
	n/a	2.2 Other transit infrastructure	100
	No	2.3 Municipal parking spaces - indoor	90
	No	2.4 Municipal parking spaces - outdoor	90
	Yes	2.5 Works Yards	100
	Yes	2.6 Rolling stock ¹	100
	n/a	2.7 Ferries	90
	n/a	2.8 Airport	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 %
3. Stormwater Drainage and Control Services	No	3.1 Main channels and drainage trunks	100
	No	3.2 Channel connections	100
	No	3.3 Retention/detention ponds	100
4. Fire Protection Services	Yes	4.1 Fire stations	100
	Yes	4.2 Fire pumpers, aerials and rescue vehicles ¹	100
	Yes	4.3 Small equipment and gear	100
5. Outdoor Recreation Services (i.e. Parks and Open Space)	Ineligible	5.1 Acquisition of land for parks, woodlots and E.S.A.s	0
	Yes	5.2 Development of area municipal parks	90
	Yes	5.3 Development of district parks	90
	Yes	5.4 Development of municipal-wide parks	90
	Yes	5.5 Development of special purpose parks	90
	Yes	5.6 Parks rolling stock ¹ and yards	90
6. Indoor Recreation Services	Yes	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	90
	Yes	6.2 Recreation vehicles and equipment ¹	90
7. Library Services	Yes	7.1 Public library space (incl. furniture and equipment)	90
	n/a	7.2 Library vehicles ¹	90
	n/a	7.3 Library materials	90
8. Electrical Power Services	Ineligible	8.1 Electrical substations	0
	Ineligible	8.2 Electrical distribution system	0
	Ineligible	8.3 Electrical system rolling stock	0

¹with 7+ year life time



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	9.1 Cultural space (e.g. art galleries, museums and theatres)	0
	Ineligible	9.2 Tourism facilities and convention centres	0
10. Wastewater Services	Yes	10.1 Treatment plants	100
	Yes	10.2 Sewage trunks	100
	n/a	10.3 Local systems	0
	Yes	10.4 Vehicles and equipment ¹	100
11. Water Supply Services	No	11.1 Treatment plants	100
	No	11.2 Distribution systems	100
	n/a	11.3 Local systems	0
	No	11.4 Vehicles and equipment ¹	100
12. Waste Management Services	Ineligible	12.1 Landfill collection, transfer vehicles and equipment	0
	Ineligible	12.2 Landfills and other disposal facilities	0
	n/a	12.3 Waste diversion facilities	90
	n/a	12.4 Waste diversion vehicles and equipment ¹	90
13. Policing Services	Yes	13.1 Policing detachments	100
	Yes	13.2 Policing rolling stock ¹	100
	Yes	13.3 Small equipment and gear	100
14. Homes for the Aged	n/a	14.1 Homes for the aged space	90
	n/a	14.2 Vehicles ¹	90
15. Child Care	n/a	15.1 Child care space	90
	n/a	15.2 Vehicles ¹	90
16. Health	n/a	16.1 Health department space	90
	n/a	16.2 Health department vehicles ¹	90
17. Social Housing	n/a	17.1 Social Housing space	90
18. Provincial Offences Act (P.O.A.)	n/a	18.1 P.O.A. space	90
19. Social Services	n/a	19.1 Social service space	90

¹with 7+ year life time



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
20. Ambulance	n/a n/a	20.1 Ambulance station space 20.2 Vehicles ¹	90 90
21. Hospital Provision	Ineligible	21.1 Hospital capital contributions	0
22. Provision of Headquarters for the General Administration of Municipalities and Area Municipal Boards	Ineligible Ineligible Ineligible	22.1 Office space 22.2 Office furniture 22.3 Computer equipment	0 0 0
23. Other Services	Yes 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 23.2 Interest on money borrowed to pay for growth-related capital	 0-100 0-100

¹with a 7+ year life time

²same percentage as service component to which it pertains

4.4 Local Service Policy

Some of the need for services generated by additional development consists of local services related to a plan of subdivision. As such, they will be required as a condition of subdivision agreements or consent conditions. The Town's local service policy is provided in Appendix E.



4.5 Capital Forecast

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

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

The capital costs include:

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

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

4.6 Treatment of Credits

Section 8, paragraph 5, of O.Reg. 82/98 indicates that a D.C. background study must set out “the estimated value of credits that are being carried forward relating to the service.” Subsection 17, paragraph 4, of the same Regulation indicates that “...the value of the credit cannot be recovered from future D.C.s,” if the credit pertains to an



ineligible service. This implies that a credit for eligible services can be recovered from future D.C.s. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs. There are no outstanding credit obligations included in the D.C. calculations.

4.7 Existing Reserve Funds

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

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

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

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

The alternative would involve the Town spending all reserve fund monies prior to renewing each by-law, which would not be a sound basis for capital budgeting. Thus, the Town will use these reserve funds for the Town’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 Town’s D.C. Reserve Fund Balance by service at December 31, 2018 is shown below:

¹ Reserve balance to be combined with Administration Studies.



Service	Totals
Services Related to a Highway	\$588,620.00
Fire Protection Services	\$117,483.62
Policing Services	\$125,036.57
Outdoor Recreation Services	\$263,968.02
Indoor Recreation Services	\$756,926.29
Library Services	\$372.86
Administration	\$187,411.27
Ward 1 - Wastewater	(\$2,221,790.67)
Ward 2 - Wastewater	\$21,866.34
Ward 3 - Wastewater	\$385,984.65
Ward 4 - Wastewater	(\$149,934.89)
Total	\$75,944.06

Note: Amounts in brackets are Deficit balances.

4.8 Deductions

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

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

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

4.8.1 *Reduction Required by Level of Service Ceiling*

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



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

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

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

4.8.2 Reduction for Uncommitted Excess Capacity

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

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

4.8.3 Reduction for Benefit to Existing Development

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



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

This step involves a further reduction in the need, by the extent to which such an increase in service would benefit existing development. The level of services cap in section 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 library facilities simply replicates what existing residents are receiving, they receive very limited (or no) benefit as a result. On the other hand, where a clear existing service problem is to be remedied, a deduction should be made accordingly.

In the case of services such as recreation facilities, community parks, libraries, etc., the service is typically provided on a Town-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.



4.8.4 Reduction for Anticipated Grants, Subsidies and Other Contributions

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

4.8.5 The 10% Reduction

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

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

4.9 Municipal-wide vs. Area Rating

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

4.10 Allocation of Development

This step involves relating the costs involved to anticipated development for each period under consideration and using allocations between residential and non-residential



development and between one type of development and another, to arrive at a schedule of charges.

4.11 Asset Management

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

4.12 Transit

The most significant changes to the Act relate to the transit service. These changes relate to four areas of the calculations, as follows:

- A. Transit no longer requires the statutory 10% mandatory deduction from the net capital cost (subsection 5.2 (i) of the D.C.A.).
- B. The background study requires the following in regard to transit costs (as per subsection 8 (2) of the Regulations):
 - 1. The calculations that were used to prepare the estimate for the planned level of service for the transit services, as mentioned in subsection 5.2 (3) of the Act.
 - 2. An identification of the portion of the total estimated capital cost relating to the transit services that would benefit,
 - i. the anticipated development over the 10-year period immediately following the preparation of the background study, or
 - ii. the anticipated development after the 10-year period immediately following the preparation of the background study.



3. An identification of the anticipated excess capacity that would exist at the end of the 10-year period immediately following the preparation of the background study.
 4. An assessment of ridership forecasts for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study, categorized by development types, and whether the forecasted ridership will be from existing or planned development.
 5. An assessment of the ridership capacity for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study.
- C. A new forward-looking service standard (as per subsection 6.1 (2) of the Regulations):
1. The service is a discrete service.
 2. No portion of the service that is intended to benefit anticipated development after the 10-year period immediately following the preparation of the background study may be included in the estimate.
 3. No portion of the service that is anticipated to exist as excess capacity at the end of the 10-year period immediately following the preparation of the background study may be included in the estimate.
- D. A very detailed asset management strategy and reporting requirements (subsection 6.1 (3) of the Regulation) that includes lifecycle costs, action plans that will enable the assets to be sustainable, summary of how to achieve the proposed level of service, discussion on procurement measures and risk.

The Town does not currently, and in the near future does not intend to, provide transit services. Therefore, the above calculations and reporting requirements are not required.



Chapter 5

D.C.-Eligible Cost Analysis by Service



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

5.1 Introduction

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

The nature of the capital projects and timing identified in the Chapter reflects Council's current intention. Over time, however, Town 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.

5.2.1 *Outdoor Recreation Services*

The Town currently has 103.7 acres of parkland within its jurisdiction. This parkland consists of various sized neighbourhood and community parks. The Town has sustained the current level of service over the historical 10-year period (2009 to 2018), with an average of 4.9 acres of parkland and 11.1 parkland amenities items per 1,000 population. The Town also provides 0.16 metres of trails per capita. Including parkland, parkland amenities (e.g. ball diamonds, playground equipment, soccer fields, etc.), and park trails, the level of service provided is approximately \$1,128 per capita. When applied over the forecast period, this average level of service translates into a D.C.-eligible amount of \$1,437,282.



Based on the projected growth over the 10-year forecast period, the Town has identified \$22,574,200 in future growth capital costs for parkland development. These projects include, the development of additional parks including amenities and trails as well as the redevelopment and upgrade of existing parks. Allocations for a post period benefit of \$2,259,300 and existing development benefit of \$19,183,600 have been made along with a deduction of \$263,968 to recognize the reserve fund balance. The net growth capital cost after the mandatory 10% deduction and the allocation of reserve balance of \$754,202 for inclusion in the D.C.

The Town presently has a fleet consisting of 69 vehicles and equipment relating to Parks which provides a level of service of \$81 per capita or a D.C. eligible amount of \$103,199. At this time, the Town has included a provision for additional vehicles and equipment in the amount of \$100,000. After the mandatory 10% deduction, the net amount included in the D.C. calculation is \$90,000.

As the predominant users of outdoor recreation tend to be residents of the Town, the forecast growth-related costs have been allocated 95% to residential and 5% to non-residential.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service Parkland Development

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	2019-2028											95%	5%
1	Townview Subdivision Park	2019	114,700	-		114,700	-		114,700	11,470	103,230	98,069	5,162
2	Essex Sports Field Complex (8 soccer fields, 6 baseball, football stadium, play structure, concession building, trails)	2022-2027	20,000,000	1,397,700		18,602,300	18,447,000		155,300	15,530	139,770	132,782	6,989
3	Harrow Dog Park	2020	63,100	2,500		60,600	58,200		2,400	240	2,160	2,052	108
4	Essex Tennis Courts	2022	114,700	4,500		110,200	105,800		4,400	440	3,960	3,762	198
5	McGregor Splash Pad (Cost Share)	2024	590,500	23,000		567,500	544,600		22,900	2,290	20,610	19,580	1,031
6	Colchester Community Centre Passive Park Accessible Ramp	2019	240,000	120,000		120,000	-		120,000	12,000	108,000	102,600	5,400
7	Trail Expansion	2019-2023	20,000	1,000		19,000	18,000		1,000	100	900	855	45
8	Essex Crossing Playground	2021	200,000	100,000		100,000	-		100,000	10,000	90,000	85,500	4,500
9	Dalla Bona Playground	2022	200,000	100,000		100,000	-		100,000	10,000	90,000	85,500	4,500
10	Colchester Park Pavillion	2021	350,000	175,000		175,000	-		175,000	17,500	157,500	149,625	7,875
11	Parkland Estate Subdivision (Ward 3) Park Development	2025	181,200	90,600		90,600	-		90,600	9,060	81,540	77,463	4,077
12	Parkland Estate Subdivision (Ward 3) Park Play Structure (Sr.)	2025	200,000	100,000		100,000	-		100,000	10,000	90,000	85,500	4,500
13	Essex Skatebord Replacement & Expansion	2026	300,000	145,000		155,000	10,000		145,000	14,500	130,500	123,975	6,525
14	Reserve Fund Adjustment						263,968		(263,968)		(263,968)	(250,770)	(13,198)
	Total		22,574,200	2,259,300	-	20,314,900	19,447,568	-	867,332	113,130	754,202	716,492	37,710



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex

Service: Parks Vehicles and Equipment

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2019-2028											95%	5%
1	Provision for Additional Vehicles and Equipment	2019-2028	100,000	-		100,000	-		100,000	10,000	90,000	85,500	4,500
	Total		100,000	-	-	100,000	-	-	100,000	10,000	90,000	85,500	4,500



5.2.2 Indoor Recreation Services

The Town operates various indoor recreation facilities providing a total of 186,152 sq. ft. of space. The average historic level of service for the previous ten years has been 9.5 sq.ft. of space per capita or an investment of \$1,933 per capita. Based on this service standard, the Town would be eligible to collect \$2,464,014 from D.C.s for indoor recreation services.

The Town has provided for the need for additional facilities at Heritage Park at a gross cost of \$550,000. Deductions for benefit to existing development of \$507,300 and \$21,400 for post period benefit have been made to these facilities. Outstanding debt for the Essex Centre Sports Complex as well as the Colchester Community Centre has been included in the D.C. calculations. The total amount of principal and discounted interest included is \$5,198,541 with a deduction of \$2,599,271 to account for the benefit to development beyond the forecast period. Further, a deduction in the amount of \$756,926 has been made to reflect the balance in the D.C. reserve fund. Therefore, the net growth capital cost after the mandatory 10% deduction of \$1,861,514 has been included in the D.C.

While indoor recreation service usage is predominately residential-based, there is some use of the facility by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service: Indoor Recreation Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 95%	Non- Residential Share 5%
	2019-2028												
1	Heritage Park - Amphitheatre	2021	300,000	11,700		288,300	276,700		11,600	1,160	10,440	9,918	522
2	Heritage Park - Washroom/Storage Building	2021	250,000	9,700		240,300	230,600		9,700	970	8,730	8,294	437
3	Essex Centre Sports Complex - Debt Principal	2019-2026	500,247	250,124		250,123	-		250,123		250,123	237,617	12,506
4	Essex Centre Sports Complex - Debt Interest (Discounted)	2019-2026	57,838	28,919		28,919	-		28,919		28,919	27,473	1,446
5	Essex Centre Sports Complex - Debt Principal	2019-2030	3,837,912	1,918,956		1,918,956	-		1,918,956		1,918,956	1,823,008	95,948
6	Essex Centre Sports Complex - Debt Interest (Discounted)	2019-2030	589,134	294,567		294,567	-		294,567		294,567	279,839	14,728
7	Colchester Community Centre - Outstanding Growth-Related Debt Principal	2019-2023	208,074	104,037		104,037	-		104,037		104,037	98,836	5,202
8	Colchester Community Centre - Outstanding Growth-Related Debt Interest (Discounted)	2019-2023	5,336	2,668		2,668	-		2,668		2,668	2,535	133
9	Reserve Fund Adjustment						756,926		(756,926)		(756,926)	(719,080)	(37,846)
	Total		5,748,541	2,620,671	-	3,127,870	1,264,226	-	1,863,644	2,130	1,861,514	1,768,438	93,076



5.2.3 Library Services

The Town provides three library facilities which total 13,077 sq.ft. in library space. Over the past ten years, the average level of service was 0.64 sq.ft. of space per capita or an investment of \$117 per capita. Based on the service standard over the past ten years, the Town would be eligible to collect a total of \$148,550 from D.C.s for library services.

Currently, the Town has provided a provision for additional space of \$143,000. After the mandatory 10% deduction of \$14,300, the D.C. calculation includes \$128,700.

While library usage is predominately residential based, there is some use of the facilities by non-residential users, for the purpose of research. To acknowledge this use, the growth-related capital costs have been allocated 95% residential and 5% non-residential.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service Library Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2019-2028											95%	5%
1	Provision for Additional Space	2019-2028	143,000	-		143,000	-		143,000	14,300	128,700	122,265	6,435
	Total		143,000	-	-	143,000	-	-	143,000	14,300	128,700	122,265	6,435

The Provision is in addition to the 2018 Reserve Fund balance of \$372.86



5.2.4 Administration

The D.C.A. permits the inclusion of studies undertaken to facilitate the identification of the Town's capital works program. The Town 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:

Essential Services Studies:

- Fire Master Plans;
- Engineering development standards review & update; and
- Development charge studies.

The cost of these studies is \$263,400 of which \$91,000 is attributable to existing benefit. A deduction in the amount of \$84,335 has been made to account for the existing reserve fund balance. The net growth-related capital cost, after the mandatory 10% deduction and the application of the existing reserve balance, is \$80,725 and has been included in the D.C.

Community Based Services Studies:

- Official Plan Review;
- Fees and Charges Review; and
- Parks and Recreation Master Plans.

The cost of these studies totals \$163,400, of which \$63,350 is attributable to existing benefit. The net growth-related capital cost, after the mandatory 10% deduction is \$90,045. This amount has been included in the D.C. calculations.

These costs have been allocated 61% residential and 39% non-residential based on the incremental growth in population to employment for the 10-year forecast period.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service Administration Studies - Essential Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 61%	Non-Residential Share 39%
	2019-2028												
1	Development Charge Study	2019	36,700	-		36,700	-		36,700	3,670	33,030	20,148	12,882
2	Development Charge Study	2024	36,700	-		36,700	-		36,700	3,670	33,030	20,148	12,882
3	Engineering Development Standards Review & Update	2020	60,000	-		60,000	-		60,000		60,000	36,600	23,400
4	Fire Master Plan	2022	65,000	-		65,000	45,500		19,500		19,500	11,895	7,605
5	Fire Master Plan	2027	65,000	-		65,000	45,500		19,500		19,500	11,895	7,605
6	Reserve Fund Adjustment						84,335		(84,335)		(84,335)	(51,444)	(32,891)
	Total		263,400	-	-	263,400	175,335	-	88,065	7,340	80,725	49,242	31,483



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service Administration Studies - Community Based Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share 61%	Non-Residential Share 39%
	2019-2028												
1	Official Plan Review	2020	50,000	-		50,000	25,000		25,000	2,500	22,500	13,725	8,775
2	Fees and Charges Review	2020	36,700	-		36,700	9,175		27,525	2,753	24,773	15,111	9,661
3	Fees and Charges Review	2024	36,700	-		36,700	9,175		27,525	2,753	24,773	15,111	9,661
4	Parks and Recreation Master Plan Update	2020	20,000	-		20,000	10,000		10,000	1,000	9,000	5,490	3,510
5	Parks and Recreation Master Plan Update	2025	20,000	-		20,000	10,000		10,000	1,000	9,000	5,490	3,510
	Total		163,400	-	-	163,400	63,350	-	100,050	10,005	90,045	54,927	35,118



5.3 Service Levels and 13-Year Capital Costs for Essex's D.C. Calculation

This section evaluates the development-related capital requirements for those services with 13-year capital costs.

5.3.1 *Services Related to a Highway*

Essex owns and maintains 316.28 km of roads which provides an average level of investment of \$8,464 per capita, resulting in a D.C.-eligible recovery amount of \$12,179,120 over the 13-year forecast period.

The Town has identified a number of road projects required to service growth over the forecast period, with a total capital cost of \$6,450,000. Deductions for existing benefit of \$4,295,500 and post period benefit of \$383,300 were made. A deduction of \$588,620 was made to account for the existing reserve fund balance. The net D.C. amount to be included in the D.C. calculations is therefore \$1,182,580.

The Operations Department has a variety of vehicles and major equipment totalling \$4.18 million. This inventory provides for a per capita standard of \$244. Over the forecast period, the D.C. eligible amount for vehicles and equipment is \$350,986. The Town recognizes the need for additional growth-related vehicles and equipment over the forecast period and has therefore included a provision for \$300,000 for inclusion in the D.C. calculations.

The Town operates their Operations service out of a number of facilities. The facilities provide 26,989 sq.ft. of building area, providing for an average level of service of 1.14 sq.ft. per capita or \$100 per capita. This level of service provides the Town with a maximum D.C.-eligible amount for recovery over the 13-year forecast period of \$144,274.

Facility expansions have been identified at a gross capital cost of \$1,150,000. These expansions will benefit growth in the post-2031 period, therefore the entire amount has been deducted from the D.C. calculation. Outstanding principal and discounted interest for the Ferris Road Salt Shed Replacement and Expansion has been included at a total amount of \$229,620. A deduction of \$81,980 has been made to account for the benefit



to development beyond the forecast period. Therefore, the net D.C. amount included in the calculations for the forecast period is \$147,640. Note that the financing costs on the existing debt are in addition to the service standard ceiling.

The residential/non-residential capital cost allocation for service related to a highway is based on a 61%/39% split which is based on the incremental growth in population to employment for the 13-year forecast period.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex

Service: Services Related to a Highway - Roads

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 61%	Non-Residential Share 39%
	2019-2031										
1	Gosfield Ave & Talbot Intersection	2029	580,000	193,300		386,700	58,000		328,700	200,507	128,193
2	Provision for additional growth related improvements	2019-2031	570,000	190,000		380,000	-		380,000	231,800	148,200
3	CR13 & CR20 Intersection	2029	250,000	-		250,000	200,000		50,000	30,500	19,500
4	Intersection Improvements: CR8 & CR34	2024	750,000	-		750,000	637,500		112,500	68,625	43,875
5	Intersection Improvements: CR8/Gosfield & Arthur	2024	4,000,000	-		4,000,000	3,400,000		600,000	366,000	234,000
6	Active Transportation Trail: CR8 to McDonalds	2020-2025	300,000	-		300,000	-		300,000	183,000	117,000
7	Reserve Fund Adjustment						588,620		(588,620)	(359,058)	(229,562)
	Total		6,450,000	383,300	-	6,066,700	4,884,120	-	1,182,580	721,374	461,206



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex

Service: Services Related to a Highway - Vehicles & Equipment

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 61%	Non- Residential Share 39%
	2019-2031										
1	Provision for Growth Related Vehicles and Equipment	2019-2031	300,000	-		300,000	-		300,000	183,000	117,000
	Total		300,000	-	-	300,000	-	-	300,000	183,000	117,000



Town of Essex

Service: Services Related to a Highway - Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2019-2031									61%	39%
1	Ferris Road Salt Shed Replacement and Expansion - Growth Related Portion of Debt (Principal)	2019-2022	224,357	80,100		144,257	-		144,257	87,997	56,260
2	Ferris Road Salt Shed Replacement and Expansion - Growth Related Portion of Debt (Interest - Discounted)	2019-2022	5,263	1,880		3,383	-		3,383	2,064	1,319
3	Ferris Road Facility Expansion	2020-2031	400,000	400,000		-	-		-	-	-
4	North Malden Facility Expansion	2020-2031	350,000	350,000		-	-		-	-	-
5	North Malden Salt Storage Expansion	2020-2031	400,000	400,000		-	-		-	-	-
	Total		1,379,620	1,231,980	-	147,640	-	-	147,640	90,060	57,580



5.3.2 Policing Services

Since 2008, the Ontario Provincial Police (O.P.P.) provides police services to the Town through a service agreement. The Town is still responsible, under the agreement with the O.P.P., to provide facility space and as such provides a headquarters facility and well as space for a community police centre. These facilities provide 14,970 sq.ft. of building area which provides for a per capita average level of service of 0.78 sq.ft. or \$290. This service standard results in an eligible D.C. amount of \$417,382. A provision for an expansion to headquarters has been identified based on discussions between Town staff and the O.P.P. The growth-related cost is estimated to be \$540,000 and has been included in the D.C. calculations. The surplus reserve fund of \$125,037 has been deducted from the growth-related cost resulting in a net total of \$414,963 for inclusion in the D.C. calculation.

In addition to facility space, the Town provides the O.P.P. with funding for vehicles, equipment and gear through the service agreement. Currently 29.57 equipped officers are assigned to Essex. Vehicles, equipment and gear for these officers, with a value of \$472,308 equates to a service standard of \$23 per capita. This level of service provides the Town with a D.C. eligible amount over the forecast period of \$33,673 for small equipment and gear to equip additional new officers to service growth. Based on the growth forecast, the Town has identified that additional equipment will be required over the forecast period to equip additional new officers and therefore has included a provision of \$33,500 in the D.C.

The costs for policing services are shared 61%/39% between residential and non-residential based on the population to employment ratio over the 13-year forecast period.



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex
Service: Policing Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 61%	Non-Residential Share 39%
1	Provision for Expansion of Police Facility Space	2019-2031	540,000	-		540,000	-		540,000	329,400	210,600
2	Reserve Fund Adjustment		-	-		-	125,037		(125,037)	(76,272)	(48,764)
	Total		540,000	-	-	540,000	125,037	-	414,963	253,128	161,836



Infrastructure Costs Included in the Development Charges Calculation

Town of Essex

Service: Policing Vehicles, Small Equipment and Gear

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 61%	Non- Residential Share 39%
	2019-2031										
1	Provision for Growth Related Equipment and Gear	2019-2031	33,500	-		33,500	-		33,500	20,435	13,065
	Total		33,500	-	-	33,500	-	-	33,500	20,435	13,065



5.3.3 Fire Protection Services

Essex currently operates its fire services from 13,807 sq.ft. of facility space, providing for a per capita average level of service of 0.65 sq.ft. per capita or \$345 per capita. This level of service provides the Town with a maximum D.C.-eligible amount for recovery over the forecast period of \$496,800.

The fire department has a current inventory of 14 vehicles. The total D.C. eligible amount calculated for fire vehicles over the forecast period is \$458,509, based on a standard of \$319 per capita.

The fire department currently has three full time firefighters and 63 part time firefighters all of which are equipped with firefighting gear. In addition, there are a number of small equipment items for the provision of fire protection services including portable generators and pumps, air bag kits, defibrillators, etc. The Town currently has a calculated average level of service for the historic 10-year period of \$68 per capita, providing for a D.C.-eligible amount over the forecast period of approximately \$97,147 for small equipment and gear.

The total D.C. eligible amount for fire protection services over the forecast period is \$1,052,456.

Based on the growth-related needs, the Town has identified the need to replace and expand the Gesto Fire Station and fire station #3 at a total cost of \$3,000,000. Deductions of \$1,168,700 to recognize benefit to existing development as well as \$1,306,100 to recognize the benefit to growth beyond the forecast period have been made. In addition to these projects, the outstanding debt on Station 1 has been included. The debt principal of \$957,215 and discounted interest of \$21,658 have been included. A post-period benefit of \$460,100 has been deducted off of the debt principal and interest.

In addition to the facilities and related debt, debt for a seventy-foot platform truck has also been included with debt principal of \$11,150 and discounted interest of \$178.

A provision for growth-related equipment and gear in the amount of \$50,000 has been included as well as the need for an ice water rescue at \$40,000. As a result, \$90,000 has been included in the D.C. calculation for equipment and gear.



The total gross capital cost for fire services over the forecast period is \$4,080,202. With deductions of \$1,766,200 for benefit to development beyond 2031 and \$1,168,700 for benefit to existing development, a further deduction of \$83,498 has been made to account for the surplus balance in the D.C. reserve fund of \$117,484. This results in a net amount of \$1,027,818 for inclusion in the D.C. calculation.

These costs are shared between residential and non-residential based on the population to employment ratio over the forecast period, resulting in 61% being allocated to residential development and 39% being allocated to non-residential development.



Infrastructure Costs Included in the D.C. Calculation

Town of Essex
Service: Fire Services

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 61%	Non- Residential Share 39%
1	McGregor Fire Station (Replace & Expand Gesto Fire Station No. 2)	2020	1,500,000	525,300		974,700	449,500		525,200	320,372	204,828
2	Replace and Expand Fire Station #3	2025-2031	1,500,000	780,800		719,200	719,200		-	-	-
3	Station 1 Growth Related Fire Debt Principal	2019-2031	957,215	449,900		507,315	-		507,315	309,462	197,853
4	Station 1 Growth Related Fire Debt Interest (Discounted)	2019-2031	21,658	10,200		11,458	-		11,458	6,990	4,469
5	Seventy Foot Platform Truck (70' Ladder) Balance of Growth- Related Debt (Principal)	2019	11,150	-		11,150	-		11,150	6,802	4,349
6	Seventy Foot Platform Truck (70' Ladder) Balance of Growth- Related Debt (Interest)	2019	178	-		178	-		178	109	70
7	Provision for Growth Related Equipment and Gear	2019-2031	50,000	-		50,000	-		50,000	30,500	19,500
8	Ice Water Rescue	2019-2022	40,000	-		40,000	-		40,000	24,400	15,600
9	Reserve Fund Adjustment						117,484		(117,484)	(71,665)	(45,819)
	Total		4,080,202	1,766,200	-	2,314,002	1,286,184	-	1,027,818	626,969	400,849



5.4 Urban Area Specific D.C. Calculation

This section evaluates the development-related capital requirements for area specific D.C.s for wastewater services.

5.4.1 Wastewater – Ward 1 Essex Service Area

In 2004, the Town undertook a process to consider a D.C. for wastewater for Wards 1 and 4 (Essex and Harrow). Public meetings with respect to these charges were held (in Harrow and Essex respectively) and the charges were approved by Council on April 5, 2004.

There were two debentures for the upgrade and expansion of the Essex Sequencing Batch Reactor (S.B.R.) a ten-year debenture at 2.53% in the amount of \$4,287,644 and a twenty year debenture at 2.66% in the amount of \$4,287,644. Both are amortizing debentures through Ontario Infrastructure Projects Corporation (O.I.P.C.) with a benefit to future users deemed to be 47.23% of annual debt charges.

The debenture costs include the total principal amount of the two debentures plus the financing costs paid to date (2007-2018) and the outstanding financing costs (discounted). These total \$10,426,156 of which 47.23% or \$4,924,521 is attributable to growth as identified in Table 5-1 below. The Town also identified the need for a flow optimization/future capacity study for Ward 1 at a cost of \$150,000 required for the forecast period. This cost has also been assigned a growth-related share based on 47.23% or \$70,849. The total cost has been attributed to residential and non-residential development based on 80%/20% share which was based on the growth initially identified to be serviced by the capital works that were undertaken. This growth includes 1,200 single detached equivalent units as well as 480,000 sq.ft. of non-residential space. The calculation provided in Table 5-1 provides for the D.C. calculation for Ward 1 Wastewater.



Table 5-1
Wastewater Ward 1 – Essex Service Area Wastewater D.C. Calculation

Wastewater Ward 1 - Essex Service Area	\$
Upgrade and Expansion to Essex Sequencing Batch Reactor	\$8,575,288
Financing Costs to Date	1,628,690
Outstanding Financing Costs (Discounted)	222,179
Total Cost	\$10,426,156
Growth Related Portion	47.232%
Growth Related Cost	\$4,924,521
Flow Optimization/Future Capacity Study	\$150,000
Growth Related Portion	47.23%
Growth Related Cost	\$70,849
Grand Total Costs	\$4,995,370

Residential/Non-Residential Share	%	Cost
Residential (SDE)	80%	\$4,020,663
Non-Residential (sq.ft.)	20%	\$974,706

Development Charge Calculation	Cost	Growth	DC
Residential (SDE)	\$4,020,663	1,200	\$3,351
Non-Residential (sq.ft.)	\$974,706	480,000	\$2.03



5.4.2 Wastewater – Ward 2 Colchester North Service Area

The Colchester North area is services via a shared facility with the Town of Amherstburg. In 1999 the sewage system was upgraded to include intermittent sand filters to serve both existing and future growth in both municipalities. The Town of Amherstburg constructed the project, funding the project through debt, and the Town of Essex is required to make annual payments for the Colchester North Share. The total growth-related portion of the costs were \$97,434. The project created capacity for the Town of Essex for 150 single detached equivalent (S.D.E.) units. To date, 148 S.D.E.s have been created. The capacity created was only to serve additional residential development and therefore 100% of the costs are attributable to residential development. The total costs have been divided by the total number (150) of S.D.E. units that capacity was created for. The table below provides for the calculation of the D.C. for a single detached unit.

Table 5-2
Wastewater Ward 2 – Colchester North Service Area Wastewater D.C. Calculation

Ward 2 - Colchester North Service Area - Wastewater	\$
Town of Essex Portion of Amherstburg Upgrade Project (indexed)	\$120,880
Financing Costs	\$9,989
Total Town of Essex Costs	\$130,868

Capacity	Units (SDE)
Capacity Created by Project (Single Detached Equivalent units)	150
Number of Single Detached Equivalent Unit to Dec. 31, 2018	148
Remaining Capacity	2

Development Charge per Single Detached Equivalent	2019
Total Town of Essex Costs	\$130,868
Total Capacity Created	150
Development Charge per Single Detached Equivalent	\$872



5.4.3 Wastewater – Ward 3 – Colchester South Service Area

The Colchester South Service Area is presently serviced by a lagoon system. Based on a recent engineering review, upgrading of the system is required to a mechanism system in order to service growth. The system will be sized to provide a capacity of 1.816m³/day with 50% of this system servicing existing development and 50% servicing development.

The calculations provided in Table 5-3 provide for the spreading of the costs equally over existing and future development. Assumed flows per person and employee were 0.3m³/day. Note that the Town anticipates receiving a grant of 50% towards this facility which has been included in the calculations. The costs that were provided in the 2014 D.C. study have been inflated by 14.67% to account for inflation over the 2014-2019 period to provide the costs at current values. In addition to the mechanical system works, Flow Optimization/Future Capacity Studies have been identified for inclusion in the D.C. It is anticipated that the study will be shared equally across both the existing and future development.

The D.C. calculations provides for both residential charges, based on the total cost per person multiplied by the average persons per unit (p.p.u.) as identified in Appendix A, and non-residential charges, based on the total cost per person divided by the square foot per employee for commercial development (550 sq.ft. per employee).



Table 5-3
Calculation of Ward 3 – Colchester South Service Area Wastewater D.C.

Criteria	
Design Capacity (m ³ /day)	1,816
MOE - production/consumption rate-litres per capita	450
Use - Lower (litres/day/capita)	300
Square Foot per Employee	550

Calculation of m³/day/person	
Use - Lower (litres/day/capita)	300
m ³ /day/person	0.3
Calculation of # People Served	
Design Capacity (m ³ /day)	1,816
÷ m ³ /day/person	0.3
People serviced	6,053
Calculation of Cost per m³	
Gross Capital Cost - Treatment Alternative SBR	\$6,600,000
Grant (50%)	(\$3,300,000)
Net Capital Cost	\$3,300,000
÷ Design Capacity (m ³ /day)	1,816.00
= Cost per m ³	\$1,817.18



As per 2009 DC Study

Colchester South Lagoons Upgrade Residential Calculation - Single & Semi-Detached		Colchester South Lagoons Upgrade Non-Residential Calculation - per ft ²	
Cost per m ³	\$1,817.18	Cost per m ³	\$1,817.18
x m ³ /day/person	0.3	x m ³ /day/person	0.3
Cost per Person	\$545.15	Cost per Person	\$545.15
x - Single and Semi-Detached p.p.u.	3.04	÷ Square Foot per Employee	500
Development Charge	\$1,658.00	Development Charge	\$1.09

Note: On December 31, 2009, the Ward 3 Wastewater Reserve fund at December 31, 2008 had a balance of \$255,303.

As per 2014 DC Study

Colchester South Lagoons Upgrade Residential Calculation - Single & Semi-Detached		Colchester South Lagoons Upgrade Non-Residential Calculation - per ft ²	
Cost per m ³ (indexed to 2014\$)	\$1,856.64	Cost per m ³ (indexed to 2014\$)	\$1,856.64
x m ³ /day/person	0.3	x m ³ /day/person	0.3
Cost per Person	\$556.99	Cost per Person	\$556.99
Flow Optimization/Future Capacity Study	\$114,249	Flow Optimization/Future Capacity Study	35,751
People serviced	6,053	People serviced	6,053
Cost per Person	\$18.87	Cost per Person	\$5.91
Total Cost per Person	\$575.87	Total Cost per Person	\$562.90
x - Single and Semi-Detached p.p.u.	3.000	÷ Square Foot per Employee	500
Development Charge	\$1,728	Development Charge	\$1.13

Note: On December 31, 2013, the Ward 3 Wastewater Reserve fund had a balance of \$326,944.19

As per 2019 DC Study

Colchester South Lagoons Upgrade Residential Calculation - Single & Semi-Detached		Colchester South Lagoons Upgrade Non-Residential Calculation - per ft ²	
Cost per m ³ (indexed to 2019\$)	\$2,129.00	Cost per m ³ (indexed to 2019\$)	\$2,129.00
x m ³ /day/person	0.3	x m ³ /day/person	0.3
Cost per Person	\$638.70	Cost per Person	\$638.70
Flow Optimization/Future Capacity Study	\$190,415	Flow Optimization/Future Capacity Study	59,585
People serviced	6,053	People serviced	6,053
Cost per Person	\$31.46	Cost per Person	\$9.84
Total Cost per Person	\$670.16	Total Cost per Person	\$648.54
x - Single and Semi-Detached p.p.u.	3.084	÷ Square Foot per Employee	550
Development Charge	\$2,067	Development Charge	\$1.18

Note: On December 31, 2018, the Ward 3 Wastewater Reserve fund had a balance of \$385,984.65



5.4.4 Wastewater – Ward 4 – Harrow Service Area

In 2004, the Town undertook a process to consider a D.C. for wastewater for Wards 1 and 4 (Essex and Harrow). Public meetings with respect to these charges were held (in Harrow and Essex respectively) and the charges were approved by Council on April 5, 2004.

There were two debentures for the upgrade and expansion of the Harrow wastewater service, a five-year debenture at 2.02% in the amount of \$864,000 and a twenty-year debenture at 2.67% in the amount of \$4,057,000. Both are amortizing debentures through O.I.P.C. with a benefit to future users deemed to be 18.39% of annual debt charges.

The debenture costs include the total principal amount of the two debentures plus the financing costs paid to date (2005-2018) and the outstanding financing costs (discounted). These total \$6,234,902 of which 18.39% or \$1,146,390 is attributable to growth as identified in Table 5-4 below. The Town has also identified the need for flow optimization/future capacity studies for Ward 4 at a total cost of \$250,000. This cost has also been assigned a growth-related share based on 18.39% or \$45,967. The total cost has been attributed to residential and non-residential development based on 75%/25% share which was based on the growth initially identified to be serviced by the capital works that were undertaken. This growth includes 360 single detached equivalent units as well as 208,360 sq.ft. of non-residential space. The calculation provided in Table 5-4 provides for the D.C. calculation for Ward 4 wastewater.



Table 5-4
Calculation of Ward 4 – Harrow Service Area Wastewater D.C.

Wastewater Ward 4 - Harrow Service Area	\$
Expansion of Wastewater Services	\$4,921,000
Financing Costs to Date	1,161,258
Outstanding Financing Costs (Discounted)	152,644
Total Cost	\$6,234,902
Growth Related Portion	18.39%
Growth Related Cost	\$1,146,390
Flow Optimization/Future Capacity Study	250,000
Growth Related Portion	18.39%
Growth Related Cost	\$45,967
Grand Total Costs	\$1,192,356

Residential/Non-Residential Share	%	Cost
Residential (SDE)	75%	\$894,267
Non-Residential (sq.ft.)	25%	\$298,089

Development Charge Calculation	Cost	Growth	DC
Residential (SDE)	\$894,267	360	\$2,484
Non-Residential (sq.ft.)	\$298,089	208,360	\$1.43



Chapter 6

D.C. Calculation



6. D.C. Calculation

Table 6-1 calculates the proposed uniform D.C. to be imposed on anticipated development in the Town for Town-wide services over a 13-year planning horizon.

Table 6-2 calculates the proposed uniform D.C. to be imposed on anticipated development in the Town for Town-wide services over a 10-year planning horizon. The proposed D.C. to be imposed for wastewater services are as outlined in section 5.4 of this report and are summarized on Table 6-3.

The calculation for residential development is generated on a per capita basis and is based upon four forms of housing types (singles and semi-detached, apartments 2+ bedrooms, apartments bachelor and 1 bedroom and all other multiples). An optional charge for special care/special dwelling units has also been calculated and provided in Appendix H for Council's consideration. The non-residential D.C. 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 Town 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 and 6-2. Wind Turbines and Telecommunication Towers are deemed to be equivalent to a residential single detached unit as it relates to Services Related to a Highway, Fire Protection Services, Policing Services, and Administration only. Solar Farms are deemed to be equivalent to the non-residential charge as it relates to Services Related to a Highway, Fire Protection Services, Policing Services, and Administration only and are charges on a per sq.ft. basis on the panel surface.

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



Table 6-4 summarizes the total D.C. that is applicable for municipal-wide services. Table 6-5 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
Town of Essex
Development Charge Calculation
Municipal-wide Services
2019-2031

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
1. <u>Services Related to a Highway</u>				
1.1 Roads	721,374	461,206	1,125	0.53
1.2 Facilities	90,060	57,580	141	0.07
1.3 Vehicles & equipment	183,000	117,000	286	0.13
	994,434	635,786	1,552	0.73
2. <u>Fire Protection Services</u>				
2.1 Fire facilities, vehicles & equipment, and small equipment & gear	626,969	400,849	979	0.46
3. <u>Policing Services</u>				
3.1 Police facilities	253,128	161,836	395	0.18
3.2 Police vehicles, small equipment and gear	20,435	13,065	32	0.01
	273,563	174,901	427	0.19
TOTAL	\$1,894,966	1,211,536	\$2,958	1.38
D.C.-Eligible Capital Cost	\$1,894,966	\$1,211,536		
13-Year Gross Population/GFA Growth (sq.ft.)	1,976	875,300		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$958.99	\$1.38		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.084	\$2,958		
Apartments - 2 Bedrooms +	1.556	\$1,492		
Apartments - Bachelor and 1 Bedroom	1.297	\$1,244		
Other Multiples	1.868	\$1,791		



Table 6-2
Town of Essex
Development Charge Calculation
Municipal-wide Services
2019-2028

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
4. <u>Outdoor Recreation Services</u>				
4.1 Parkland development, amenities & trails	716,492	37,710	1,316	0.05
4.2 Parks vehicles and equipment	85,500	4,500	157	0.01
	801,992	42,210	1,473	0.06
5. <u>Indoor Recreation Services</u>				
5.1 Recreation facilities	1,768,438	93,076	3,248	0.11
	1,768,438	93,076	3,248	0.11
6. <u>Library Services</u>				
6.1 Library facilities	122,265	6,435	225	0.01
	122,265	6,435	225	0.01
7. <u>Administration</u>				
7.1 Essential Services Studies	49,242	31,483	90	0.04
7.2 Community Based Services Studies	54,927	35,118	101	0.05
TOTAL	\$2,796,865	\$208,321	\$5,137	\$0.27
D.C.-Eligible Capital Cost	\$2,796,865	\$208,321		
10-Year Gross Population/GFA Growth (sq.ft.)	1,679	762,600		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$1,665.79	\$0.27		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.084	\$5,137		
Apartments - 2 Bedrooms +	1.556	\$2,592		
Apartments - Bachelor and 1 Bedroom	1.297	\$2,161		
Other Multiples	1.868	\$3,112		



Table 6-3
Town of Essex
Development Charge Calculation
Area Specific Wastewater Services

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
8. Ward 1 - Essex Service Area	4,020,663	974,706	3,351	2.03
9. Ward 2 - Colchester North Service Area	130,868	-	872	-
10. Ward 3 - Colchester South Service Area	2,582,032	807,968	2,067	1.18
11. Ward 4 - Harrow Service Area	894,267	298,089	2,484	1.43

Table 6-4
Town of Essex
Development Charge Calculation
Total All Services

	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
Municipal-wide Services 13 Year	1,894,966	1,211,536	2,958	1.38
Municipal-wide Services 10 Year	2,796,865	208,321	5,137	0.27
TOTAL MUNICIPAL-WIDE SERVICES	4,691,831	1,419,857	8,095	1.65
Area Specific Wastewater Services				
Ward 1 - Essex Service Area	4,020,663	974,706	3,351	2.03
Ward 2 - Colchester North Service Area	130,868	-	872	-
Ward 3 - Colchester South Service Area	2,582,032	807,968	2,067	1.18
Ward 4 - Harrow Service Area	894,267	298,089	2,484	1.43



Table 6-5
Town of Essex
Gross Expenditure and Sources of Revenue Summary for Costs to be Incurred Over the Life of the By-law

Service	Total Gross Cost	Sources of Financing						
		Tax Base or Other Non-D.C. Source				Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding	Legislated Reduction		Residential	Non-Residential
1. Services Related to a Highway								
1.1 Roads	459,231	0	0	0	0	73,077	235,554	150,600
1.2 Facilities	612,953	0	0	0	0	465,313	90,060	57,580
1.3 Vehicles & equipment	780,000	0	0	0	0	0	475,800	304,200
2. Fire Protection Services								
2.1 Fire facilities, vehicles & equipment, and small equipment & gear	1,500,000	0	449,500	0	0	525,300	320,372	204,828
3. Policing Services								
3.1 Police facilities	207,692	0	0	0	0	0	126,692	81,000
3.2 Police vehicles, small equipment and gear	12,885	0	0	0	0	0	7,860	5,025
4. Outdoor Recreation Services								
4.1 Parkland development, amenities & trails	1,302,500	0	182,000	0	61,750	503,000	527,963	27,788
4.2 Parks vehicles and equipment	50,000	0	0	0	5,000	0	42,750	2,250
5. Indoor Recreation Services								
5.1 Recreation facilities	550,000	0	507,300	0	2,130	21,400	18,212	959
6. Library Services								
6.1 Library facilities	71,500	0	0	0	7,150	0	61,133	3,218
7. Administration								
7.1 Essential Services Studies	161,700	0	45,500	0	3,670	0	68,643	43,887
7.2 Community Based Services Studies	106,700	0	44,175	0	6,253	0	34,326	21,946
Total Expenditures & Revenues	\$5,815,161	\$0	\$1,228,475	\$0	\$85,953	\$1,588,090	\$2,009,364	\$903,279



Chapter 7

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



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

7.1 Introduction

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

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

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

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

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

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

The rules provided are based on the Town’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 D.C. By-law Structure

It is recommended that:

- the Town uses a uniform Town-wide D.C. calculation for all municipal services, except wastewater services
- wastewater services be imposed on an area specific basis in the four urban serviced areas of the Town; and
- one municipal D.C. by-law be used for all services.

7.3 D.C. By-law Rules

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

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

7.3.1 Payment in any Particular Case

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

- “(a) the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the Planning Act;
- (b) the approval of a minor variance under section 45 of the Planning Act;
- (c) a conveyance of land to which a by-law passed under subsection 50 (7) of the Planning Act applies;
- (d) the approval of a plan of subdivision under section 51 of the Planning Act;
- (e) a consent under section 53 of the Planning Act;
- (f) the approval of a description under section 9 of the Condominium Act, 1998; or
- (g) the issuing of a permit under the Building Code Act, 1992 in relation to a building or structure.”



7.3.2 Determination of the Amount of the Charge

The following conventions be adopted:

- 1) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type 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).
- 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 administration, the costs have been based on a population vs. employment growth ratio (61%/39% for residential and non-residential, respectively) over the 10-year forecast period;
 - for indoor and outdoor recreation and library services, a 5% non-residential attribution has been made to recognize use by the non-residential sector;
 - for services related to a highway, policing services, and fire protection services, the costs have been based on a population vs. employment growth ratio (61%/39% for residential and non-residential, respectively) over the 13-year forecast period;
 - for Wastewater – Ward 1, the residential/non-residential allocation (80%/20%) has been made based on the growth anticipated to be serviced by the capital works.
 - For Wastewater – Ward 2, the residential/non-residential allocation (100%/0%) has been made based on the growth anticipated to be serviced by the capital works.
 - For Wastewater – Ward 3, the residential/non-residential allocation (76%/24%) has been made based on the growth anticipated to be serviced by the capital works.
 - For Wastewater – Ward 4, the residential/non-residential allocation (75%/25%) has been made based on the growth anticipated to be serviced by the capital works.



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 D.C. in place at the time the D.C. is payable; and/or
- 2) the gross floor area of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. 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 48 months prior to the issuance of a building permit. The credit can, in no case, exceed the amount of D.C.s that would otherwise be payable.

7.3.4 Exemptions (full or partial)

a) Statutory exemptions:

- industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, section 1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to D.C.s (subsection 4 (3) of the D.C.A.);
- buildings or structures owned by and used for the purposes of any municipality, local board or Board of Education (section 3);
- residential development that results only in the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in section 2 of O.Reg. 82/98).

b) Non-statutory exemptions:

- Places of worship, churchyard and cemeteries exempt from taxation under the Assessment Act;



- The development of non-residential farm buildings constructed for bona fide farm uses, being that which operates with a valid Farm Business Number and is assessed in the Farmland Realty Tax Class;
- A hospital under the Public Hospitals Act;
- The development of not-for-profit housing units;
- The development of multi-residential rental housing for purpose-built uses;
- Residential charges shall not be imposed in the Harrow Primary Settlement Area; and
- non-residential charges will be imposed on commercial development, but not on industrial or institutional development.

7.3.5 Phasing in

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

7.3.6 Timing of Collection

A D.C. that is applicable under section 5 of the D.C.A. 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 D.C. prior to the issuance of a permit of prior to the commencement of development or redevelopment as the case may be; and
- despite the above, Council, from time to time and at any time, may enter into agreements providing for all or any part of a D.C. to be paid before or after it would otherwise be payable.

7.3.7 Wind Turbines, Communication Towers and Solar Farms

Charges have also been calculated for Wind Turbines, Telecommunication Towers and Solar Farms. For each type of development, charges will be imposed for Services Related to a Highway, Fire Protection Services, Policing Services, and Administration. Solar farms will be charged on a per square foot basis for the panel surfaces whereas the other two forms of development will be charged on a per unit basis.

7.3.8 Indexing

Indexing of the D.C.s shall be implemented on a mandatory basis annually commencing on January 1, 2020 each January 1st thereafter, in accordance with the Statistics



Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0135-01)¹ for the most recent year-over-year period.

7.3.9 The Applicable Areas

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

- Wastewater area specific charges will be imposed within the urban areas of the Town; and
- Remaining Services – the residential and non-residential charges will be imposed on all lands within the Town.

7.4 Other D.C. By-law Provisions

It is recommended that:

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

The Town's D.C. collections are currently reserved in eleven separate reserve funds: services related to a highway, fire protection services, policing services, outdoor recreation services, indoor recreation services, library services, administration, and four reserves for each area specific wastewater D.C. It is recommended that the Town rename the administration reserve fund as administration – essential services studies and set up a separate reserve fund for administration – community based services studies. Appendix F outlines the reserve fund policies that the Town is required to follow as per the D.C.A.

7.4.2 By-law In-force Date

A by-law under the D.C.A. comes into force on the day after which the by-law is passed by Council.

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



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

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

7.4.4 Area Rating

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

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

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

At present, the Town’s by-law provides for wastewater services on an area-specific urban basis. All other Town services are recovered based on a uniform, Town-wide basis. There have been several reasons why area-specific charges for these services have not been imposed including:

1. All Town services, with the exception of water, wastewater and stormwater, require that the average 10-year service standard be calculated. This average service standard multiplied by growth in the Town, 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 Town 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 Town-wide approach to an area specific approach. For example, if all services were now built (and funded) within Area A (which is 75% built out) and this was funded with some revenues from Areas B and C, moving to an area rating approach would see Area A contribute no funds to the costs of services in Areas B and C. The development charges would be lower in Area A (as all services are now funded) and higher in Areas B and C. As well, funding shortfalls may then potentially encourage the municipality to provide less services to Areas B and C due to reduced revenue.
3. Many services which are provided (roads, parks, recreation facilities, library) are not restricted to one specific area and are often used by all residents. For example, arenas located in different parts of the Town will be used by residents from all areas depending on the programming of the facility (i.e. a public skate is available each night, but at a different arena; hence usage of any one facility at any given time is based on programming availability).

For the reasons noted above, it is recommended that Council continue the D.C. approach to calculate the charges on a uniform Town-wide basis.

7.5 Other Recommendations

It is recommended that Council:

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

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



“Continue the D.C. approach to calculate the charges on a uniform Municipal-wide basis for all services other than wastewater and on an area specific urban-area basis for wastewater services;”

“Approve the capital project listing set out in Chapter 5 of the D.C.s Background Study dated June 20, 2019, subject to further annual review during the capital budget process;”

“Approve the D.C.s Background Study dated June 20, 2019, as amended (if applicable);”

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

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



Chapter 8

By-law Implementation



8. By-law Implementation

8.1 Public Consultation Process

8.1.1 Introduction

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

8.1.2 Public Meeting of Council

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

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

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

8.1.3 Other Consultation Activity

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

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



of the D.C. revenues. Others, such as realtors, are directly impacted by D.C. policy. They are, therefore, potentially interested in all aspects of the charge, particularly the quantum by unit type, projects to be funded by the D.C. and the timing thereof, and Town 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 Town D.C. policy. Their primary concern is frequently with the quantum of the charge, gross floor area exclusions such as basements, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

8.2 Anticipated Impact of the Charge on Development

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

On the other hand, D.C.s or other Town 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 Town has calculated the charge, prepared the complete background study, carried out the public process and passed a new by-law, the emphasis shifts to implementation matters.

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

The sections which follow overview the requirements in each case.

8.3.2 Notice of Passage

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

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

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

8.3.3 By-law Pamphlet

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

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



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

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

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

8.3.4 Appeals

Sections 13 to 19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and L.P.A.T. Hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the L.P.A.T. by filing a notice of appeal with the Town 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 Town is carrying out a public consultation process, in order to address the issues that come forward as part of that process, thereby avoiding or reducing the need for an appeal to be made.

8.3.5 Complaints

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

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

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



8.3.6 Credits

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

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

8.3.7 Front-Ending Agreements

The Town 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 Town to which the D.C. by-law applies. Such an agreement can provide for the costs to be borne by one or more parties to the agreement who are, in turn, reimbursed in future by persons who develop land defined in the agreement.

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

8.3.8 Severance and Subdivision Agreement Conditions

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

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

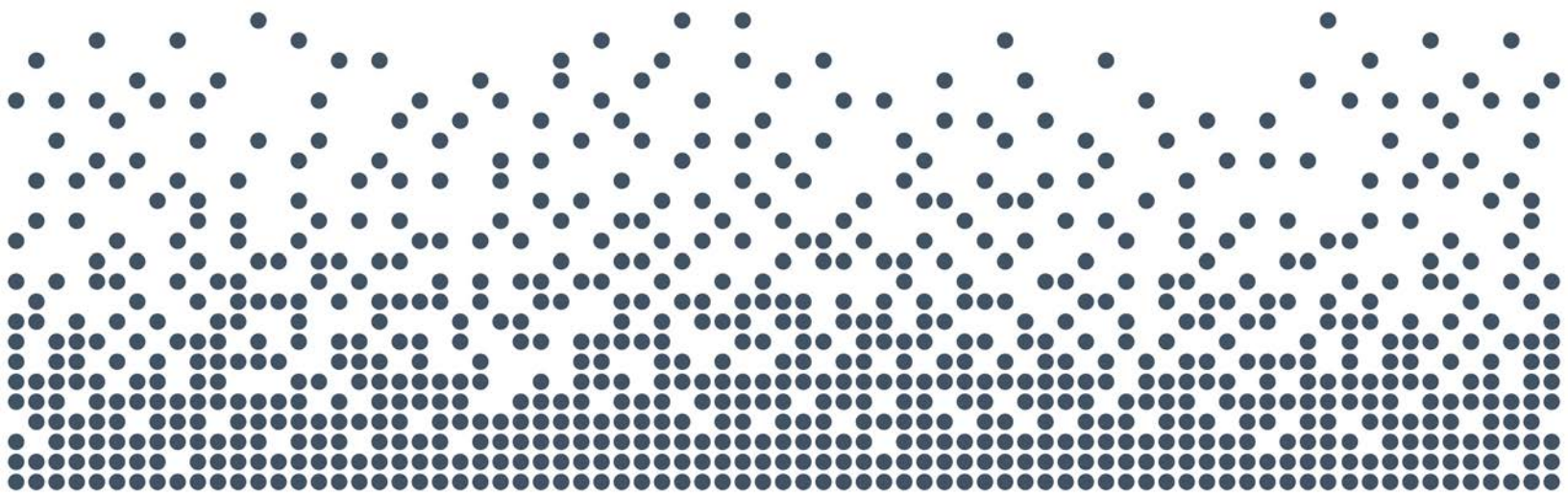


It is also noted that subsection 59 (4) of the D.C.A. requires that the municipal approval authority for a draft plan of subdivision under subsection 51 (31) of the Planning Act, use its power to impose conditions to ensure that the first purchaser of newly subdivided land is informed of all the D.C.s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

In this regard, if the Town 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 Town D.C.s related to the site.

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

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



Appendices



Appendix A

Background Information on Residential and Non- Residential Growth Forecast



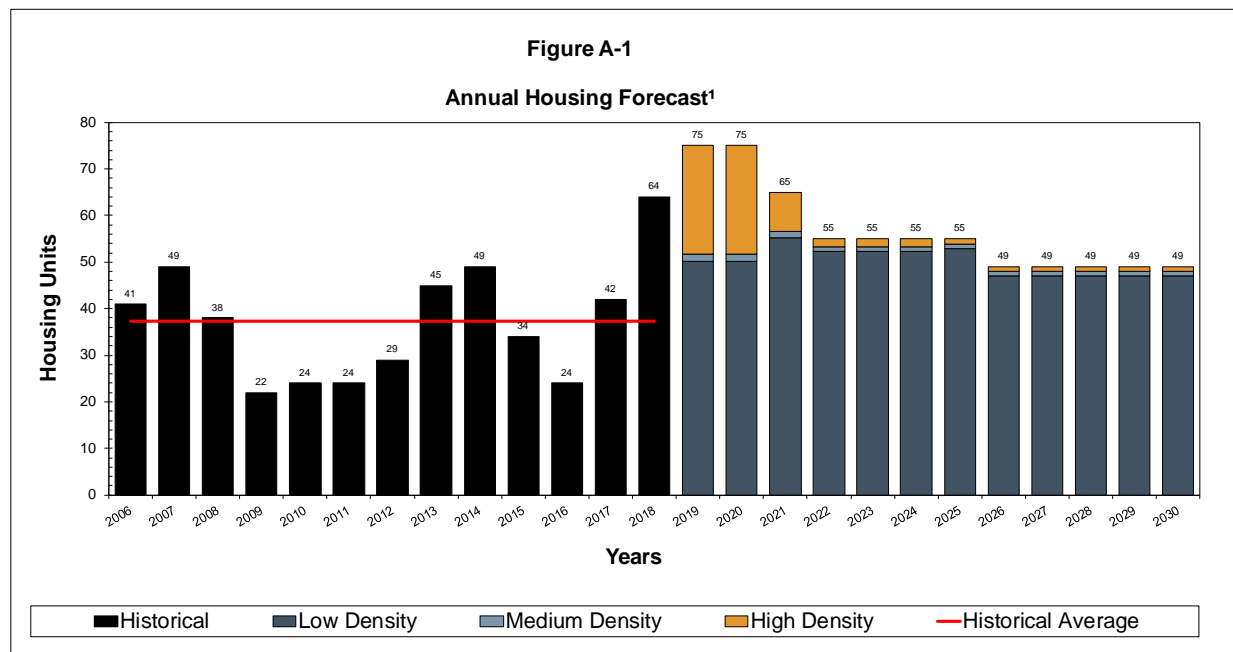
Schedule 1 Town of Essex Residential Growth Forecast Summary

Year		Excluding Census Undercount			Housing Units					Person Per Unit (P.P.U.): Total Population/ Total Households
		Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi- Detached	Multiple Dwellings ¹	Apartments ²	Other	Total Households	
Historical	Mid 2006	20,032	337	19,695	7,020	260	350	15	7,645	2.620
	Mid 2011	19,600	400	19,200	6,708	335	374	376	7,793	2.515
	Mid 2016	20,427	852	19,575	6,830	365	455	440	8,090	2.525
Forecast	Mid 2019	20,711	866	19,845	6,956	369	455	440	8,220	2.520
	Mid 2029	21,986	925	21,061	7,462	381	519	440	8,802	2.498
	Mid 2031	22,150	925	21,225	7,557	383	521	440	8,900	2.489
Incremental	Mid 2006 - Mid 2011	-432	63	-495	-312	75	24	361	148	
	Mid 2011 - Mid 2016	827	452	375	122	30	81	64	297	
	Mid 2016 - Mid 2019	284	14	270	126	4	0	0	130	
	Mid 2019 - Mid 2029	1,275	59	1,216	506	12	64	0	582	
	Mid 2019 - Mid 2031	1,439	59	1,380	601	14	66	0	680	

Derived from Foundation Report: Essex County Official Plan Review, the County of Essex, August 2011 forecast for the Town of Essex Low Population Growth Scenario, May 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes bachelor, 1-bedroom and 2-bedroom+ apartments.



Source: Historical housing activity derived from Statistics Canada building permit data for the Town of Essex, 2006-2018.

¹ Growth forecast represents calendar year.



**Schedule 2
Town of Essex
Current Year Growth Forecast
Mid 2016 to Mid 2019**

		Population
Mid 2016 Population		20,427
Occupants of New Housing Units, Mid 2016 to Mid 2019	<i>Units (2)</i>	130
	<i>multiplied by P.P.U. (3)</i>	2,912
	<i>gross population increase</i>	379
Occupants of New Equivalent Institutional Units, Mid 2016 to Mid 2019	<i>Units</i>	12
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	13
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2019	<i>Units (4)</i>	8,090
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.013
	<i>total decline in population</i>	-108
Population Estimate to Mid 2019		20,711
Net Population Increase, Mid 2016 to Mid 2019		284

- (1) 2016 population based on Statistics Canada Census unadjusted for Census undercount.
- (2) Estimated residential units constructed, Mid-2016 to the beginning of the growth period assuming a six-month lag between construction and occupancy.
- (3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit ¹ (P.P.U.)	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	2.949	97%	2.858
<i>Multiples (6)</i>	1.771	3%	0.054
<i>Apartments (7)</i>	1.333	0%	0.000
Total		100%	2.912

¹ Based on 2016 Census custom database

² Based on Building permit/completion activity

- (4) 2016 households taken from Statistics Canada Census.
- (5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.
- (6) Includes townhouses and apartments in duplexes.
- (7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.



**Schedule 3
Town of Essex
Ten Year Growth Forecast
Mid 2019 to Mid 2029**

		Population
Mid 2019 Population		20,711
Occupants of New Housing Units, Mid 2019 to Mid 2029	Units (2)	582
	multiplied by P.P.U. (3)	2.885
	gross population increase	1,679
Occupants of New Equivalent Institutional Units, Mid 2019 to Mid 2029	Units	54
	multiplied by P.P.U. (3)	1.100
	gross population increase	59
Decline in Housing Unit Occupancy, Mid 2019 to Mid 2029	Units (4)	8,220
	multiplied by P.P.U. decline rate (5)	-0.056
	total decline in population	-463
Population Estimate to Mid 2029		21,986
Net Population Increase, Mid 2019 to Mid 2029		1,275

(1) Mid 2019 Population based on:

2016 Population (20,427) + Mid 2016 to Mid 2019 estimated housing units to beginning of forecast period (130 x 2.912 = 379) + (12 x 1.1 = 13) + (8,090 x -0.013 = -108) = 20,711

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

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

Structural Type	Persons Per Unit ¹ (P.P.U.)	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	3.084	87%	2.683
<i>Multiples (6)</i>	1.868	2%	0.037
<i>Apartments (7)</i>	1.498	11%	0.165
<i>one bedroom or less</i> 1.297			
<i>two bedrooms or more</i> 1.556			
Total		100%	2.885

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

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

(4) Mid 2019 households based upon 2016 Census (8,090 units) + Mid 2016 to Mid 2019 unit estimate (130 units) = 8,220 units.

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

(6) Includes townhouses and apartments in duplexes.

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



**Schedule 4
Town of Essex
Twenty Year Growth Forecast
Mid 2019 to Mid 2031**

		Population
Mid 2019 Population		20,711
Occupants of New Housing Units, Mid 2019 to Mid 2039	Units (2)	680
	multiplied by P.P.U. (3)	2,906
	gross population increase	1,976
Occupants of New Equivalent Institutional Units, Mid 2019 to Mid 2039	Units	54
	multiplied by P.P.U. (3)	1,100
	gross population increase	59
Decline in Housing Unit Occupancy, Mid 2019 to Mid 2039	Units (4)	8,220
	multiplied by P.P.U. decline rate (5)	-0.073
	total decline in population	-596
Population Estimate to Mid 2039		22,150
Net Population Increase, Mid 2019 to Mid 2039		1,439

(1) Mid 2019 Population based on:

2016 Population (20,427) + Mid 2016 to Mid 2019 estimated housing units to beginning of forecast period (130 x 2.912 = 379) + (12 x 1.1 = 13) + (8,090 x -0.013 = -108) = 20,711

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

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

Structural Type	Persons Per Unit ¹ (P.P.U.)	% Distribution of Estimated Units ²	Weighted Persons Per Unit Average
<i>Singles & Semi Detached</i>	3.084	88%	2.723
<i>Multiples (6)</i>	1.868	2%	0.037
<i>Apartments (7)</i>	1.498	10%	0.145
<i>one bedroom or less</i>	1.297		
<i>two bedrooms or more</i>	1.556		
Total		100%	2.906

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

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

(4) Mid 2019 households based upon 2016 Census (8,090 units) + Mid 2016 to Mid 2019 unit estimate (130 units) = 8,220 units.

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

(6) Includes townhouses and apartments in duplexes.

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



Schedule 5
Town of Essex
Historical Residential Building Permits
Years 2007 - 2017

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples ¹	Apartments ²	Total
2007	49	0	0	49
2008	38	0	0	38
2009	22	0	0	22
2010	24	0	0	24
2011	24	0	0	24
Average (2007 - 2011)	31	0	0	31
% Breakdown	100.0%	0.0%	0.0%	100.0%
2012	29	0	0	29
2013	45	0	0	45
2014	47	2	0	49
2015	34	0	0	34
2016	20	4	0	24
Sub-total	175	6	0	181
Average (2012 - 2016)	35	1	0	36
% Breakdown	96.7%	3.3%	0.0%	100.0%
2017	42	0	0	42
2018	64	0	0	64
Sub-total	106	0	0	106
% Breakdown	100.0%	0.0%	0.0%	100.0%
2007 - 2018				
Total	438	6	0	444
Average	37	1	0	34
% Breakdown	98.6%	1.4%	0.0%	100.0%

Source: Statistics Canada Publication, 64-001XIB

¹ Includes townhouses and apartments in duplexes.

² Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



**Schedule 6a - 20 Year Average
Town of Essex
Persons Per Unit By Age and Type of Dwelling
(2016 Census)**

Age of Dwelling	Singles and Semi-Detached						20 Year Average	20 Year Average Adjusted
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	-	-	3.069	-	2.949		
6-10	-	-	-	3.258	-	3.372		
11-15	-	-	-	3.113	-	3.243		
16-20	-	-	1.786	2.917	3.571	2.884	3.112	3.084
20-25	-	-	2.000	2.857	4.000	2.927		
25-35	-	-	2.000	2.794	-	2.742		
35+	-	1.281	1.817	2.541	2.846	2.349		
Total	-	1.556	1.848	2.698	3.415	2.569		

¹ Includes townhouses and apartments in duplexes.

² Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

³ Adjusted based on 2001-2016 historical trends.

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

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



Schedule 8b
County of Essex Less Guelph
Persons Per Unit By Age and Type of Dwelling
(2016 Census)

Age of Dwelling	Singles and Semi-Detached						20 Year Average	20 Year Average Adjusted
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	1.700	1.905	3.169	4.311	3.127		
6-10	-	-	1.895	3.170	4.352	3.204		
11-15	-	-	1.819	3.227	4.094	3.205		
16-20	-	-	1.883	3.087	3.986	3.108	3.161	3.157
20-25	-	-	2.029	2.966	3.871	2.988		
25-35	-	-	1.948	2.862	3.484	2.845		
35+	-	1.375	1.844	2.605	3.674	2.474		
Total	-	1.406	1.863	2.836	3.901	2.760		

Age of Dwelling	Multiples ¹						20 Year Average	20 Year Average Adjusted
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	-	1.583	2.111	-	1.771		
6-10	-	-	1.833	2.244	-	2.095		
11-15	-	-	1.550	2.143	-	1.924		
16-20	-	-	1.688	2.362	-	2.066	1.964	1.868
20-25	-	-	1.667	2.639	-	2.068		
25-35	-	-	2.194	2.639	-	2.315		
35+	-	1.250	2.038	2.652	-	2.167		
Total	-	1.200	1.827	2.415	2.000	2.080		

Age of Dwelling	Apartments ²						20 Year Average	20 Year Average Adjusted
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	1.167	2.100	-	-	1.333		
6-10	-	-	1.387	-	-	1.390		
11-15	-	-	1.413	-	-	1.525		
16-20	-	1.917	1.673	-	-	1.611	1.465	1.498
20-25	-	1.353	1.512	-	-	1.517		
25-35	-	1.164	1.569	-	-	1.382		
35+	-	1.212	1.681	2.360	-	1.436		
Total	-	1.229	1.609	2.400	2.000	1.447		

Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	-	1.345	1.790	3.112	4.410	2.943
6-10	-	1.333	1.754	3.093	4.341	2.992
11-15	-	1.214	1.657	3.120	4.147	2.995
16-20	-	1.760	1.762	3.031	4.007	2.937
20-25	-	1.357	1.842	2.941	3.920	2.848
25-35	-	1.209	1.865	2.858	3.446	2.691
35+	1.077	1.257	1.820	2.606	3.663	2.372
Total	1.105	1.278	1.804	2.814	3.913	2.625

¹ Includes townhouses and apartments in duplexes.

² Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

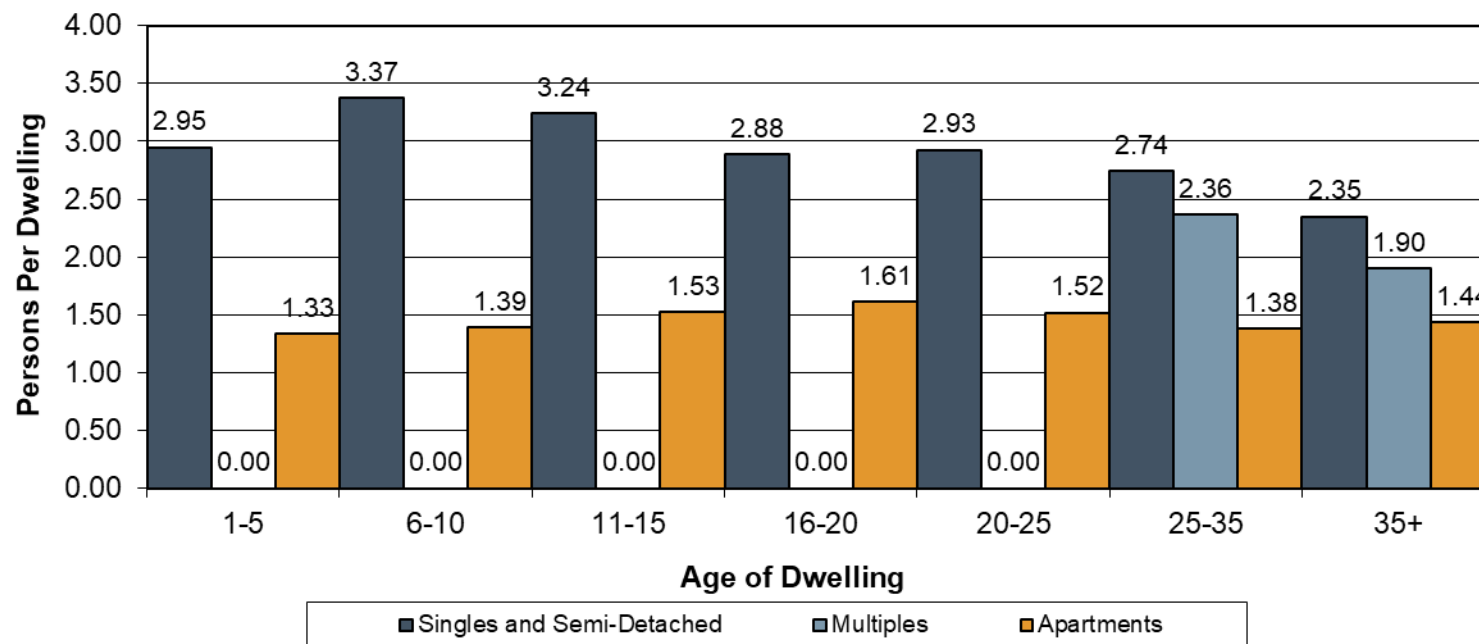
³ Adjusted based on 2001-2016 historical trends.

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

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



**Schedule 9
Town of Essex
Persons Per Unit By Structural Type and Age of Dwelling
(2016 Census)**



Multiple and Apartment P.P.U.s are based on County of Essex.



Schedule 10a Town of Essex 2019 Employment Forecast

Period	Population	Activity Rate						Total (Excluding Work at Home)
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	
Mid 2006	20,032	0.010	0.033	0.084	0.123	0.060	0.310	0.277
Mid 2011	19,600	0.004	0.028	0.079	0.104	0.073	0.289	0.260
Mid 2016	20,427	0.007	0.026	0.063	0.113	0.069	0.278	0.252
Mid 2019	20,711	0.007	0.026	0.063	0.114	0.069	0.278	0.253
Mid 2029	21,986	0.006	0.030	0.078	0.117	0.074	0.305	0.275
Mid 2031	22,150	0.006	0.032	0.080	0.118	0.075	0.311	0.279
Incremental Change								
Mid 2006 - Mid 2011	-432	-0.007	-0.005	-0.005	-0.018	0.014	-0.021	-0.016
Mid 2011 - Mid 2016	827	0.0030	-0.0024	-0.0162	0.0090	-0.0044	-0.0109	-0.0086
Mid 2016 - Mid 2019	284	-0.0001	0.0000	-0.0001	0.0007	0.0004	0.0009	0.0009
Mid 2019 - Mid 2029	1,275	-0.0004	0.0043	0.0149	0.0030	0.0048	0.0267	0.0223
Mid 2019 - Mid 2031	1,439	-0.0004	0.0063	0.0169	0.0038	0.0058	0.0324	0.0260

Derived from Foundation Report: Essex County Official Plan Review, the County of Essex, August 2011 forecast for the Town of Essex Low Population Growth Scenario, May 2019.

Period	Population	Employment						Total (Excluding Work at Home)
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	
Mid 2006	20,032	205	660	1,680	2,460	1,195	6,200	5,540
Mid 2011	19,600	70	550	1,555	2,045	1,435	5,655	5,105
Mid 2016	20,427	135	525	1,290	2,315	1,405	5,670	5,145
Mid 2019	20,711	135	532	1,306	2,362	1,433	5,768	5,236
Mid 2029	21,986	135	660	1,715	2,572	1,627	6,709	6,049
Mid 2031	22,150	135	710	1,770	2,610	1,660	6,885	6,175
Incremental Change								
Mid 2006 - Mid 2011	-432	-135	-110	-125	-415	240	-545	-435
Mid 2011 - Mid 2016	827	65	-25	-265	270	-30	15	40
Mid 2016 - Mid 2019	284	0	7	16	47	28	98	91
Mid 2019 - Mid 2029	1,275	0	128	409	210	194	941	813
Mid 2019 - Mid 2031	1,439	0	178	464	248	227	1,117	939

Derived from Foundation Report: Essex County Official Plan Review, the County of Essex, August 2011 forecast for the Town of Essex Low Population Growth Scenario, May 2019.



Schedule 10b
Town of Essex
Employment & Gross Floor Area (G.F.A) Forecast, 2019 to 2031

Period	Population	Employment					Gross Floor Area in Square Feet (Estimated) ¹			
		Primary	Industrial	Commercial/ Population Related	Institutional	Total	Industrial	Commercial/ Population Related	Institutional	Total
Mid 2006	20,032	205	1,680	2,460	1,195	5,540				
Mid 2011	19,600	70	1,555	2,045	1,435	5,105				
Mid 2016	20,427	135	1,290	2,315	1,405	5,145				
Mid 2019	20,711	135	1,306	2,362	1,433	5,236				
Mid 2029	21,986	135	1,715	2,572	1,627	6,049				
Mid 2031	22,150	135	1,770	2,610	1,660	6,175				
Incremental Change										
Mid 2006 - Mid 2011	-432	-135	-125	-415	240	-435				
Mid 2011 - Mid 2016	827	65	-265	270	-30	40				
Mid 2016 - Mid 2019	284	0	16	47	28	91	20,000	25,800	19,600	65,400
Mid 2019 - Mid 2029	1,275	0	409	210	194	813	511,300	115,500	135,800	762,600
Mid 2019 - Mid 2031	1,439	0	464	248	227	939	580,000	136,400	158,900	875,300
Annual Average										
Mid 2006 - Mid 2011	-86	-27	-25	-83	48	-87				
Mid 2011 - Mid 2016	165	13	-53	54	-6	8				
Mid 2016 - Mid 2019	95	0	5	16	9	30	6,667	8,600	6,533	21,800
Mid 2019 - Mid 2029	128	0	41	21	19	81	51,130	11,550	13,580	76,260
Mid 2019 - Mid 2031	96	0	39	21	19	78	48,333	11,367	13,242	72,942

Derived from Foundation Report: Essex County Official Plan Review, the County of Essex, August 2011 forecast for the Town of Essex Low Population Growth Scenario, May 2019.

¹ Square Foot Per Employee Assumptions

Industrial 1,250

Commercial/ Population Related 550

Institutional 700

* Reflects Mid 2019 to Mid 2039 forecast period



Schedule 11
Town of Essex

Employment to Population Ratio by Major Employment Sector, 2006 to 2016

NAICS	Employment & Gross Floor Area (G.F.A) Forecast, 2016 To Buildout	Year			Change			Comments
		2006	2011	2016	96-01	06-11	11-16	
Employment by industry								Categories which relate to local land-based resources
	Primary Industry Employment							
11	Agriculture, forestry, fishing and hunting	445	390	240		-55	-150	
21	Mining and oil and gas extraction	0	0	0		0	0	
Sub-total		445	390	240	0	-55	-150	
Industrial and Other Employment								Categories which relate primarily to industrial land supply and demand
22	Utilities	90	85	35		-5	-50	
23	Construction	195	235	200		40	-35	
31-33	Manufacturing	920	755	745		-165	-10	
41	Wholesale trade	215	200	145		-15	-55	
48-49	Transportation and warehousing	370	345	225		-25	-120	
56	Administrative and support	53	65	58		13	-8	
Sub-total		1,843	1,685	1,408	-53	-158	-278	
	Population Related Employment							Categories which relate primarily to population growth within the municipality
44-45	Retail trade	875	905	810		30	-95	
51	Information and cultural industries	90	85	50		-5	-35	
52	Finance and insurance	230	180	255		-50	75	
53	Real estate and rental and leasing	40	75	30		35	-45	
54	Professional, scientific and technical services	210	100	235		-110	135	
55	Management of companies and enterprises	0	0	0		0	0	
56	Administrative and support	53	65	58		13	-8	
71	Arts, entertainment and recreation	160	125	180		-35	55	
72	Accommodation and food services	590	370	585		-220	215	
81	Other services (except public administration)	420	225	370		-195	145	
Sub-total		2,668	2,130	2,573	-53	-538	443	
	Institutional							
61	Educational services	385	380	395		-5	15	
62	Health care and social assistance	575	745	700		170	-45	
91	Public administration	285	325	355		40	30	
Sub-total		1,245	1,450	1,450	0	205	0	
Total Employment		6,200	5,655	5,670	-105	-545	15	
Population		20,032	19,600	20,427	-53	-432	827	
Employment to Population Ratio								
Industrial and Other Employment		0.09	0.09	0.07	0.00	-0.01	-0.02	
Population Related Employment		0.13	0.11	0.13	0.00	-0.02	0.02	
Institutional Employment		0.06	0.07	0.07	0.00	0.01	0.00	
Primary Industry Employment		0.02	0.02	0.01	0.00	0.00	-0.01	
Total		0.31	0.29	0.28	0.00	-0.02	-0.01	

Source: Statistics Canada Employment by Place of Work

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



Appendix B

Level of Service



Appendix B: Level of Service

APPENDIX B - LEVEL OF SERVICE CEILING

TOWN OF ESSEX

SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED							
Service Category	Sub-Component	10 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Services Related to a Highway	Services Related to a Highway - Roads	\$8,463.60	0.0158	km of roadways	535,671	per lane km	12,179,120
	Services Related to a Highway - Facilities	\$100.26	1.1439	ft² of building area	88	per sq.ft.	144,274
	Services Related to a Highway - Vehicles & Equipment	\$243.91	0.0040	No. of vehicles and equipment	60,978	per vehicle	350,986
Fire	Fire Facilities	\$345.24	0.6495	ft² of building area	532	per sq.ft.	496,800
	Fire Vehicles	\$318.63	0.0007	No. of vehicles	455,186	per vehicle	458,509
	Fire Small Equipment and Gear	\$67.51	0.0185	No. of equipment and gear	3,649	per Firefighter	97,147
Policing	Policing Facilities	\$290.05	0.7764	ft² of building area	374	per sq.ft.	417,382
	Policing Vehicles, Small Equipment and Gear	\$23.40	0.0035	No. of vehicles and equipment	6,686	per vehicle	33,673
Outdoor Recreation	Parkland Development	\$308.92	0.0049	Acres of Parkland	63,045	per acre	393,873
	Parkland Amenities	\$770.67	0.0111	No. of parkland amenities	69,430	per amenity	982,604
	Parkland Trails	\$47.69	0.1590	Linear Metres of Paths and Trails	300	per lin m.	60,805
	Parks Vehicles and Equipment	\$80.94	0.0028	No. of vehicles and equipment	28,907	per vehicle	103,199
Indoor Recreation	Indoor Recreation Facilities	\$1,932.56	9.4975	ft² of building area	203	per sq.ft.	2,464,014
Library Services	Library Facilities	\$116.51	0.6367	ft² of building area	183	per sq.ft.	148,550



Town of Essex
Service Standard Calculation Sheet

Service: Services Related to a Highway - Roads

Unit Measure: km of roadways

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/km)
High Class Bituminous (Ashphalt)	67.784	67.784	67.784	67.784	68.440	68.440	68.440	68.440	68.440	68.440	\$1,720,000
Low Class Bituminous (Tar & Chip)	180.746	180.746	180.746	185.876	191.090	196.540	196.540	198.970	201.390	205.690	\$236,100
Gravel	67.750	67.750	67.750	62.620	56.750	51.300	51.300	48.870	46.450	42.149	\$126,800
Total	316.28	316.28	316.28	316.28	316.28	316.28	316.28	316.28	316.28	316.28	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0159	0.0160	0.0161	0.0160	0.0159	0.0158	0.0156	0.0155	0.0155	0.0154

10 Year Average	2009-2018
Quantity Standard	0.0158
Quality Standard	\$535,671
Service Standard	\$8,464

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$8,464
Eligible Amount	\$12,179,120



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Ferris Public Works Yard Shop/Garage	12,032	12,032	12,032	12,032	12,032	12,032	12,032	12,032	12,032	12,032	\$69	\$80
Ferris Road Storage Building #1	479	479	479	479	479	957	957	957	957	957	\$29	\$36
Ferris Road Storage Building #2	800	800	800	800	800	800	800	800	800	800	\$34	\$42
Ferris Road Salt Shed	1,800	1,800	1,800	1,800	1,800	1,800	1,800	7,200	7,200	7,200	\$85	\$98
North Malden Road Salt Shed	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	\$85	\$98
North Malden Road PW Satellite Yard	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$69	\$80
Operations Facility Office Space	300	300	300	300	300	300	300	300	300	300	\$510	\$566
Total	21,111	21,111	21,111	21,111	21,111	21,589	21,589	26,989	26,989	26,989		

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	1.0638	1.0706	1.0771	1.0702	1.0625	1.0761	1.0652	1.3212	1.3190	1.3131

10 Year Average	2009-2018
Quantity Standard	1.1439
Quality Standard	\$88
Service Standard	\$100

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$100
Eligible Amount	\$144,274



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Vehicles:											
5 Ton Dump/Plow Truck	2	-	-	-	-	-	-	-	-	-	\$272,000
Freightliner 5 Ton Plow	1	1	1	1	1	1	1	1	1	-	\$235,000
15-Ton Dump [Asset ID 1653]	1	1	1	1	1	1	1	1	1	1	\$311,000
5-Ton Dump [Asset ID 1654]	1	1	1	1	1	1	1	1	1	-	\$278,000
15-Ton Dump [Asset ID 1655]	1	1	1	1	1	1	1	1	1	1	\$298,000
5-Ton Dump International 510 [Asset ID 1656]	1	1	1	1	1	1	1	1	1	1	\$265,000
2-Ton Dump Truck [Asset ID 1659]	1	1	1	-	-	-	-	-	-	-	\$111,000
3-Ton Dump Truck [Asset ID 1661]	1	1	1	1	1	1	1	1	1	-	\$272,000
1/2-Ton Pickup Truck [Asset ID 1660]	1	1	-	-	-	-	-	-	-	-	\$41,300
1/2-Ton Pickup Truck [Asset ID 1662]	1	1	1	1	1	1	1	1	1	1	\$41,300
1/2-Ton Pickup Truck [Asset ID 1663]	1	1	1	1	1	1	1	-	-	-	\$41,300
15-Ton Dump Plow [Asset ID 1664]	1	1	1	1	1	1	1	-	-	-	\$60,200
Sterling Acterra [Asset ID 1665]	1	1	1	1	1	1	1	1	1	1	\$175,000
2010 International [Asset ID 23208]	-	1	1	1	1	1	1	1	1	1	\$204,000
2002 International [Asset ID 23209]	-	1	1	1	1	1	1	1	1	1	\$59,600
15-Ton Dump [Asset ID 23760]	1	1	1	1	1	1	1	-	-	-	\$35,500
2011 Chevrolet Silverado [Asset ID 24130]	-	-	1	1	1	1	1	1	1	1	\$31,000
15-Ton Tandem Truck/Plow Unit 535 [Asset ID 24251]	1	-	-	1	1	1	1	1	1	1	\$232,000
3-Ton Truck Unit [Asset ID 24252]	-	-	-	1	1	1	1	1	1	1	\$197,000
1/2 Pickup [Asset ID 24605]	1	-	-	-	1	1	1	1	1	1	\$32,100
15-Ton Tandem [Asset ID 24950]	-	-	-	-	-	-	1	1	1	1	\$276,000
Dodge Ram 1500 [Asset ID 25153]	-	-	-	-	-	-	-	1	1	1	\$39,900
Dodge Ram 1500 ST [Asset ID 25154]	-	-	-	-	-	-	-	1	1	1	\$39,900



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Machinery:											
Backhoe Loader [Asset ID 2742]	1	1	1	1	1	1	1	1	1	-	\$45,200
Tractor Loader 4x4 [Asset ID 2743]	1	1	1	1	1	1	1	1	1	-	\$347,000
Sweeper [Asset ID 2744]	1	1	1	1	1	1	1	-	-	-	\$45,000
Grader [Asset ID 2745]	1	1	1	1	1	1	1	-	-	-	\$325,000
Cat Backhoe [Asset ID 2771]	1	1	1	1	1	1	1	1	1	1	\$126,000
Case Tractor [Asset ID 2772]	1	1	1	1	1	1	-	-	-	-	\$14,900
Champion Grader [Asset ID 2774]	-	1	1	1	1	1	1	1	1	1	\$325,000
Kubota Tractor [Asset ID 2776]	1	1	1	1	1	1	1	1	1	1	\$85,000
Sweeper [Asset ID 2789]	1	1	1	1	1	-	-	-	-	-	\$306,000
Equipment:											
Wing Plow (8)	8	8	8	8	8	8	8	8	8	8	\$8,800
V-Plow (4)	4	4	4	4	4	4	4	4	4	4	\$8,900
Orange Plow [Asset IDs 2780, 2781, 2784]	3	3	2	2	2	2	2	2	2	2	\$6,700
One-Way Plow (7)	-	-	7	7	7	7	7	7	7	7	\$8,900
Reversible Poly Plow (8)	-	-	8	8	8	8	8	8	8	8	\$9,200
2500 Gallon Tank (2)	2	2	2	2	2	2	2	2	2	2	\$5,400
Air Compressor	1	1	1	1	1	1	1	1	1	1	\$6,300
Air Conditioner	1	1	1	1	1	1	1	1	1	1	\$4,600
Air Conditioning Tester [Asset ID 2752]	1	1	1	1	1	1	1	1	1	1	\$6,000
Mig Welder [Asset ID 2753]	1	1	1	1	1	1	1	1	1	1	\$1,700
Power Washer [Asset ID 2754]	1	1	1	1	1	1	1	1	1	1	\$2,400
Sewer Roder [Asset ID 2769]	1	1	1	1	1	1	1	-	-	-	\$75,000



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Confined Space Equipment [Asset ID 2797]	1	1	1	1	1	1	1	1	1	1	\$10,000
Trailer [Asset ID 2798]	1	1	1	1	1	1	1	1	1	1	\$1,300
Head Light Aligner [Asset ID 15501]	1	1	1	1	1	1	1	1	1	1	\$1,600
AVL Guidance System [Asset ID 23266]	1	1	1	1	1	1	1	1	1	1	\$4,600
Toro Riding Mower [Asset ID 24253]	-	-	-	1	1	1	1	1	1	1	\$3,200
John Deere Backhoe [Asset ID 24680]	-	-	-	-	-	1	1	1	1	1	\$128,000
Freightliner Street Sweeper [Asset ID 24704]	-	-	-	-	-	1	1	1	1	1	\$266,000
15 Ton Freightliner Plow	-	-	-	-	-	-	-	-	-	1	\$280,000
Plow Blade	-	-	-	-	-	-	1	1	1	1	\$24,000
Kubota Tractor [24948]	-	-	-	-	-	-	1	1	1	1	\$66,000
Portable Column Lift	-	-	-	-	-	-	1	1	1	1	\$56,000
Cargo Trailer	-	-	-	-	-	-	-	1	1	1	\$9,000
Road Widener Box	-	-	-	-	-	-	-	1	1	1	\$46,000
Hot Water Power Washer [Asset ID 25297]	-	-	-	-	-	-	-	-	1	1	\$15,000
Angle Broom for Sweeper	-	-	-	-	-	-	-	-	1	1	\$7,000
Flex Wing Mower	-	-	-	-	-	-	-	-	1	1	\$19,000
Mobile Drafting Table	-	-	-	-	-	-	-	-	1	1	\$10,000
Battery Charger	1	1	1	1	1	1	1	1	1	1	\$5,700
Unit Heaters (2)	2	2	2	2	2	2	2	2	2	2	\$7,600
Bush Hog [Asset IDs 2777, 2778, 2779]	3	3	2	2	2	2	2	1	1	1	\$5,500
Cool Tech Unit	1	1	1	1	1	1	1	1	1	1	\$30,400
Cutting/Pruning Saw [Asset ID 15498]	1	1	1	1	1	1	1	1	1	1	\$6,400
Generator	1	1	1	1	1	1	1	1	1	1	\$3,400



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Diesel Back-up Generator [Asset ID 2759]	1	1	1	1	1	1	1	-	-	-	\$29,000
GPS Units	1	1	1	1	1	1	1	1	1	1	\$3,600
Hot Water Power Washer	1	1	1	1	1	1	1	1	1	1	\$18,100
Kubota Z726X Lawn Mower	1	1	1	1	1	1	1	1	1	1	\$10,300
Land Pride Mower RC5610	1	1	1	1	1	1	1	1	1	1	\$20,600
Traffic Counters	1	1	1	1	1	1	1	1	1	1	\$13,800
Vermeer Wood Chipper	1	1	1	1	1	1	1	1	1	1	\$80,000
Total	68	67	80	82	83	84	87	83	87	83	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0034	0.0034	0.0041	0.0042	0.0042	0.0042	0.0043	0.0041	0.0043	0.0040

10 Year Average	2009-2018
Quantity Standard	0.0040
Quality Standard	\$60,978
Service Standard	\$244

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$244
Eligible Amount	\$350,986



Town of Essex
Service Standard Calculation Sheet

Service: Fire Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Station 1 (Essex)	4,294	4,294	4,294	4,294	7,729	7,729	7,729	7,729	7,729	7,729	\$485	\$550
Station 2 (Gesto)	3,240	3,240	3,240	3,240	2,338	2,338	2,338	2,338	2,338	2,338	\$477	\$529
Station 3 (Harrow)	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	\$477	\$529
Emergency Operations Centre	600	600	600	600	-	-	-	-	-	-	\$100	\$120
Total	11,874	11,874	11,874	11,874	13,807	13,807	13,807	13,807	13,807	13,807		

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.5983	0.6021	0.6058	0.6019	0.6949	0.6882	0.6812	0.6759	0.6747	0.6717

10 Year Average	2009-2018
Quantity Standard	0.6495
Quality Standard	\$532
Service Standard	\$345

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$345
Eligible Amount	\$496,800



Town of Essex
Service Standard Calculation Sheet

Service: Fire Vehicles
Unit Measure: No. of vehicles

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Tanker 2	1	1	1	1	1	1	1	1	1	1	\$423,000
Tanker/Pumper 3	1	1	1	1	1	1	1	1	1	1	\$393,000
Engine 1	1	1	1	1	1	1	1	1	1	1	\$611,000
Engine 2	1	1	1	1	1	1	1	1	1	1	\$611,000
Engine 3	1	1	-	-	-	-	-	-	-	-	\$611,000
Engine 3A	1	1	1	1	1	1	1	1	1	1	\$611,000
Rescue 1	1	1	1	1	1	1	1	1	1	1	\$378,000
Rescue 2	1	1	1	1	1	1	1	1	1	1	\$378,000
Rescue 3	1	1	1	1	1	1	1	1	1	1	\$378,000
Ladder 1/70' Platform	1	1	1	1	1	1	1	1	1	1	\$1,166,000
Support 3	1	1	1	1	1	1	1	1	1	1	\$42,500
Inspector's Van	1	1	1	1	1	1	1	1	1	1	\$27,900
Chief Vehicle	1	1	1	1	1	1	1	1	1	1	\$42,200
Deputy Chief Vehicle	-	-	1	1	1	1	1	1	1	1	\$42,200
Station 3 95' Platform Truck	-	1	1	1	1	1	1	1	1	1	\$1,300,000
Total	13	14	14	14	14	14	14	14	14	14	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007

10 Year Average	2009-2018
Quantity Standard	0.0007
Quality Standard	\$455,186
Service Standard	\$319

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$319
Eligible Amount	\$458,509



Town of Essex
Service Standard Calculation Sheet

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/item)
Equipped Firefighters (P/T)	63	63	63	63	63	63	63	63	63	63	\$4,700
Equipped Firefighters (F/T)	2	2	2	3	3	3	3	3	3	3	\$5,300
Equipped Firefighters (Auxiliary)	15	15	15	15	15	15	15	15	-	-	\$2,300
Radio's and Base Station's	35	35	35	35	35	50	50	50	50	50	\$2,300
Portable Generators	8	8	8	8	8	8	8	8	8	8	\$2,300
Portable Pumps	5	5	5	5	5	5	5	5	5	5	\$2,600
SCBA	49	52	55	58	58	53	53	53	53	53	\$3,100
SCBA Cyl.	116	125	134	143	144	100	100	100	100	100	\$1,100
Jaws & Cutters	3	3	3	3	3	3	3	3	3	3	\$36,500
Air Bag Kit	5	5	5	5	5	3	3	3	3	3	\$10,100
Defibrillators	3	3	3	3	3	3	3	3	3	3	\$4,400
Generators Back-Up	2	2	2	2	2	3	3	3	3	3	\$12,800
Thermal Imaging Camera	3	3	3	3	4	4	4	5	5	5	\$9,200
SCBA Filling Station	2	2	2	2	2	2	2	2	2	2	\$45,500
Compressors	1	1	1	1	1	2	2	2	2	2	\$13,800
Extrication Tool	-	-	-	-	3	3	3	3	3	3	\$2,500
Hose	1	1	1	1	1	1	1	1	1	1	\$177,500
Hurst Rescue Tool	1	1	1	1	1	1	1	1	1	1	\$4,500
Low Pressure Fog Nozzle	20	20	20	20	20	20	20	20	20	20	\$1,400
Max-Force Nozzle	20	20	20	20	20	20	20	20	20	20	\$1,100
RIT 2	-	1	1	1	1	3	3	3	3	3	\$3,600
RIT Bags	-	1	1	1	1	3	3	3	3	3	\$3,200
Total	354	368	380	393	398	368	368	369	354	354	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0178	0.0187	0.0194	0.0199	0.0200	0.0183	0.0182	0.0181	0.0173	0.0172

10 Year Average	2009-2018
Quantity Standard	0.0185
Quality Standard	\$3,649
Service Standard	\$68

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$68
Eligible Amount	\$97,147



Town of Essex
Service Standard Calculation Sheet

Service: Policing Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Headquarters	14,154	14,154	14,154	14,154	14,154	14,154	14,154	14,154	14,154	14,154	\$341	\$398
Storage Facility	1,152	1,152	1,152	-	-	-	-	-	-	-	\$30	\$39
Storage Facility (at Ferris Road Storage Building #1)	479	479	479	479	479	-	-	-	-	-	\$30	\$39
Community Police Centre (Essex Community Centre)	816	816	816	816	816	816	816	816	816	816	\$164	\$194
Total	16,601	16,601	16,601	15,449	15,449	14,970	14,970	14,970	14,970	14,970		

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.8366	0.8419	0.8470	0.7832	0.7776	0.7462	0.7386	0.7329	0.7316	0.7283

10 Year Average	2009-2018
Quantity Standard	0.7764
Quality Standard	374
Service Standard	\$290

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$290
Eligible Amount	\$417,382



Town of Essex
Service Standard Calculation Sheet

Service: Policing Vehicles, Small Equipment and Gear
Unit Measure: No. of vehicles and equipment

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Equipped Officers	28.57	28.57	28.57	28.57	28.57	28.57	28.57	29.57	29.57	29.57	\$4,400
Court Officer/Prisoner Guards	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$3,200
Portable Radios	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	\$10,500
Vehicle Lights and Sirens	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	\$14,200
Mobile Radios	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	\$11,900
Vehicle Cages	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	\$1,600
Push Bumpers	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	\$1,300
Radar Equipment - Moving	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	\$9,300
Radar Equipment - Hand Held	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	\$2,100
Community Police Vehicle/Van	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$34,400
Total	69	69	69	69	69	69	69	70	70	70	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0035	0.0035	0.0035	0.0035	0.0035	0.0034	0.0034	0.0034	0.0034	0.0034

10 Year Average	2009-2018
Quantity Standard	0.0035
Quality Standard	\$6,686
Service Standard	\$23

D.C. Amount (before deductions)	
Forecast Population	1,439
\$ per Capita	\$23
Eligible Amount	\$33,673



**Town of Essex
Service Standard Calculation Sheet**

Service: Parkland Development
Unit Measure: Acres of Parkland

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Acre)
Community Parks:											
Essex Outdoor Recreation Complex	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	\$60,800
Harrow Community Park	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	\$60,800
Pollard Park	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	\$60,800
CoAn Park	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	\$60,800
Colchester Park	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	\$60,800
Former Holy Name	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	\$60,800
Harrow Parkette	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	\$60,800
Harrow Soccer Park	-	-	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	\$60,800
Heritage Park Open Space	1.0	1.0	1.0	1.0	1.0	1.0	-	-	-	-	\$5,000
Heritage Park	-	-	-	-	-	-	3.0	3.0	3.0	3.0	\$17,000
Neighbourhood Parks:											
Lions Optimist Park	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	\$90,600
Tot Park	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	\$90,600
Optimist Bridelwood Park	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	\$90,600
Hunter Park	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	\$90,600
Liberato Park	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	\$90,600
Bramblewood Park	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	\$90,600
Tulley's Meadow Park	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	\$90,600
McGregor Parkette	-	-	-	-	-	-	-	0.1	0.1	0.1	\$70,000
Essex B.I.A. Parkette	-	-	-	-	-	-	-	-	0.1	0.1	\$5,000
Total	84.5	84.5	101.5	101.5	101.5	101.5	103.5	103.6	103.7	103.7	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0043	0.0043	0.0052	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051	0.0050

10 Year Average	2009-2018
Quantity Standard	0.0049
Quality Standard	\$63,045
Service Standard	\$309

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$309
Eligible Amount	\$393,873



Town of Essex
Service Standard Calculation Sheet

Service: Parkland Amenities
Unit Measure: No. of parkland amenities

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/item)
Concession Building	1	1	1	1	1	1	1	1	1	1	\$118,100
Maintenance Building	-	1	1	1	1	1	1	1	1	1	\$100,900
Picnic Shelter/Maintenance Bldg	1	1	1	1	1	1	1	1	1	1	\$135,300
Picnic Shelter/Maintenance Bldg	1	1	1	1	1	1	1	1	1	1	\$28,700
Washrooms/Storage	1	1	1	1	1	1	1	1	1	1	\$81,400
Locker Building Co-An Park	1	1	1	1	1	1	1	1	1	1	\$10,000
Barbeque Pit & Shelter	1	1	1	1	1	1	1	1	1	1	\$5,800
Washrooms/Changehouse - Colchester Park	1	1	1	1	1	1	1	1	1	1	\$60,800
Storage Shed (Essex)	1	1	1	1	1	1	1	1	1	1	\$7,300
Fieldhouse - Memorial Park	1	1	1	1	1	1	1	1	1	1	\$357,800
Storage Building - Memorial Park	1	1	1	1	1	1	1	1	1	1	\$131,900
Picnic Shelter (142 Keown St.)	1	1	1	1	1	1	1	1	1	1	\$27,500
Picnic Shelter (39 Milne St.)	1	1	1	1	1	1	1	1	1	1	\$21,800
Youth Centre/Washrooms (McAfee St)	1	1	1	1	-	-	-	-	-	-	\$301,600
Concession Booth (McAfee St.)	1	1	1	1	1	1	1	1	1	1	\$35,500
Picnic Shelter (E/S McAfee St.)	1	1	1	1	1	1	1	1	1	1	\$37,800
Picnic Shelter (W/S McAfee St.)	1	1	1	1	1	1	1	1	1	1	\$22,900
Grandstand/Storage (McAfee St.)	1	1	1	1	1	1	1	1	1	1	\$80,300
Floodlighting (various locations)	1	1	1	1	1	1	1	1	1	1	\$381,800
Playground Structures (junior)	4	4	4	4	4	4	4	6	5	5	\$103,200
Playground Structures (senior)	5	5	5	5	5	5	6	6	7	7	\$200,000
Players Benches Soccer Fields	6	14	14	14	18	18	18	18	18	18	\$15,400
Swing Sets	6	6	6	6	6	6	6	6	6	6	\$1,800
Bleachers	1	1	21	21	21	21	21	21	21	21	\$90,600
Picnic Tables	72	72	37	37	37	37	37	37	37	37	\$700
Lounge/Washrooms/showers - Marina	1	1	1	1	1	1	1	1	1	1	\$655,900
Park benches	73	73	73	73	73	73	73	73	73	73	\$900
Floating Wooden Docks	1	1	1	1	4	4	4	4	4	4	\$1,374,900
Baseball Diamonds (unlit)	1	1	1	1	1	1	1	1	1	1	\$144,500
Softball Diamonds (unlit)	10	10	10	10	5	5	5	5	5	5	\$59,600



Town of Essex
Service Standard Calculation Sheet

Service: Parkland Amenities
Unit Measure: No. of parkland amenities

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/item)
Baseball Diamonds (lit)	1	1	1	1	1	1	1	1	1	1	\$204,100
Softball Diamonds (lit)	1	1	1	1	1	1	1	1	1	1	\$152,500
Soccer Fields	8	11	11	11	11	11	11	11	11	11	\$67,700
Tennis Courts	3	3	3	3	3	3	3	3	3	3	\$114,700
Basketball Courts	2	2	2	2	2	2	2	2	2	2	\$102,100
Basketball Courts (1/2 Court)	1	1	1	1	1	1	1	1	1	1	\$50,500
Skate Park	2	2	2	2	2	2	2	2	2	2	\$102,100
Maintenance Building (McAffee St)	-	-	-	-	1	1	1	1	1	1	\$172,000
Colchester Splash Pad	-	-	1	1	1	1	1	1	1	1	\$590,500
Harrow Splash Pad	-	1	1	1	1	1	1	1	1	1	\$299,300
Colchester Pirate Ship Park	-	1	1	1	1	1	1	1	1	1	\$310,800
Essex Tot Park	-	-	-	1	1	1	1	1	1	1	\$120,400
Downtown Beautification	-	-	-	-	1	1	1	1	1	1	\$31,000
Harrow Soccer Park	-	-	1	1	1	1	1	1	1	1	\$2,456,200
McGregor Parkette Gazebo	-	-	-	-	-	-	1	1	1	1	\$16,900
Essex B.I.A. Parkette Shade Sails	-	-	-	-	-	-	-	-	1	1	\$12,700
Essex Centre Splash Pad	-	-	-	-	-	-	-	-	-	1	\$306,000
Colchester Park Peace Garden	-	-	-	-	-	-	-	-	1	1	\$53,000
Colchester Park Basketball Court	-	-	-	-	-	-	-	-	-	1	\$25,500
Essex Dog Park	-	-	-	-	-	-	-	-	1	1	\$44,500
Heritage Park Spitfire	-	-	-	-	-	-	-	-	1	1	\$116,600
Heritage Park Monument	-	-	-	-	-	-	-	-	1	1	\$53,000
Heritage Pavillion	-	-	-	-	-	-	-	-	-	1	\$382,500
Total	216	230	217	218	221	221	223	225	230	233	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0109	0.0117	0.0111	0.0111	0.0111	0.0110	0.0110	0.0110	0.0112	0.0113

10 Year Average	2009-2018
Quantity Standard	0.0111
Quality Standard	\$69,430
Service Standard	\$771

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$771
Eligible Amount	\$982,604



Town of Essex
Service Standard Calculation Sheet

Service: Parkland Trails
Unit Measure: Linear Metres of Paths and Trails

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/ Linear Metre)
Bush Trails (mulch)	2,350	2,700	3,050	3,400	3,400	3,400	3,400	3,400	3,400	3,400	\$300
Total	2,350	2,700	3,050	3,400	3,400	3,400	3,400	3,400	3,400	3,400	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.1184	0.1369	0.1556	0.1724	0.1711	0.1695	0.1678	0.1664	0.1662	0.1654

10 Year Average	2009-2018
Quantity Standard	0.1590
Quality Standard	\$300
Service Standard	\$48

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$48
Eligible Amount	\$60,805



Town of Essex
Service Standard Calculation Sheet

Service: Parks Vehicles and Equipment
Unit Measure: No. of vehicles and equipment

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Indoor Recreation Vehicles & Equipment:											
Olympia Ice Resurfacers Essex 1	1	1	1	1	1	1	1	1	1	1	\$115,800
Olympia Ice Resurfacers Essex 2	1	1	1	1	1	1	1	1	1	1	\$115,800
Lawn Tractor / Trailer	1	1	1	1	1	1	1	1	1	1	\$4,200
John Deere Gator/Kubota ATV	2	2	2	2	2	2	2	2	2	2	\$16,600
Ice Edger - Battery Essex	1	1	1	1	1	1	1	1	1	1	\$6,300
Ice Edger - Battery Mem Arena	1	1	1	-	-	-	-	-	-	-	\$6,300
Ice Edger - Battery Harrow	-	-	-	1	1	1	1	1	1	1	\$6,300
Sporttimer Essex Arena	2	2	2	2	2	2	2	2	2	2	\$17,800
Sporttimer Harrow	1	1	1	1	1	1	1	1	1	1	\$17,800
Skate Sharpener	2	2	2	2	2	2	2	2	2	2	\$14,300
Auto Floor Scrubber	2	2	2	2	2	2	2	2	2	2	\$6,900
Ice Resurfacers - Harrow	1	1	1	1	1	1	1	1	1	1	\$115,800
Vehicles:											
Pickup Truck [Asset ID 1666]	1	1	1	1	1	1	1	1	1	1	\$74,500
Pickup Truck [Asset ID 1673]	-	1	1	1	1	-	-	-	-	-	\$50,500
Pickup Truck [Asset ID 1675]	1	1	1	1	1	1	1	1	-	-	\$50,500
Pickup Truck [Asset ID 1676]	-	1	1	1	1	1	1	-	-	-	\$44,700
2-Ton Dump [Asset ID 23437]	-	1	1	1	1	1	1	1	-	-	\$118,100
Pickup Truck [Asset ID 23438]	1	1	1	1	1	1	1	1	-	-	\$31,000
Pickup Truck [Asset ID 23485]	-	1	1	1	1	1	1	1	-	-	\$31,000
Pickup Truck [Asset ID 24070]	1	1	1	1	1	1	1	1	1	1	\$31,000
Pickup Truck [Asset ID 24094]	1	1	1	1	1	1	1	1	1	1	\$31,000
Pickup Truck [Asset ID 24283]	1	1	1	1	1	1	1	1	1	1	\$31,000
Pickup Truck [Asset ID 24285]	1	1	1	1	1	1	1	1	1	1	\$31,000
1/2 Ton Pickup [Asset ID 24548]	-	-	-	-	1	1	1	1	1	1	\$31,000
3/4 Ton Pickup (Asset ID 24968)	-	-	-	-	-	-	1	1	1	1	\$36,000
Pickup (Asset ID 25184)	-	-	-	-	-	-	-	1	1	1	\$34,000
Water Truck (Asset ID 25769)	-	-	-	-	-	-	-	-	-	1	\$42,000
Panel Van (Asset ID 25772)	-	-	-	-	-	-	-	-	-	1	\$44,000



**Town of Essex
Service Standard Calculation Sheet**

Service: Parks Vehicles and Equipment
Unit Measure: No. of vehicles and equipment

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Pickup Truck (Asset ID 25773)	-	-	-	-	-	-	-	-	-	1	\$36,000
Dump Truck (Asset ID 25774)	-	-	-	-	-	-	-	-	-	1	\$56,000
1/2 Ton Ford 150	-	1	1	1	1	1	1	1	1	1	\$23,000
Machinery:											
Tractor [Asset ID 7186]	1	1	1	1	1	1	1	-	-	-	\$26,400
Tractor [Asset ID 7188]	1	1	1	1	1	1	1	-	-	-	\$26,400
4WD Tractor [Asset ID 24278]	1	1	1	1	1	1	1	1	1	1	\$26,400
2009 Kioti [Asset ID 23191]	1	1	1	1	1	1	1	1	1	1	\$59,600
Toro Moower [Asset ID 23192]	1	1	1	1	1	1	1	1	1	1	\$56,000
4WD Kioti Tractor [Asset ID 24068]	1	1	1	1	1	1	1	1	1	1	\$37,800
Kubota Zero Turn Lawn Tractor [Asset ID 24549]	-	-	-	-	1	1	1	1	3	3	\$35,600
Toro Wide Wing Mower [Asset ID 25770]	-	-	-	-	-	-	-	-	-	1	\$57,000
Toro Rotary Mower [Asset ID 24279]	-	-	-	1	1	1	1	1	1	1	\$43,300
Toro Ground Master [Asset ID 7189]	1	1	1	1	1	1	1	-	-	-	\$52,700
Bobcat with Attachments [Asset ID 24966]	-	-	-	-	-	-	1	1	1	1	\$70,000
Snow Blower and Salter	-	-	-	-	-	-	-	1	1	1	\$14,000
Toro Snow Blower	-	-	-	-	-	-	-	1	1	2	\$3,800
Equipment:											
Beach Groomer [Asset ID 23193]	1	1	1	1	1	1	1	1	1	1	\$40,100
Power Washer	-	1	2	2	2	2	2	2	2	3	\$5,700
Tractor Attachment - Overseeder	-	-	1	1	1	1	1	1	1	1	\$13,800
Tractor Attachment - Spreader	-	-	1	1	1	1	1	1	1	1	\$13,800
Tractor Attachment - Top Dresser	-	-	1	1	1	1	1	1	1	1	\$13,800
Trailer - Low Boy Dump Trailer [Asset ID 24660]	-	-	-	-	-	1	1	1	1	1	\$9,000



Town of Essex
Service Standard Calculation Sheet

Service: Parks Vehicles and Equipment
Unit Measure: No. of vehicles and equipment

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Value (\$/Vehicle)
Trailer - 6x10 Steel Side [Asset ID25190]	-	-	-	-	-	-	-	1	1	1	\$2,200
Power Dock Scrubber [Asset ID 24275]	-	-	-	1	1	1	1	1	1	1	\$2,900
Diamond Groomers [Asset ID 24282]	-	-	-	2	2	2	2	2	2	2	\$9,200
Natural Gas Compressor	3	3	3	3	3	3	3	3	3	3	\$27,500
GPS Units	4	4	4	4	4	4	4	4	4	6	\$7,600
Kifco Water Reels	-	-	2	2	2	2	2	2	2	2	\$22,000
Field Lazer Paint Sprayer	-	-	1	1	1	1	1	1	2	2	\$5,700
Kubota Pump Engine	-	-	1	1	1	1	1	1	1	1	\$13,800
Aerator	1	1	1	1	1	1	1	1	1	1	\$4,000
Easy Go Electric and Gas Golf Cart [Asset ID 25569]	-	-	-	-	-	-	-	-	1	1	\$5,000
Total	38	44	52	56	58	58	60	60	60	69	

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.0019	0.0022	0.0027	0.0028	0.0029	0.0029	0.0030	0.0029	0.0029	0.0034

10 Year Average	2009-2018
Quantity Standard	0.0028
Quality Standard	\$28,907
Service Standard	\$81

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$81
Eligible Amount	\$103,199



**Town of Essex
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Essex Recreation Complex	19,296	19,296	19,296	19,296	19,296	19,296	19,296	19,296	19,296	19,296	\$354	\$394
Essex Memorial Arena	43,664	43,664	22,705	22,705	22,705	22,705	-	-	-	-	\$136	\$154
Harrow/Colchester South Community Centre	46,500	46,500	46,500	46,500	46,500	46,500	46,500	46,500	46,500	46,500	\$183	\$206
Colchester Community Centre (2nd Floor)	-	-	-	-	-	-	-	-	-	1,160	\$136	\$154
Colchester Community Centre (1st Floor)	-	-	-	-	-	-	-	-	-	1,646	\$136	\$154
Colchester Old School House	3,979	3,979	3,979	3,979	3,979	3,979	3,979	3,979	3,979	3,979	\$22	\$49
Essex Community Centre	8,571	8,571	8,571	8,571	8,571	8,571	8,571	8,571	8,571	8,571	\$164	\$185
McGregor Community Centre	-	5,060	5,060	5,060	5,060	5,060	5,060	5,060	5,060	5,060	\$165	\$186
Essex Centre Sports Complex	-	97,000	97,000	97,000	97,000	97,000	97,000	97,000	97,000	97,000	\$158	\$178
Parks & Recreation Facility Office Space	360	360	360	360	360	360	360	360	360	360	\$510	\$566
Lions Hall	-	-	-	-	-	-	-	-	-	1,050	\$257	\$287
Kinsmen Field House	1,530	1,530	1,530	1,530	1,530	1,530	1,530	1,530	1,530	1,530	\$210	\$235
Total	123,900	225,960	205,001	205,001	205,001	205,001	182,296	182,296	182,296	186,152		

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	6.2437	11.4590	10.4592	10.3924	10.3181	10.2184	8.9947	8.9242	8.9090	9.0567

10 Year Average	2009-2018
Quantity Standard	9.4975
Quality Standard	\$203
Service Standard	\$1,933

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$1,933
Eligible Amount	\$2,464,014



Town of Essex
Service Standard Calculation Sheet

Service: Library Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Harrow Library (140 King St.)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$165	\$203
McGregor Library (9557 Walker Rd)	1,000	1,000	-	-	-	-	-	-	-	-	\$136	\$168
McGregor Library (New)	-	-	2,541	2,541	2,541	2,541	2,541	2,541	2,541	2,541	\$165	\$203
Essex Library New (Gosfield Townline)	6,536	6,536	6,536	6,536	6,536	6,536	6,536	6,536	6,536	6,536	\$133	\$165
Total	11,536	11,536	13,077	13,077	13,077	13,077	13,077	13,077	13,077	13,077		

Population	19,844	19,719	19,600	19,726	19,868	20,062	20,267	20,427	20,462	20,554
Per Capita Standard	0.5813	0.5850	0.6672	0.6629	0.6582	0.6518	0.6452	0.6402	0.6391	0.6362

10 Year Average	2009-2018
Quantity Standard	0.6367
Quality Standard	\$183
Service Standard	\$117

D.C. Amount (before deductions)	10 Year
Forecast Population	1,275
\$ per Capita	\$117
Eligible Amount	\$148,550



Appendix C

Long-Term Capital and Operating Cost Examination



Appendix C: Long-Term Capital and Operating Cost Examination

Town of Essex Annual Capital and Operating Cost Impact

As a requirement of the D.C.A. under subsection 10 (2) (c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the D.C. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost saving attributable to economies of scale or cost sharing where applicable and prorate the cost on a per unit basis (i.e. sq.ft. of building space, per vehicle, etc.). This was undertaken through a review of the Town's approved 2017 Financial Information Return (F.I.R.).

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

Asset	Lifecycle Cost Factors	
	Average Useful Life	Factor
Roads	25	0.03122
Vehicles	12	0.07456
Fire & Police Equipment	7	0.13451
Parkland	30	0.02465
Parkland Amenities	15	0.05783
Library Materials	10	0.09133
Facilities	50	0.01182



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 Town 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
Town of Essex
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. Services Related to a Highway				
1.1 Roads	1,565,880	137,423	168,571	305,994
1.2 Facilities	1,379,620	40,308	148,520	188,828
1.3 Vehicles & equipment	300,000	31,889	32,296	64,185
2. Fire Protection Services				
2.1 Fire facilities, vehicles & equipment, and small equipment & gear	2,794,018	113,306	103,444	216,750
3. Policing Services				
3.1 Police facilities	414,963	29,016	227,744	256,760
3.2 Police vehicles, small equipment and gear	33,500	5,538	18,386	23,924
4. Outdoor Recreation Services				
4.1 Parkland development, amenities & trails	3,126,632	188,493	70,014	258,507
4.2 Parks vehicles and equipment	100,000	12,270	2,239	14,509
5. Indoor Recreation Services				
5.1 Recreation facilities	4,484,315	2,214	274,824	277,038
6. Library Services				
6.1 Library facilities	143,000	7,690	1,329	9,019
7. Administration				
7.1 Essential Services Studies	88,065	-	-	-
7.2 Community Based Services Studies	100,050	-	-	-
Total	14,530,044	568,147	1,047,368	1,615,515



Appendix D

D.C. Reserve Fund Policy



Appendix D: D.C. Reserve Fund Policy

D.1 Legislative Requirements

The Development Charges Act, 1997 (D.C.A.) requires development charge collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the Act provide the following regarding reserve fund establishment and use:

- A municipality shall establish a reserve fund for each service to which the D.C. by-law relates; subsection 7 (1), however, allows services to be grouped into categories of services for reserve fund (and credit) purposes, although only 100% eligible and 90% eligible services may be combined (minimum of two reserve funds).
- The municipality shall pay each development charge it collects into a reserve fund or funds to which the charge relates.
- The money in a reserve fund shall be spent only for the “capital costs” determined through the legislated calculation process (as per subsection 5 (1) 2-8).
- Money may be borrowed from the fund but must be paid back with interest (O.Reg. 82/98, subsection 11 (1) defines this as Bank of Canada rate either on the day the by-law comes into force or, if specified in the by-law, the first business day of each quarter).
- D.C. reserve funds may not be consolidated with other municipal reserve funds for investment purposes and may only be as an interim financing source for capital undertakings for which development charges may be spent (section 37).

Annually, the Treasurer of the municipality is required to provide Council with a financial statement related to the D.C. by-law(s) and reserve funds. This statement must be made available to the public and may be requested to be forwarded to the Minister of Municipal Affairs and Housing. The D.C.A. does not prescribe how the statement is to be made available to the public. We would recommend that a resolution of Council make the statement available on the municipality’s website or upon request.

Subsection 43 (2) and O.Reg. 82/98 prescribes the information that must be included in the Treasurer’s statement, as follows:

- opening balance;



- closing balance;
- description of each service and/or service category for which the reserve fund was established (including a list of services within a service category);
- transactions for the year (e.g. collections, draws) including each assets capital costs to be funded from the D.C. reserve fund and the manner for funding the capital costs not funded under the D.C. by-law (i.e. non-D.C. recoverable cost share and post-period D.C. recoverable cost share);
- for projects financed by development charges, the amount spent on the project from the D.C. reserve fund and the amount and source of any other monies spent on the project.
- amounts borrowed, purpose of the borrowing and interest accrued during previous year;
- amount and source of money used by the municipality to repay municipal obligations to the D.C. reserve fund;
- list of credits by service or service category (outstanding at beginning of the year, given in the year and outstanding at the end of the year by holder);
- for credits granted under section 14 of the previous D.C.A., a schedule identifying the value of credits recognized by the municipality, the service to which it applies and the source of funding used to finance the credit; and
- a statement as to compliance with subsection 59 (1) of the D.C.A., whereby the municipality shall not impose, directly or indirectly, a charge related to a development or a requirement to construct a service related to development, except as permitted by the D.C.A. or another Act.

Based upon the above, Figure 1, and Attachments 1 and 2, set out the format for which annual reporting to Council should be provided.

D.2 D.C. Reserve Fund Application

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

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

This provision clearly establishes that reserve funds collected for a specific service are only to be used for that service, or to be used as a source of interim financing of capital undertakings for which a development charge may be spent.



Figure D-1
Town of Essex
Annual Treasurer's Statement of Development Charge Reserve Funds

Description	Services to which the Development Charge Relates												Total
	Non-Discounted Services			Discounted Services					Area Specific				
	Services Related to a Highway	Policing Services	Fire Protection Services	Outdoor Recreation Services	Indoor Recreation Services	Library Services	Administration - Essential Services Studies	Administration - Community Based Studies	Ward 1 Sanitary Sewer	Ward 2 Sanitary Sewer	Ward 3 Sanitary Sewer	Ward 4 Sanitary Sewer	
Opening Balance, January 1, _____													0
Plus:													
Development Charge Collections													0
Accrued Interest													0
Repayment of Monies Borrowed from Fund and Associated Interest ¹													0
Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Less:													
Amount Transferred to Capital (or Other) Funds ²													0
Amounts Refunded													0
Amounts Loaned to Other D.C. Service Category for Interim Financing													0
Credits ³													0
Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Closing Balance, December 31, _____	0	0	0	0	0	0	0	0	0	0	0	0	0

¹ Source of funds used to repay the D.C. reserve fund

² See Attachment 1 for details

³ See Attachment 2 for details

The Municipality is compliant with s.s. 59.1 (1) of the *Development Charges Act*, whereby charges are not directly or indirectly imposed on development nor has a requirement to construct a service related to development been imposed, except as permitted by the *Development Charges Act* or another Act.



Attachment 1
Town of Essex
Amount Transferred to Capital (or Other) Funds – Capital Fund Transactions

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



Attachment 2
Town of Essex
Statement of Credit Holder Transactions

Credit Holder	Applicable D.C. Reserve Fund	Credit Balance Outstanding Beginning of Year _____	Additional Credits Granted During Year	Credits Used by Holder During Year	Credit Balance Outstanding End of Year _____
Credit Holder A					
Credit Holder B					
Credit Holder C					
Credit Holder D					
Credit Holder E					
Credit Holder F					



Appendix E

Local Service Policy



Appendix E: Local Service Policy

E.1 Local Service Policy for Services Related to a Highway

E.1.1. Arterial and Collector Roads

- E.1.1.1 Collector roads Internal to development - Direct developer responsibility under s.59 of the D.C.A. (as a local service).
- E.1.1.2. Roads (collector and arterial) external to development - Include in D.C. calculation to the extent permitted under s.5(1) of the D.C.A. (dependent on local circumstances).

E.1.2. Traffic Signals

- E.1.2.1 Traffic signalization external to development – Include in D.C. calculation to the extent permitted under s.5(1) of the D.C.A.

E.1.3 Intersection Improvements

- E.1.3.1. New roads (collector and arterial) and road (collector and arterial) improvements – Include as part of road costing noted in item 1, to limits of R.O.W.
- E.1.3.2. Intersections improvements within specific developments and all works necessary to connect to entrances (private and specific subdivision) to the roadway - Direct developer responsibility under s.59 of D.C.A. (as a local service)
- E.1.3.3. Intersections with County roads – Include in D.C. calculation to the extent that they are Town responsibility.
- E.1.3.4. Intersection improvements on other roads due to development growth increasing traffic – Include in D.C. calculation.

E.1.4 Streetlights

- E.1.4.1. Streetlights on external roads – Include in area municipal D.C. (linked to collector road funding source in item 1).



- E.1.4.2. Streetlights within specific developments – Direct developer responsibility under s.59 of D.C.A. (as a local service).

E.1.5 Sidewalks

- E.1.5.1. Sidewalks on County roads – Include in area municipal D.C. or, in exceptional circumstances, may be local improvement or direct developer responsibility through local service provisions (s.59 of D.C.A.).
- E.1.5.2. Sidewalks on area municipal roads - Linked to collector road funding source in item 1.
- E.1.5.3. Other sidewalks external to development (which are a local service within the area to which the plan relates) - Direct developer responsibility as a local service provision (under s.59 of D.C.A.)

E.1.6 Bike Routes/Bike Lanes/Bike Paths/Multi-Use Trails/Naturalized Walkways

- E.1.6.1. Bike paths/multi-use trails/naturalized walkways external to development – Include in area municipal D.C.s consistent with the service standard provisions of the D.C.A., s.5(1).
- E.1.6.2. Bike lanes, within road allowance, internal to development – Direct developer responsibility under s.50 of the D.C.A.(as a local service).
- E.1.6.3. Bike paths/multi-use trails/naturalized walkways internal to development – Direct developer responsibility under s.50 of the D.C.A.(as a local service).
- E.1.6.4. Trail Bridges/Underpasses and associated works – Include in area municipal D.C.s consistent with the service standard provisions of the D.C.A., s.5(1).

E.1.7 Noise Abatement Measures

- E.1.7.1. Internal to Development - Direct developer responsibility though local service provisions (s.59 of D.C.A.)



E.1.8 Land Acquisition for Road Allowances

- E.1.8.1. Land Acquisition for arterial roads – Dedication under the Planning Act subdivision provisions (s.51) through development lands; in areas with limited or no development, include in area municipal D.C. (to the extent eligible).
- E.1.8.2. Land Acquisition for collector roads – Dedication under the Planning Act subdivision provision (s.51) through development lands (up to 22 metre right-of-way); in areas with limited or no development, include in area municipal D.C. (to the extent eligible).
- E.1.8.3. Land Acquisition for grade separations (beyond normal dedication requirements) – Internal to subdivision to be provided by developer, external include in the D.C. to the extent eligible.

E.1.9 Land Acquisition for Easements

- E.1.9.1. Easement costs external to subdivisions shall be provided by developer.

E.2 Local Service Policy for Stormwater Management

- E.2.1. Quality and Quantity Works, direct developer responsibility through local service provisions (s. 59 of D.C.A.).
- E.2.2. Oversizing of stormwater management works for development external to developments will be subject to best efforts clauses by area municipality.

E.3 Local Service Policy for Wastewater Services

- E.3.1. Connections to truck mains and pumping stations to service specific areas, to be direct developer responsibility.
- E.3.2. Major trunk mains and pumping stations to be included within the area-wide D.C. – extension to subdivisions to be included in the area-wide or area specific D.C. Oversizing within the subdivision to also be included in D.C. above 375 mm for sanitary sewer.



E.4 Local Service Policy for Water Sewers

- E.4.1 Connections to truck mains and pumping stations to service specific areas, to be direct developer responsibility.

E.5 Local Service Policy for Parkland Development

E.5.1 Recreational Trails

- E.5.1.1 Recreational trails (Multi-use trails) that do not form part of the municipality's active transportation network, and their associated infrastructure (landscaping, bridges, trail surface, etc.), is included in area municipal parkland D.C.'s.

E.5.2 Parkland

- E.5.2.1 Parkland Development for Community Parks and Neighbourhood Parks: direct developer responsibility to provide at base condition, as follows:
- Clearing and grubbing. Tree removals as per the subdivision's tree preservation and removals plan.
 - Topsoil Stripping, screening, and stockpiling.
 - Rough grading (pre-grading) to allow for positive drainage of the Park, with minimum slopes of 2%. If necessary, this may include some minor drainage tile work and grading as per the overall subdivision grading design complete with any required swales or catch basins. Runoff from the development property shall not drain into the park unless approved by the Manager, Environment Services, Public Works.
 - Spreading of topsoil to 150mm depth (import topsoil if existing on-site is insufficient to reach required depth).
 - Seeding of site with Municipality-approved seed mix. Maintenance of seed until acceptance by Municipality.
 - Parks shall be free of any contaminated soil or subsoil.
 - Parks shall not be mined for fill.
 - Parks shall be conveyed free and clear of all encumbrances.



- 100% of 1.5m chain link perimeter fencing to the Municipal standards to separate the development lands from the Municipal lands or lands to be dedicated to the Municipality, unless the perimeter fencing is on land that will be dedicated to the Municipality to fulfil the requirement of parkland dedication under the Planning Act, in which case the cost shall be shared 50/50.
- When Park parcels cannot be developed in a timely manner, they shall be graded to ensure positive drainage and seeded to minimize erosion and dust. These shall be maintained by the developer until construction commences thereon.
- The Park block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.
- Required heritage features within the Park as set out within the Planning approval conditions.

E.5.2.2 Program facilities, amenities, and furniture, within parkland: are included in D.C.'s.

E.5.3 Landscape Buffer Blocks, Features, Cul-de-sac Islands, Berms, Grade Transition Areas, Walkway Connections to Adjacent Arterial Roads, Open Space, Etc.

E.5.3.1 The cost of developing all landscape buffer blocks, landscape features, cul-de-sac islands, berms, grade transition areas, walkway connections to adjacent arterial roads, open space and other remnant pieces of land conveyed to the municipality shall be a direct developer responsibility as a local service. Such costs include but are not limited to:

- pre-grading, sodding or seeding, supply and installation of amended topsoil, (to the Municipality's required depth), landscape features, perimeter fencing and amenities and all planting.
- Perimeter fencing to the Municipal standard located on the public property side of the property line adjacent land uses (such as but limited to arterial roads) as directed by the Municipality.



Appendix F

Asset Management Plan



Appendix F: Asset Management Plan

The recent changes to the D.C.A. (new subsection 10 (2) (c.2)) require that the background study must include an asset management plan (A.M.P.) related to new infrastructure. Section 10 (3) of the D.C.A. provides:

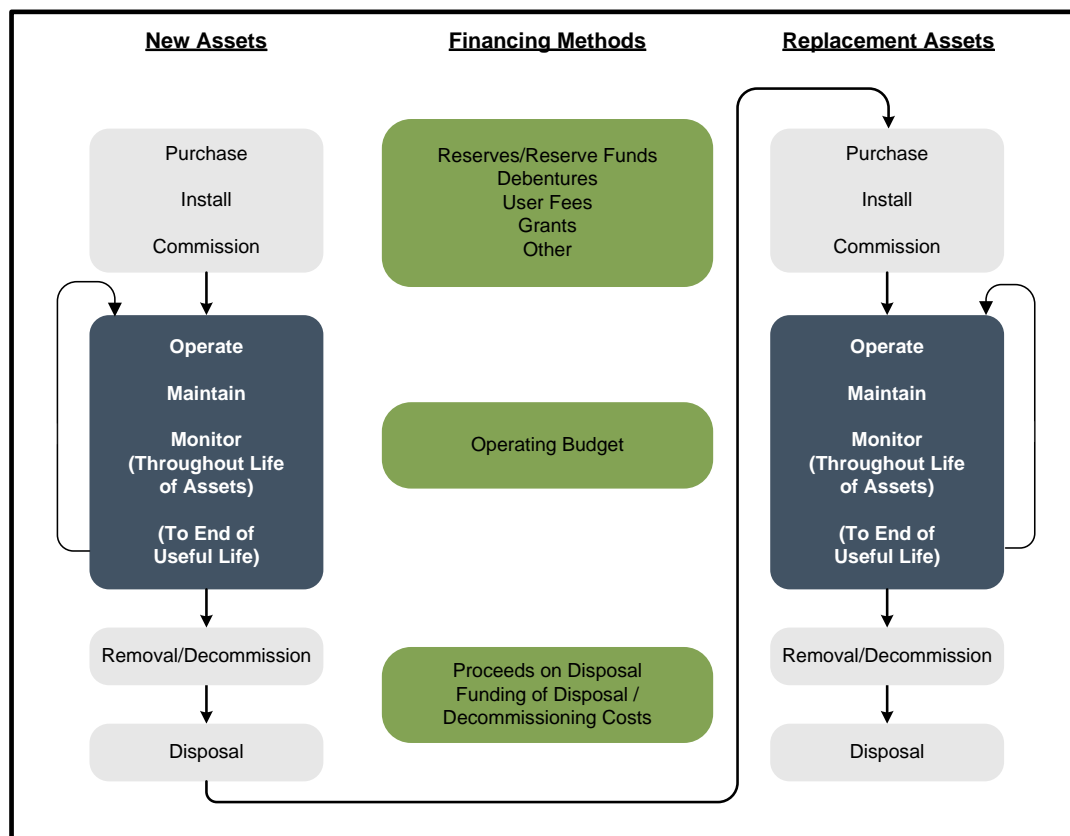
“The asset management plan shall,

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

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

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

It should be noted that with the recent passing of the Infrastructure for Jobs and Prosperity Act (I.J.P.A.) municipalities are now required to complete A.M.P.s, based on certain criteria, which are to be completed by 2021 for core municipal services and 2023 for all other services. The amendments to the D.C.A. do not require municipalities to complete these A.M.P.s (required under I.J.P.A.) for the D.C. background study, rather the D.C.A. requires that the D.C. background study include information to show the assets to be funded by the D.C. are sustainable over their full lifecycle.



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

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

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

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

Financing strategy: having a financial plan is critical for putting an A.M.P. into action. By having a strong financial plan, municipalities can also demonstrate that they have



made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting and are making full use of all available infrastructure financing tools.

Commensurate with the above, the Town prepared an A.M.P. in 2015 for its existing assets however, did not take into account future growth-related assets. As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information.

In recognition to the schematic above, the following table (presented in 2019 \$) has been developed to provide the annualized expenditures and revenues associated with new growth. Note that the D.C.A. does not require an analysis of the non-D.C. capital needs or their associated operating costs so these are omitted from the table below. As well, as all capital costs included in the D.C.-eligible capital costs are not included in the Town's A.M.P., the present infrastructure gap and associated funding plan have not been considered at this time. Hence the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects which will require financing from municipal financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing.
2. Lifecycle costs for the 2019 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 \$3.82 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 \$1.70 million. This amount, totalled with the existing operating revenues of \$36.58 million, provide annual revenues of \$38.29 million by the end of the period.



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

Town of Essex
Asset Management – Future Expenditures and Associated Revenues
2019\$

	2031 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth Related Capital ¹ (2014 D.C. and 2016 updates)	\$1,860,342
Annual Debt Payment on Post Period Capital ²	\$346,139
Lifecycle:	
Annual Lifecycle	\$568,147
Incremental Operating Costs (for D.C. Services)	\$1,047,368
Total Expenditures	\$3,821,996
Revenue (Annualized)	
Total Existing Revenue ³	\$36,580,511
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$1,704,776
Total Revenues	\$38,285,287

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

² Interim Debt Financing for Post Period Benefit

³ As per Sch. 10 of FIR



Appendix G

Proposed D.C. By-law



Appendix G: Proposed D.C. By-law

The Corporation of the TOWN OF ESSEX

By-Law Number _____

A BY-LAW FOR THE IMPOSITION OF DEVELOPMENT CHARGE

WHEREAS the Town of Essex will experience growth through development and re-development;

AND WHEREAS development and re-development requires the provision of physical and social services by the Town of Essex;

AND WHEREAS Council desires to ensure that the capital cost of meeting growth-related demands for or burden on municipal services does not place an excessive financial burden on the Town of Essex or its existing taxpayers while at the same time ensuring new taxpayers contribute no more than the net capital cost attributable to providing the current level of municipal services;

AND WHEREAS the Development Charges Act, 1997 (the “Act”) provides that the council of a municipality may by by-law impose development charges against land to pay for increased capital costs required because of increased needs for services;

AND WHEREAS a development charge background study has been completed in accordance with the Act;

AND WHEREAS the Council of The Corporation of the Town of Essex has given notice of and held a public meeting on the XX day of July, 2019 in accordance with the Act and the regulations thereto;



NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWN OF ESSEX ENACTS AS FOLLOWS:

1. INTERPRETATION

1.1 In this By-law the following items shall have the corresponding meanings:

“Act” means the Development Charges Act, as amended, or any successor thereof;

“affordable housing” means housing accommodations and incidental facilities primarily for persons of low and moderate income that meet the requirements of any program for such purpose as administered by any agency of the Federal or Provincial government, the County of Essex and/or the Town.

“apartment unit” means any residential unit within a building containing more than four dwelling units where the units are connected by an interior corridor;

“bedroom” means a habitable room which can be used as sleeping quarters, but does not include a bathroom, living room, dining room or kitchen;

“board of education” has the same meaning as set out in the Education Act, R.S.O. 1990, Chap. E.2, as amended, or any successor thereof;

“bona fide farm uses” means the proposed development will qualify as a farm business operating with a valid Farm Business Registration Number issued by the Ontario Ministry of Agriculture, Food and Rural Affairs and be assessed in the Farmland Realty Tax Class by the Ontario Property Assessment Corporation;

“Building Code Act” means the Building Code Act, S.O. 1992, as amended, or any successor thereof;

“capital cost” means costs incurred or proposed to be incurred by the municipality or a local board thereof directly or by others on behalf of and as authorized by the municipality or local board,

(a) to acquire land or an interest in land, including a leasehold interest,

(b) to improve land,

(c) to acquire, lease, construct or improve buildings and structures,



(d) to acquire, construct or improve facilities including,

- (i) furniture and equipment other than computer equipment, and
- (ii) material acquired for circulation, reference or information purposes by a library board as defined in the Public Libraries Act, R.S.O. 1990, Chap. P.44, as amended, or any successor thereof; and
- (iii) rolling stock with an estimated useful life of seven years or more, and

(e) to undertake studies in connection with any matter under the Act and any of the matters in clauses (a) to (d) above, including the development charge background study required for the provision of services designated in this By-law within or outside the municipality, including interest on borrowing for those expenditures under clauses (a) to (e) above that are growth-related;

“commercial” means any use of land, structures or buildings for the purposes of buying or selling commodities and services, but does not include industrial or agricultural uses, but does include hotels, motels, motor inns and boarding, lodging and rooming houses;

“Council” means the Council of the municipality;

“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 the effect of increasing the size of usability thereof, and includes redevelopment;

“development charge” means a charge imposed with respect to this By-law;

“dwelling unit” means any part of a building or structure used, designed or intended to be used as a domestic establishment in which one or more persons may sleep and are provided with culinary and sanitary facilities for their exclusive use;

“Existing” means the number, use and size that existed as of the date this by-law was passed;



“farm building” means that part of a bona fide farming operation encompassing barns, silos and other ancillary development to an agricultural use, but excluding a residential use;

“gross floor area” means:

(a) in the case of a residential building or structure, the total area of all floors above grade of a dwelling unit measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of party walls dividing the dwelling unit from any other dwelling unit or other portion of a building; and

(b) in the case of a non-residential building or structure, or in the case of a mixed-use building or structure in respect of the non-residential portion thereof, the total area of all building floors above or below grade measured between the outside surfaces of the exterior walls, or between the outside surfaces of exterior walls and the centre line of party walls dividing a non-residential use and a residential use, except for:

(i) a room or enclosed area within the building or structure above or below that is used exclusively for the accommodation of heating, cooling, ventilating, electrical, mechanical or telecommunications equipment that service the building;

(ii) loading facilities above or below grade; and

(iii) a part of the building or structure below grade that is used for the parking of motor vehicles or for storage or other accessory use;

“industrial” means lands, buildings or structures used or designed or intended for use for manufacturing, processing, fabricating or assembly of raw goods, warehousing or bulk storage of goods, and includes office uses and the sale of commodities to the general public where such uses are accessory to an industrial use, but does not include the sale of commodities to the general public through a warehouse club;



“Institutional” means land, buildings, structures or any part thereof used by any organization, group or association for promotion of charitable, educational or benevolent objectives and not for profit or gain;

“Local Board” means a school board, public utility, commission, transportation commission, public library board, board of park management, local board of health, board of commissioners of police, 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, including school purposes, of the Town of Essex or any part or parts thereof;

“local services” means those services, facilities or things which are under the jurisdiction of the municipality and are related to a plan of subdivision or within the area to which the plan relates in respect of the lands under Sections 41, 51 or 53 of the Planning Act, R.S.O. 1990, Chap. P.13, as amended, or any successor thereof;

“multiple dwellings” means all dwellings other than single-detached, semi-detached and apartment unit dwellings;

“municipality” means the Corporation of the Town of Essex;

“non-residential use” means a building or structure of any kind whatsoever used, designed or intended to be used for other than a residential use;

“Official Plan” means the Official Plan adopted for the Town, as amended and approved;

“Owner” means the owner of land or a person who has made application for an approval for the development of land upon which a development charge is imposed;

“place of worship” means that part of a building or structure that is exempt from taxation as a place of worship under the Assessment Act, R.S.O. 1990, Chap. A.31, as amended, or any successor thereof;

“Rate” means the interest rate established weekly by the Bank of Canada based on Treasury Bills having a term of 91 days;

“regulation” means any regulation made pursuant to the Act;



“Residential Dwelling” means a building, occupied or capable of being occupied as a home, residence or sleeping place by one or more persons, containing one or more Dwelling Units but not including motels, hotels, tents, truck campers, tourist trailers, mobile camper trailers or boarding, lodging or rooming houses;

“residential use” means the use of a building or structure or portion thereof for one or more Dwelling Units. This also includes a Dwelling Unit on land that is used for an Agricultural Use;

“row dwelling” means a building containing three or more attached dwelling units in a single row, each of which dwelling units has an independent entrance from the outside and is vertically separated from any abutting dwelling unit;

“semi-detached dwelling” means a dwelling unit in a residential building consisting of two dwelling units having one vertical wall or one horizontal wall, but not other parts, attached or another dwelling unit where the residential unit are not connected by an interior corridor;

“service” means a service designed in Schedule “A” to this By-law, and “services” shall have a corresponding meaning;

“servicing agreement” means an agreement between a landowner and the municipality relative to the provision of municipal services to specified land within the municipality;

“single detached dwelling unit” means a residential building consisting of one dwelling unit and not attached to another structure;

“Solar Farm” means any solar energy system comprised of one or more solar panels and associated control or conversion electronics that converts sunlight into electricity. A solar farm 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;

“Telecommunications Tower” – means any tower, apparatus, structure or other thing that is used or is capable of being used for telecommunications of for any operation directly connected with telecommunications, and includes a transmission facility, as define in the Telecommunications Act.



“town” means the area within the geographic limits of the Town of Essex;

“Wind Turbine” means any wind energy system, comprising one or more turbines, that converts energy into electricity, with a combined nameplate generating capacity greater than 500 kilowatts and a height greater than 100 metres, 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; and

“Zoning By-law” means the Zoning By-law of the Town of Essex, including the former Village of Essex, the former Township of Essex or any successor thereof passed pursuant to Section 34 of the Planning Act, S.O. 1998.

2. DESIGNATION OF SERVICES

2.1 The categories of services for which development charges are imposed under this By-law are as follows:

- (a) Services Related to a Highway
- (b) Fire Protection Services
- (c) Policing Services
- (d) Outdoor Recreation Services
- (e) Indoor Recreation Services
- (f) Library Services
- (g) Administration – Essential Services Studies
- (h) Administration – Community Based Services Studies
- (i) Wastewater

2.2 The components of the services designated in section 2.1 are described in Schedule A.



3. APPLICATION OF BY-LAW RULES

3.1 Development charges shall be payable in the amounts set out in this By-law where:

- (a) the lands are located in the area described in section 3.2; and
- (b) the development of the lands requires any of the approvals set out in subsection 3.4(a).

Area to Which By-law Applies

3.2 Subject to section 3.3, this By-law applies to all lands in the Town of Essex whether or not the land or use thereof is exempt from taxation under s. 13 of the Assessment Act.

3.3. Notwithstanding clause 3.2 above, this by-law shall not apply to lands that are owned by and used for the purposes of:

- (a) the municipality or a local board thereof;
- (b) a board of education; or
- (c) the Corporation of the County of Essex or a local board thereof.

Approvals for Development

3.4(a) Development charges shall be imposed on all lands, buildings or structures that are developed for residential or non-residential uses 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;
- (ii) the 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, R.S.O. 1990, Chap. C.26, as amended, or any successor thereof; or
 - (vii) the issuing of a permit under the Building Code Act in relation to a building or structure.
- (b) No more than one development charge for each service designated in subsection 2.1 shall be imposed upon any lands, buildings or structures to which this By-law applies even though two or more of the actions described in subsection 3.4(a) are required before the lands, buildings or structures can be developed.
- (c) Despite subsection 3.4(b), if two or more of the actions described in subsection 3.4(a) occur at different times, additional development charges shall be imposed if the subsequent action has the effect of increasing the need for services.

Exemptions

3.5 Notwithstanding the provisions of this By-law, development charges shall not be imposed with respect to:

- (a) an enlargement to an existing dwelling unit;
- (b) one or two additional dwelling units in an existing single detached dwelling; or
- (c) one additional dwelling unit in any other existing residential building;

3.6 Notwithstanding section 3.5(b), development charges shall be imposed if the total gross floor area of the additional one or two units exceeds the gross floor area of the existing dwelling unit.

3.7 Notwithstanding section 3.5, development charges shall be imposed if the additional unit has a gross floor area greater than

- i. in the case of a semi-detached or row dwelling, the gross floor area of the existing dwelling unit; and



- ii. in the case of any other residential building, the gross floor area of the smallest dwelling unit contained in the residential building.

3.8 Exemption for Industrial Development:

- 3.8.1 Notwithstanding any other provision of this by-law, no development charge is payable with respect to an enlargement of the gross floor area of an existing industrial building where the gross floor area is enlarged by 50 percent or less.

Rules with Respect to an Industrial Expansion Exemption

- 3.8.2 If a development includes the enlargement of the gross floor area of an existing industrial building, the amount of the development charge that is payable in respect of the enlargement is determined in accordance with the following:

- (i) Subject to subsection 3.8.2 (iii), if the gross floor area is enlarged by 50 per cent or less of the lesser of:
 - 1. the gross floor area of the existing industrial building, or
 - 2. the gross floor area of the existing industrial building before the first enlargement for which:
 - a. an exemption from the payment of development charges was granted, or
 - b. a lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, the amount of the development charge in respect of the enlargement is zero;

- (ii) Subject to subsection 3.8.2 (iii), if the gross floor area is enlarged by more than 50 per cent or less of the lesser of:
 - (A) the gross floor area of the existing industrial building, or
 - (B) the gross floor area of the existing industrial building before the first enlargement for which:



- (i) an exemption from the payment of development charges was granted, or
- (ii) a lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, 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:

- (A) determine the amount by which the enlargement exceeds 50 per cent of the gross floor area before the first enlargement, and
- (B) divide the amount determined under subsection (A) by the amount of the enlargement

(iii) For the purposes of calculating the extent to which the gross floor area of an existing industrial building is enlarged in subsection 3.8.2 (ii), the cumulative gross floor area of any previous enlargements for which:

- (A) An exemption from the payment of development charges was granted, or
- (B) A lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, shall be added to the calculation of the gross floor area of the proposed enlargement.

(iv) For the purposes of this subsection, the enlargement must not be attached to the existing industrial building by means only of a tunnel, bridge, passageway, canopy, shared below grade connection, such as a service tunnel, foundation, footing or parking facility.

3.9 For the purpose of section 3.8 herein, “existing industrial building” is used as defined in the Regulation made pursuant to the Act.

3.10 Other Exemptions:



Notwithstanding the provision of this by-law, development charges shall not be imposed with respect to:

- a) lands, buildings or structures used or to be used for a place of worship or for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act;
- b) a public hospital receiving aid under the Public Hospitals Act, R.S.O. 1990, Chap. P.40, as amended, or any successor thereof;
- c) the development of non-residential farm buildings constructed for bona fide farm uses, which qualify as a farm business, being that which operates with a valid Farm Business Registration Number and is assessed in the Farmland Realty Tax Class; and
- d) the development of affordable housing

Amount of Charges

Residential

3.11.1 The development charges set out in Schedules B-1 and B-2 shall be imposed on residential uses of lands, buildings or structures, including a dwelling unit accessory to a non-residential use and, in the case of a mixed use building or structure, on the residential uses in the mixed use building or structure, according to the type of residential unit, and calculated with respect to each of the services according to the type of residential use.

3.11.2 The following percentage of each service for residential uses within the Harrow Primary Settlement Area, outlined in Schedule C, as provided in Schedules B-1 and B-2, shall be imposed:



Service	Residential - Single and Semi- Detached Dwelling	Residential - Apartments - 2 Bedrooms +	Residential - Apartments - Bachelor and 1 Bedroom	Residential - Other Multiples
Municipal Wide Services:				
Services Related to a Highway	0%	0%	0%	0%
Fire Protection Services	0%	0%	0%	0%
Policing Services	0%	0%	0%	0%
Outdoor Recreation Services	0%	0%	0%	0%
Indoor Recreation Services	0%	0%	0%	0%
Library Services	0%	0%	0%	0%
Administration	0%	0%	0%	0%
Area Specific Charges				
Ward 4 - Harrow Service Area - Wastewater	0%	0%	0%	0%

Non-Residential

3.12.1 Subject to section 3.12.2, the development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on non-residential uses of lands, buildings or structures, and, in the case of a mixed use building or structure, on the non-residential uses in the mixed use building or structure, and calculated with respect to each of the services according to the total floor area of the non-residential use.

3.12.2 The following percentage of each service for non-residential uses, as provided in Schedules B-1 and B-2, shall be imposed provided that for non-residential commercial uses in areas that fall outside Community Improvement Plan boundaries (existing as of April 23, 2018), until Council considers the economic climate of the Town warrants a change to the development charge being imposed:



Service	Non-residential		
	Commercial	Industrial	Institutional
Municipal Wide Services:			
Services Related to a Highway	100%	0%	0%
Fire Protection Services	100%	0%	0%
Policing Services	100%	0%	0%
Outdoor Recreation Services	100%	0%	0%
Indoor Recreation Services	100%	0%	0%
Library Services	100%	0%	0%
Administration	100%	0%	0%
Area Specific Charges			
Ward 1 - Essex Service Area - Wastewater	100%	0%	0%
Ward 2 - Colchester North Service Area - Wastewater	100%	0%	0%
Ward 3 - Colchester South Service Area - Wastewater	100%	0%	0%
Ward 4 - Harrow Service Area - Wastewater	100%	0%	0%

Wind Turbines and Telecommunication Towers

- 3.13 The development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on wind turbines and telecommunication towers with respect to services related to a highway, fire protection services, policing services and administration on a per unit basis.

Solar Farm

- 3.14 The development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on solar farms with respect to services related to a highway, fire protection services, policing services and administration on a per square foot of the panel surface.

Reduction of Development Charges for Redevelopment

- 3.15 Despite any other provisions of this By-law, where, as a result of the redevelopment of land, a building or structure existing on the same land within 48 months prior to the date of payment of development charges in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land, in order to facilitate the redevelopment, the development charges otherwise payable with respect to such redevelopment shall be reduced by the following amounts:



- (a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charge under subsection 3.11 by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
- (b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charges under subsection 3.12, by the gross floor area that has been or will be demolished or converted to another principal use;

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

Time of Payment of Development Charges

- 3.16 Development charges imposed under this By-law are calculated, payable, and collected upon issuance of a building permit for the development.
- 3.17 Despite section 3.16, 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, in accordance with section 27 of the Act.

4. PAYMENT BY SERVICES

- 4.1 Despite the payment required under subsections 3.11 and 3.12, Council may, by agreement, give a credit towards a development charge in exchange for work that relates to a service to which a development charge relates under this By-law.

5. INDEXING

- 5.1 Development charges imposed pursuant to this By-law shall be adjusted annually, on the first day of each year commencing on January 1, 2010, in accordance with the prescribed index in the Act.



6. SCHEDULES

6.1 The following schedules shall form part of this By-law:

Schedule A - Components of Services Designated in section 2.1

Schedule B-1 - Residential and Non-Residential Development Charges for
“Hard Services”

Schedule B-2 - Residential and Non-Residential Development Charges for “Soft
Services”

Schedule C - Map of Harrow Primary Settlement Area

7. CONFLICTS

7.1 Where the Town and an owner or former owner have entered into an agreement with respect to land within the area to which this By-law applies, and a conflict exists between the provisions of this By-law and such agreement, the provisions of the agreement shall prevail to the extent that there is a conflict.

7.2 Notwithstanding section 7.1, where a development which is the subject of an agreement to which section 7.1 applies, is subsequently the subject of one or more of the actions described in subsection 3.4(a), an additional development charge in respect of the development permitted by the action shall be calculated, payable and collected in accordance with the provisions of this By-law if the development has the effect of increasing the need for services, unless such agreement provides otherwise.

8. SEVERABILITY

8.1 If, for any reason, any provision of this By-law is held to be invalid, it is hereby declared to be the intention of Council that all the remainder of this By-law shall continue in full force and effect until repealed, re-enacted, amended or modified.

9. DATE BY-LAW IN FORCE

9.1 This By-law shall come into effect at 12:01 AM on _____, 2019.

10. DATE BY-LAW EXPIRES



10.1 This By-law will expire at 12:01 AM on _____, 2019 unless it is repealed by Council at an earlier date.

11. EXISTING BY-LAW REPEALED

11.1 By-law Number xx is hereby repealed as of the date and time of this By-law coming into effect.

READ A FIRST, SECOND, THIRD TIME AND FINALLY PASSED THIS
_____ DAY OF AUGUST, 2019.

Mayor

Town Clerk



SCHEDULE “A”

TO BY-LAW NO. ____/2019

COMPONENTS OF SERVICES DESIGNATED IN SUBSECTION 2.1

100% Eligible Services

Wastewater Works

Wastewater Treatment, Pumping and Collection System

Services Related to a Highway

Roads

Depots and Domes

PW Rolling Stock

Fire Protection Services

Fire Facilities

Fire Vehicles

Fire Small Equipment & Gear

Policing Services

Policing Facilities

Policing Vehicles, Small Equipment and Gear

90% Eligible Services

Administration

Growth Related Studies – Essential Services Studies

Growth Related Studies – Community Based Services Studies



Library Services

Library Facilities

Outdoor Recreation Services

Parkland Development, Amenities & Trails

Vehicles and Equipment

Indoor Recreation Services

Recreation Facilities



SCHEDULE "B-1"
TO BY-LAW NO. ____/2019
SCHEDULE OF DEVELOPMENT CHARGES FOR "HARD SERVICES"

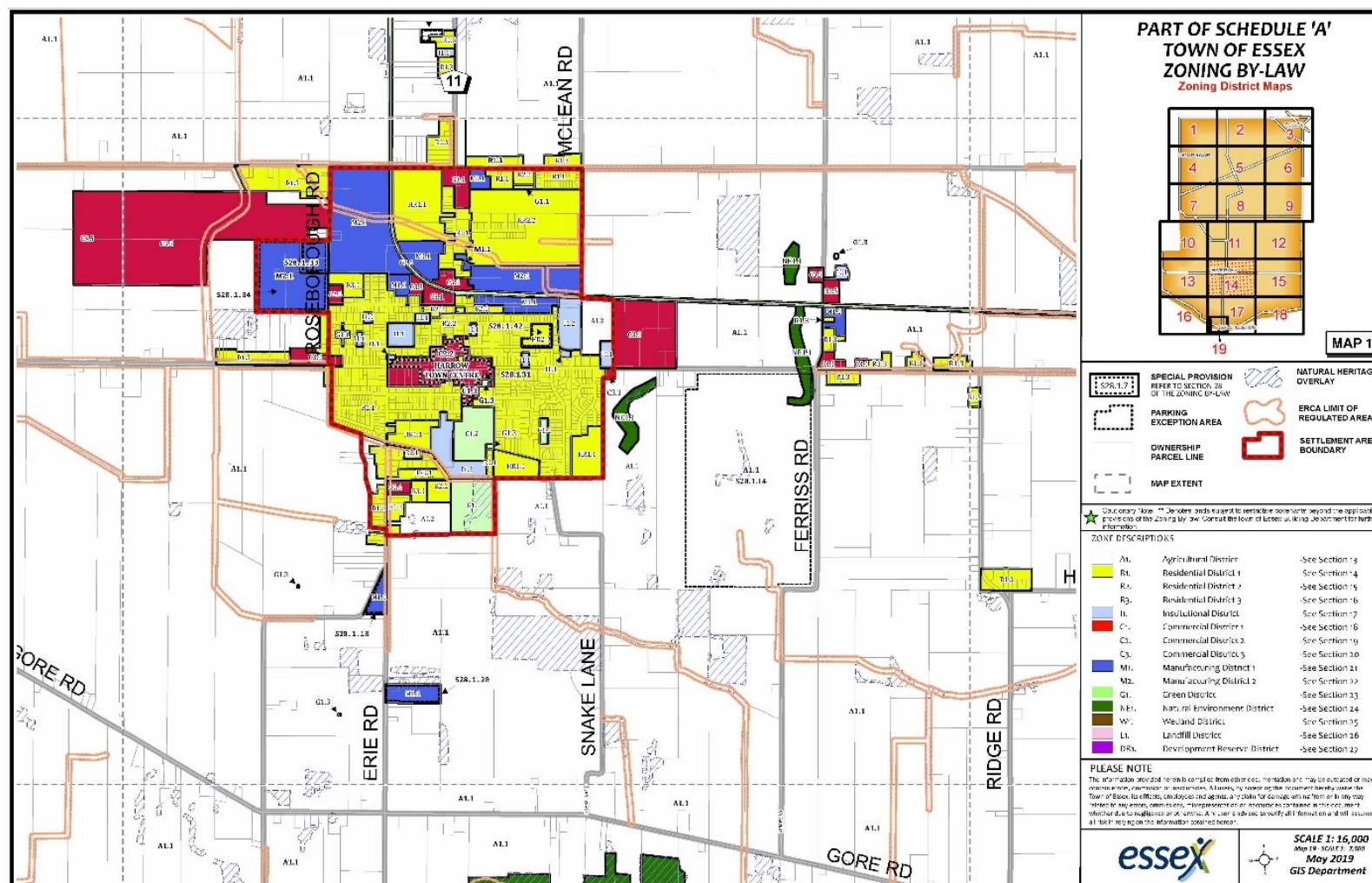
Service	RESIDENTIAL					NON-RESIDENTIAL	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units	(per sq.ft. of Gross Floor Area)		
Municipal Wide Services:								
Services Related to a Highway	1,552	783	653	940	554	0.73	1,552	0.73
Fire Protection Services	979	494	412	593	349	0.46	979	0.46
Policing Services	427	215	180	259	152	0.19	427	0.19
Administration - Essential Services Studies	90	45	38	55	32	0.04	90	0.04
Total Municipal Wide Services - "Hard Services"	3,048	1,537	1,283	1,847	1,087	1.42	3,048	1.42
Area Specific Services:								
Ward 1 - Essex Service Area	3,351	1,690	1,409	2,029	1,195	2.03	-	-
Ward 2 - Colchester North Service Area	872	440	367	528	311	0.00	-	-
Ward 3 - Colchester South Service Area	2,067	1,043	869	1,252	737	1.18	-	-
Ward 4 - Harrow Service Area	2,484	1,253	1,045	1,505	886	1.43	-	-

SCHEDULE "B-2"
TO BY-LAW NO. ____/2019
SCHEDULE OF DEVELOPMENT CHARGES FOR "SOFT SERVICES"

Service	RESIDENTIAL					NON-RESIDENTIAL	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units	(per sq.ft. of Gross Floor Area)		
Outdoor Recreation Services	1,473	743	619	892	525	0.06	-	-
Indoor Recreation Services	3,248	1,639	1,366	1,967	1,158	0.11	-	-
Library Services	225	114	95	136	80	0.01	-	-
Administration - Community Based Studies	101	51	42	61	36	0.05	-	-
Total Municipal Wide Services - "Soft Services"	5,047	2,547	2,122	3,056	1,799	0.23	-	-



SCHEDULE "C"
TO BY-LAW NO. ____/2019
MAP OF HARROW PRIMARY SETTLEMENT AREA





Appendix H

Optional Special Care/Special Dwelling Unit Charge



Appendix H: Optional Special Care/Special Dwelling Unit Charge

The following additional residential unit category, special care/special dwelling unit calculations presented herein have been requested by staff for Council's consideration as part of the D.C. process. Recognizing the aging population in Ontario and the growing demand for developments including such things as nursing homes, retirement homes and hospices, many municipalities are embracing this special care/special dwelling unit charge in their D.C. by-laws. In addition, various municipalities also classify the development of group homes and correctional group homes in this category as they have a similar average occupancy.

Table H-1 below indicates the calculated special care/special dwelling unit charge. Note that each dwelling unit is on an average occupancy of 1.1 persons per unit.



Figure H-1
Calculated Development Charge for Special Care/Special Dwelling Units

Service	RESIDENTIAL
	Special Care/Special Dwelling Units
Municipal Wide Services:	
Services Related to a Highway	554
Fire Protection Services	349
Policing Services	152
Administration - Essential Services Studies	32
Outdoor Recreation Services	525
Indoor Recreation Services	1,158
Library Services	80
Administration - Community Based Studies	36
Total Municipal Wide Services	2,886
Area Specific Charges - Wastewater	
Ward 1 - Essex Service Area	1,195
Ward 2 - Colchester North Service Area	311
Ward 3 - Colchester South Service Area	737
Ward 4 - Harrow Service Area	886

If Council wishes to implement this additional rate for any of the noted types of developments, the following example definitions should be considered and included in the draft by-law, as necessary:

“charitable dwelling” means a residential building, a part of a residential building or the residential portion of a mixed-use building maintained and operated by a corporation approved under the Charitable Institutions Act, R.S.O. 1990, c. C.9, for persons requiring residential, specialized or group care and charitable dwelling includes a children’s residence under the Child and Family Services Act, R.S.O. 1990, c. C.11, a home or a joint home under the Homes for the Aged and Rest Homes Act, R.S.O. 1990, c. H.13, an institution under the Mental Hospitals Act, R.S.O. 1990, c. M.8, a nursing home under the Nursing Homes Act, R.S.O., 1990, c. N.7, and a home for special care under the Homes for Special Care Act, R.S.O. 1990, c. H.12;



“correctional group home” means a residential building or the residential portion of a mixed-use building containing a single housekeeping unit supervised on a 24-hour basis on site by agency staff on a shift rotation basis, and funded wholly or in part by any government or its agency, or by public subscription or donation, or by any combination thereof, and licensed, approved or supervised by the Province of Ontario as a detention or correctional facility under any general or special act and amendments or replacement thereto. A correction group home may contain an office provided that the office is used only for the operation of the correctional group home in which it is located. A correctional group home shall not include any detention facility operated or supervised by the Federal Government nor any correctional institution or secure custody and detention facility operated by the Province of Ontario;

“dwelling unit” means either (1) a room or suite of rooms used, or designed or intended for use, by one person or persons living together, in which culinary and sanitary facilities are provided for the exclusive use of such person or persons, or (2) in the case of a special care/special need dwelling, a room or suite of rooms used, or designed or intended for use, by one person with or without exclusive sanitary and/or culinary facilities, or more than one person in sanitary facilities are directly connected and exclusively accessible to more than one room or suite of rooms;

“group home” means a residential building or the residential portion of a mixed-use building containing a single housekeeping unit which may or may not be supervised on a 24-hour basis on site by agency staff on a shift rotation basis, and funded wholly or in part by any government or its agency, or by public subscription or donation, or by any combination thereof and licensed, approved or supervised by the Province of Ontario for the accommodation of persons under any general or special act and amendments or replacements thereto. A group home may contain an office provided that the office is used only for the operation of the group home in which it is located;

“hospice” means a building or portion of a mixed-use building designed and intended to provide palliative care and emotional support to the terminally ill in a home or homelike setting so that quality of life is maintained and family members may be active participants in care;



“nursing home” means a residential building or the residential portion of a mixed-use building licensed as a nursing home by the Province of Ontario;

“retirement home or lodge” means a residential building or the residential portion of a mixed-use building which provides accommodation primarily for retired persons or couples where each private bedroom or living accommodation has a separate private bathroom and separate entrance from a common hall but where common facilities for the preparation and consumption of food are provided, and common lounges, recreation rooms and medical care facilities may also be provided; and

“Special care/special need dwelling” means a building containing two or more dwellings units, which units have a common entrance from street level;

- i. Where the occupants have the right to use in common, halls, stairs, yards, common rooms and accessory buildings;
- ii. Which may or may not have exclusive sanitary and/or culinary facilities;
- iii. That is designed to accommodate persons with specific needs, including, but not limited to, independent permanent living arrangements; and
- iv. Where support services such as meal preparation, grocery shopping, laundry, housekeeping, nursing, respite care and attendant services are provided at various levels,

And includes, but is not limited to, retirement houses or lodges, nursing homes, charitable dwellings, group homes (including correctional group homes) and hospices.



Addendum #1 to the June 20, 2019 Development Charges Background Study

Town of Essex

July 4, 2019

Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca



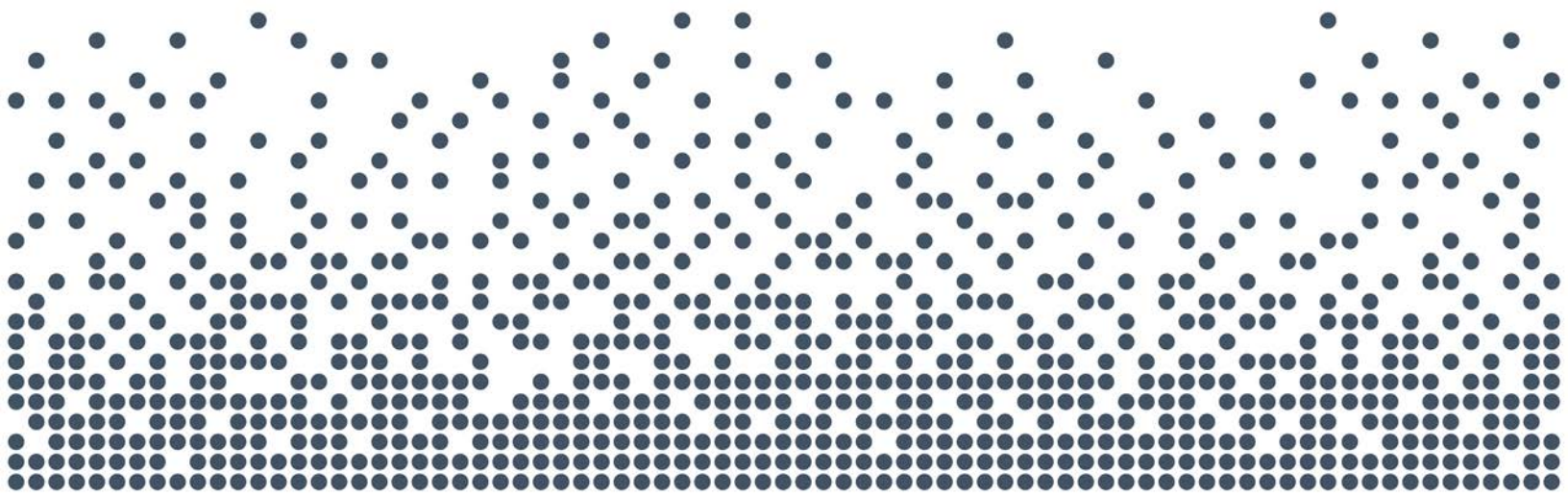
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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
D.C.	Development Charges
D.C.A.	Development Charges Act
sq.ft.	Square Foot
sq.m.	Square Metres



Addendum Report to the June 20, 2019 Development Charges Background Study



1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the Town 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:

June 20, 2019 – Release of the D.C. Background Study and draft by-law

July 15, 2019 – Public Meeting of Council

August 19, 2019 – Passage of Development Charges By-law

As per discussions with staff subsequent to the release of the background study, it was requested that the draft by-law to the background study be amended to include full exemptions for all non-residential development and partial exemptions for apartment rental developments (to be exempt from the municipal-wide charges only).

These refinements will form part of the D.C. background study provided prior to by-law adoption.

2. Discussion

This section of the addendum report provides an explanation for the above-noted refinements. It is noted that the refinements do not impact the calculated development charges provided in the June 20, 2019 background study.

2.1 Additional Exemptions

2.1.1 Non-residential Development

The June 20, 2019 background study and draft by-law provided an exemption for institutional and industrial developments. The background study and draft by-law has been amended to exempt all non-residential development (including commercial).

2.1.2 Apartment Rental Development

The background study and draft by-law has been amended to exempt apartment rental developments. This exemption applies to all municipal-wide services (i.e. charges for wastewater will still be imposed).



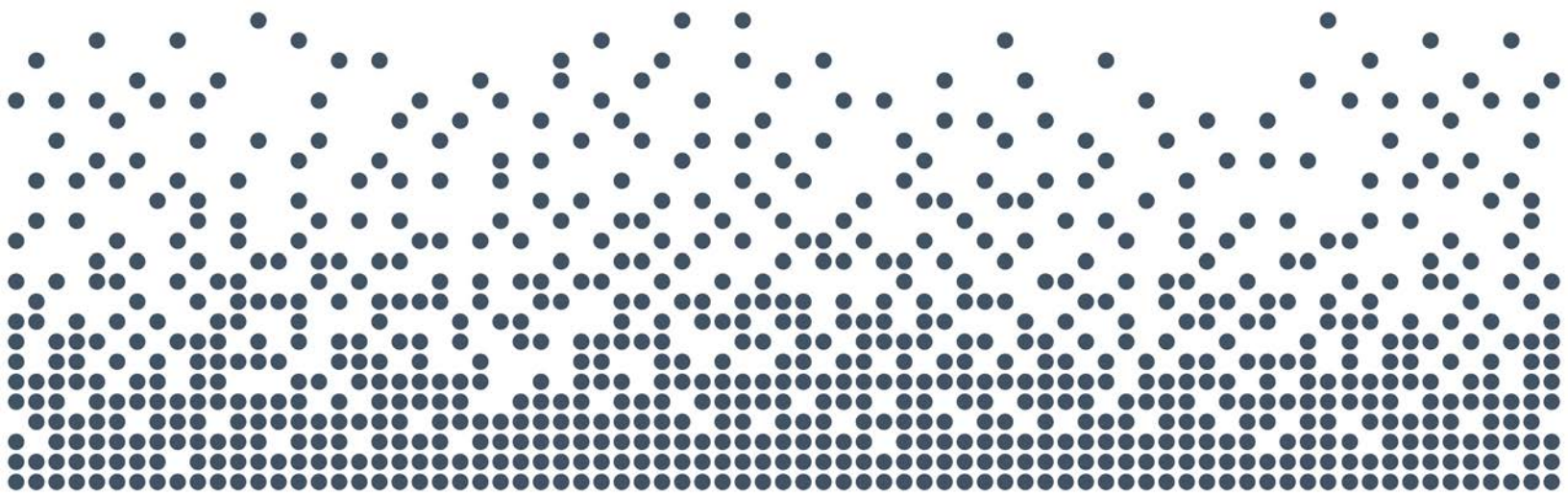
2.2 Changes to the Background Report

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

Page Reference	Description of Revisions
Page 1-2	Figure 1-1 Revised to include this addendum report in the schedule of key D.C. process dates.
Page 7-5	Refinements to the list of exemptions to replace institutional and industrial with all non-residential development and to include rental apartments (municipal-wide charges only).
Appendix G	Revised verbiage related to the refinements to the exemptions.

3. Process for the Adoption of the Development Charges By-law

Sections 1 & 2 provide for a summary of the revisions to the Town's D.C. Background Study. If Council is satisfied with the above changes to the Background Study and based on the public submissions made at the public meeting, this addendum report #1 will be considered for approval by Council along with the Background Study.



Amended Pages



1.2 Summary of the Process

The public meeting required under section 12 of the D.C.A., has been scheduled for July 15, 2019. 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 Town's D.C.s.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on June 20, 2019.

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

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

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

Figure 1-1
Schedule of Key D.C. Process Dates for the Town of Essex

1. Data collection, staff review, engineering work, D.C. calculations and policy work	January to May 2019
2. Public meeting advertisement placed in newspaper(s)	No later than June 24, 2019
3. Background study and proposed by-law available to public	June 20, 2019
4. Addendum Report	July 4, 2019
5. Public meeting of Council	July 15, 2019
6. Council considers adoption of background study and passage of by-law	August 19, 2019
7. Newspaper notice given of by-law passage	By 20 days after passage
8. Last day for by-law appeal	40 days after passage
9. Town makes pamphlet available (where by-law not appealed)	By 60 days after in force date



- The development of non-residential farm buildings constructed for bona fide farm uses, being that which operates with a valid Farm Business Number and is assessed in the Farmland Realty Tax Class;
- A hospital under the Public Hospitals Act;
- The development of affordable housing;
- The development of apartment rental housing is exempt from the municipal-wide development charges only;
- Residential charges shall not be imposed in the Harrow Primary Settlement Area; and
- non-residential development.

7.3.5 Phasing in

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

7.3.6 Timing of Collection

A D.C. that is applicable under section 5 of the D.C.A. 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 D.C. prior to the issuance of a permit of prior to the commencement of development or redevelopment as the case may be; and
- despite the above, Council, from time to time and at any time, may enter into agreements providing for all or any part of a D.C. to be paid before or after it would otherwise be payable.

7.3.7 Wind Turbines, Communication Towers and Solar Farms

Charges have also been calculated for Wind Turbines, Telecommunication Towers and Solar Farms. For each type of development, charges will be imposed for Services Related to a Highway, Fire Protection Services, Policing Services, and Administration. Solar farms will be charged on a per square foot basis for the panel surfaces whereas the other two forms of development will be charged on a per unit basis.

7.3.8 Indexing

Indexing of the D.C.s shall be implemented on a mandatory basis annually commencing on January 1, 2020 each January 1st thereafter, in accordance with the Statistics



Appendix G: Proposed D.C. By-law

The Corporation of the TOWN OF ESSEX

By-Law Number _____

A BY-LAW FOR THE IMPOSITION OF DEVELOPMENT CHARGE

WHEREAS the Town of Essex will experience growth through development and re-development;

AND WHEREAS development and re-development requires the provision of physical and social services by the Town of Essex;

AND WHEREAS Council desires to ensure that the capital cost of meeting growth-related demands for or burden on municipal services does not place an excessive financial burden on the Town of Essex or its existing taxpayers while at the same time ensuring new taxpayers contribute no more than the net capital cost attributable to providing the current level of municipal services;

AND WHEREAS the Development Charges Act, 1997 (the “Act”) provides that the council of a municipality may by by-law impose development charges against land to pay for increased capital costs required because of increased needs for services;

AND WHEREAS a development charge background study has been completed in accordance with the Act;

AND WHEREAS the Council of The Corporation of the Town of Essex has given notice of and held a public meeting on the XX day of July, 2019 in accordance with the Act and the regulations thereto;



NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWN OF ESSEX ENACTS AS FOLLOWS:

1. INTERPRETATION

1.1 In this By-law the following items shall have the corresponding meanings:

“Act” means the Development Charges Act, as amended, or any successor thereof;

“affordable housing” means housing accommodations and incidental facilities primarily for persons of low and moderate income that meet the requirements of any program for such purpose as administered by any agency of the Federal or Provincial government, the County of Essex and/or the Town.

“apartment unit” means any residential unit within a building containing more than four dwelling units where the units are connected by an interior corridor;

“bedroom” means a habitable room which can be used as sleeping quarters, but does not include a bathroom, living room, dining room or kitchen;

“board of education” has the same meaning as set out in the Education Act, R.S.O. 1990, Chap. E.2, as amended, or any successor thereof;

“bona fide farm uses” means the proposed development will qualify as a farm business operating with a valid Farm Business Registration Number issued by the Ontario Ministry of Agriculture, Food and Rural Affairs and be assessed in the Farmland Realty Tax Class by the Ontario Property Assessment Corporation;

“Building Code Act” means the Building Code Act, S.O. 1992, as amended, or any successor thereof;

“capital cost” means costs incurred or proposed to be incurred by the municipality or a local board thereof directly or by others on behalf of and as authorized by the municipality or local board,

(a) to acquire land or an interest in land, including a leasehold interest,

(b) to improve land,

(c) to acquire, lease, construct or improve buildings and structures,



(d) to acquire, construct or improve facilities including,

- (i) furniture and equipment other than computer equipment, and
- (ii) material acquired for circulation, reference or information purposes by a library board as defined in the Public Libraries Act, R.S.O. 1990, Chap. P.44, as amended, or any successor thereof; and
- (iii) rolling stock with an estimated useful life of seven years or more, and

(e) to undertake studies in connection with any matter under the Act and any of the matters in clauses (a) to (d) above, including the development charge background study required for the provision of services designated in this By-law within or outside the municipality, including interest on borrowing for those expenditures under clauses (a) to (e) above that are growth-related;

“commercial” means any use of land, structures or buildings for the purposes of buying or selling commodities and services, but does not include industrial or agricultural uses, but does include hotels, motels, motor inns and boarding, lodging and rooming houses;

“Council” means the Council of the municipality;

“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 the effect of increasing the size of usability thereof, and includes redevelopment;

“development charge” means a charge imposed with respect to this By-law;

“dwelling unit” means any part of a building or structure used, designed or intended to be used as a domestic establishment in which one or more persons may sleep and are provided with culinary and sanitary facilities for their exclusive use;

“Existing” means the number, use and size that existed as of the date this by-law was passed;



“farm building” means that part of a bona fide farming operation encompassing barns, silos and other ancillary development to an agricultural use, but excluding a residential use;

“gross floor area” means:

(a) in the case of a residential building or structure, the total area of all floors above grade of a dwelling unit measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of party walls dividing the dwelling unit from any other dwelling unit or other portion of a building; and

(b) in the case of a non-residential building or structure, or in the case of a mixed-use building or structure in respect of the non-residential portion thereof, the total area of all building floors above or below grade measured between the outside surfaces of the exterior walls, or between the outside surfaces of exterior walls and the centre line of party walls dividing a non-residential use and a residential use, except for:

(i) a room or enclosed area within the building or structure above or below that is used exclusively for the accommodation of heating, cooling, ventilating, electrical, mechanical or telecommunications equipment that service the building;

(ii) loading facilities above or below grade; and

(iii) a part of the building or structure below grade that is used for the parking of motor vehicles or for storage or other accessory use;

“industrial” means lands, buildings or structures used or designed or intended for use for manufacturing, processing, fabricating or assembly of raw goods, warehousing or bulk storage of goods, and includes office uses and the sale of commodities to the general public where such uses are accessory to an industrial use, but does not include the sale of commodities to the general public through a warehouse club;



“Institutional” means land, buildings, structures or any part thereof used by any organization, group or association for promotion of charitable, educational or benevolent objectives and not for profit or gain;

“Local Board” means a school board, public utility, commission, transportation commission, public library board, board of park management, local board of health, board of commissioners of police, 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, including school purposes, of the Town of Essex or any part or parts thereof;

“local services” means those services, facilities or things which are under the jurisdiction of the municipality and are related to a plan of subdivision or within the area to which the plan relates in respect of the lands under Sections 41, 51 or 53 of the Planning Act, R.S.O. 1990, Chap. P.13, as amended, or any successor thereof;

“multiple dwellings” means all dwellings other than single-detached, semi-detached and apartment unit dwellings;

“municipality” means the Corporation of the Town of Essex;

“non-residential use” means a building or structure of any kind whatsoever used, designed or intended to be used for other than a residential use;

“Official Plan” means the Official Plan adopted for the Town, as amended and approved;

“Owner” means the owner of land or a person who has made application for an approval for the development of land upon which a development charge is imposed;

“place of worship” means that part of a building or structure that is exempt from taxation as a place of worship under the Assessment Act, R.S.O. 1990, Chap. A.31, as amended, or any successor thereof;

“Rate” means the interest rate established weekly by the Bank of Canada based on Treasury Bills having a term of 91 days;

“regulation” means any regulation made pursuant to the Act;



“Residential Dwelling” means a building, occupied or capable of being occupied as a home, residence or sleeping place by one or more persons, containing one or more Dwelling Units but not including motels, hotels, tents, truck campers, tourist trailers, mobile camper trailers or boarding, lodging or rooming houses;

“residential use” means the use of a building or structure or portion thereof for one or more Dwelling Units. This also includes a Dwelling Unit on land that is used for an Agricultural Use;

“row dwelling” means a building containing three or more attached dwelling units in a single row, each of which dwelling units has an independent entrance from the outside and is vertically separated from any abutting dwelling unit;

“semi-detached dwelling” means a dwelling unit in a residential building consisting of two dwelling units having one vertical wall or one horizontal wall, but not other parts, attached or another dwelling unit where the residential unit are not connected by an interior corridor;

“service” means a service designed in Schedule “A” to this By-law, and “services” shall have a corresponding meaning;

“servicing agreement” means an agreement between a landowner and the municipality relative to the provision of municipal services to specified land within the municipality;

“single detached dwelling unit” means a residential building consisting of one dwelling unit and not attached to another structure;

“Solar Farm” means any solar energy system comprised of one or more solar panels and associated control or conversion electronics that converts sunlight into electricity. A solar farm 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;

“Telecommunications Tower” – means any tower, apparatus, structure or other thing that is used or is capable of being used for telecommunications of for any operation directly connected with telecommunications, and includes a transmission facility, as define in the Telecommunications Act.



“town” means the area within the geographic limits of the Town of Essex;

“Wind Turbine” means any wind energy system, comprising one or more turbines, that converts energy into electricity, with a combined nameplate generating capacity greater than 500 kilowatts and a height greater than 100 metres, 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; and

“Zoning By-law” means the Zoning By-law of the Town of Essex, including the former Village of Essex, the former Township of Essex or any successor thereof passed pursuant to Section 34 of the Planning Act, S.O. 1998.

2. DESIGNATION OF SERVICES

2.1 The categories of services for which development charges are imposed under this By-law are as follows:

- (a) Services Related to a Highway
- (b) Fire Protection Services
- (c) Policing Services
- (d) Outdoor Recreation Services
- (e) Indoor Recreation Services
- (f) Library Services
- (g) Administration – Essential Services Studies
- (h) Administration – Community Based Services Studies
- (i) Wastewater

2.2 The components of the services designated in section 2.1 are described in Schedule A.



3. APPLICATION OF BY-LAW RULES

3.1 Development charges shall be payable in the amounts set out in this By-law where:

- (a) the lands are located in the area described in section 3.2; and
- (b) the development of the lands requires any of the approvals set out in subsection 3.4(a).

Area to Which By-law Applies

3.2 Subject to section 3.3, this By-law applies to all lands in the Town of Essex whether or not the land or use thereof is exempt from taxation under s. 13 of the Assessment Act.

3.3. Notwithstanding clause 3.2 above, this by-law shall not apply to lands that are owned by and used for the purposes of:

- (a) the municipality or a local board thereof;
- (b) a board of education; or
- (c) the Corporation of the County of Essex or a local board thereof.

Approvals for Development

3.4(a) Development charges shall be imposed on all lands, buildings or structures that are developed for residential or non-residential uses 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;
- (ii) the 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, R.S.O. 1990, Chap. C.26, as amended, or any successor thereof; or
 - (vii) the issuing of a permit under the Building Code Act in relation to a building or structure.
- (b) No more than one development charge for each service designated in subsection 2.1 shall be imposed upon any lands, buildings or structures to which this By-law applies even though two or more of the actions described in subsection 3.4(a) are required before the lands, buildings or structures can be developed.
- (c) Despite subsection 3.4(b), if two or more of the actions described in subsection 3.4(a) occur at different times, additional development charges shall be imposed if the subsequent action has the effect of increasing the need for services.

Exemptions

3.5 Notwithstanding the provisions of this By-law, development charges shall not be imposed with respect to:

- (a) an enlargement to an existing dwelling unit;
- (b) one or two additional dwelling units in an existing single detached dwelling; or
- (c) one additional dwelling unit in any other existing residential building;

3.6 Notwithstanding section 3.5(b), development charges shall be imposed if the total gross floor area of the additional one or two units exceeds the gross floor area of the existing dwelling unit.

3.7 Notwithstanding section 3.5, development charges shall be imposed if the additional unit has a gross floor area greater than

- i. in the case of a semi-detached or row dwelling, the gross floor area of the existing dwelling unit; and



- ii. in the case of any other residential building, the gross floor area of the smallest dwelling unit contained in the residential building.

3.8 Exemption for Industrial Development:

- 3.8.1 Notwithstanding any other provision of this by-law, no development charge is payable with respect to an enlargement of the gross floor area of an existing industrial building where the gross floor area is enlarged by 50 percent or less.

Rules with Respect to an Industrial Expansion Exemption

- 3.8.2 If a development includes the enlargement of the gross floor area of an existing industrial building, the amount of the development charge that is payable in respect of the enlargement is determined in accordance with the following:

- (i) Subject to subsection 3.8.2 (iii), if the gross floor area is enlarged by 50 per cent or less of the lesser of:

- 1. the gross floor area of the existing industrial building, or
- 2. the gross floor area of the existing industrial building before the first enlargement for which:
 - a. an exemption from the payment of development charges was granted, or
 - b. a lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, the amount of the development charge in respect of the enlargement is zero;

- (ii) Subject to subsection 3.8.2 (iii), if the gross floor area is enlarged by more than 50 per cent or less of the lesser of:

- (A) the gross floor area of the existing industrial building, or
- (B) the gross floor area of the existing industrial building before the first enlargement for which:



- (i) an exemption from the payment of development charges was granted, or
- (ii) a lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, 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:

- (A) determine the amount by which the enlargement exceeds 50 per cent of the gross floor area before the first enlargement, and
- (B) divide the amount determined under subsection (A) by the amount of the enlargement

(iii) For the purposes of calculating the extent to which the gross floor area of an existing industrial building is enlarged in subsection 3.8.2 (ii), the cumulative gross floor area of any previous enlargements for which:

- (A) An exemption from the payment of development charges was granted, or
- (B) A lesser development charge than would otherwise be payable under this by-law, or predecessor thereof, was paid,

pursuant to Section 4 of the Act and this subsection, shall be added to the calculation of the gross floor area of the proposed enlargement.

(iv) For the purposes of this subsection, the enlargement must not be attached to the existing industrial building by means only of a tunnel, bridge, passageway, canopy, shared below grade connection, such as a service tunnel, foundation, footing or parking facility.

3.9 For the purpose of section 3.8 herein, “existing industrial building” is used as defined in the Regulation made pursuant to the Act.

3.10 Other Exemptions:



Notwithstanding the provision of this by-law, development charges shall not be imposed with respect to:

- a) lands, buildings or structures used or to be used for a place of worship or for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act;
- b) a public hospital receiving aid under the Public Hospitals Act, R.S.O. 1990, Chap. P.40, as amended, or any successor thereof;
- c) the development of non-residential farm buildings constructed for bona fide farm uses, which qualify as a farm business, being that which operates with a valid Farm Business Registration Number and is assessed in the Farmland Realty Tax Class;
- d) the development of affordable housing;
- e) the development of apartment rental housing is exempt from the municipal-wide charges only; and
- f) non-residential development.

Amount of Charges

Residential

3.11.1 The development charges set out in Schedules B-1 and B-2 shall be imposed on residential uses of lands, buildings or structures, including a dwelling unit accessory to a non-residential use and, in the case of a mixed use building or structure, on the residential uses in the mixed use building or structure, according to the type of residential unit, and calculated with respect to each of the services according to the type of residential use.

3.11.2 The following percentage of each service for residential uses within the Harrow Primary Settlement Area, outlined in Schedule C, as provided in Schedules B-1 and B-2, shall be imposed:



Service	Residential - Single and Semi- Detached Dwelling	Residential - Apartments - 2 Bedrooms +	Residential - Apartments - Bachelor and 1 Bedroom	Residential - Other Multiples
Municipal Wide Services:				
Services Related to a Highway	0%	0%	0%	0%
Fire Protection Services	0%	0%	0%	0%
Policing Services	0%	0%	0%	0%
Outdoor Recreation Services	0%	0%	0%	0%
Indoor Recreation Services	0%	0%	0%	0%
Library Services	0%	0%	0%	0%
Administration	0%	0%	0%	0%
Area Specific Charges				
Ward 4 - Harrow Service Area - Wastewater	0%	0%	0%	0%

Non-Residential

3.12.1 Subject to section 3.12.2, the development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on non-residential uses of lands, buildings or structures, and, in the case of a mixed use building or structure, on the non-residential uses in the mixed use building or structure, and calculated with respect to each of the services according to the total floor area of the non-residential use.

3.12.2 The following percentage of each service for non-residential uses, as provided in Schedules B-1 and B-2, shall be imposed provided that for non-residential commercial uses in areas that fall outside Community Improvement Plan boundaries (existing as of April 23, 2018), until Council considers the economic climate of the Town warrants a change to the development charge being imposed:



Service	Non-residential		
	Commercial	Industrial	Institutional
Municipal Wide Services:			
Services Related to a Highway	0%	0%	0%
Fire Protection Services	0%	0%	0%
Policing Services	0%	0%	0%
Outdoor Recreation Services	0%	0%	0%
Indoor Recreation Services	0%	0%	0%
Library Services	0%	0%	0%
Administration	0%	0%	0%
Area Specific Charges			
Ward 1 - Essex Service Area - Wastewater	0%	0%	0%
Ward 2 - Colchester North Service Area - Wastewater	0%	0%	0%
Ward 3 - Colchester South Service Area - Wastewater	0%	0%	0%
Ward 4 - Harrow Service Area - Wastewater	0%	0%	0%

Wind Turbines and Telecommunication Towers

- 3.13 The development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on wind turbines and telecommunication towers with respect to services related to a highway, fire protection services, policing services and administration on a per unit basis.

Solar Farm

- 3.14 The development charges described in Schedules B-1 and B-2 to this by-law shall be imposed on solar farms with respect to services related to a highway, fire protection services, policing services and administration on a per square foot of the panel surface.

Reduction of Development Charges for Redevelopment

- 3.15 Despite any other provisions of this By-law, where, as a result of the redevelopment of land, a building or structure existing on the same land within 48 months prior to the date of payment of development charges in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land, in order to facilitate the redevelopment, the development charges otherwise payable with respect to such redevelopment shall be reduced by the following amounts:



- (a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charge under subsection 3.11 by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
- (b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable development charges under subsection 3.12, by the gross floor area that has been or will be demolished or converted to another principal use;

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

Time of Payment of Development Charges

- 3.16 Development charges imposed under this By-law are calculated, payable, and collected upon issuance of a building permit for the development.
- 3.17 Despite section 3.16, 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, in accordance with section 27 of the Act.

4. PAYMENT BY SERVICES

- 4.1 Despite the payment required under subsections 3.11 and 3.12, Council may, by agreement, give a credit towards a development charge in exchange for work that relates to a service to which a development charge relates under this By-law.

5. INDEXING

- 5.1 Development charges imposed pursuant to this By-law shall be adjusted annually, on the first day of each year commencing on January 1, 2010, in accordance with the prescribed index in the Act.



6. SCHEDULES

6.1 The following schedules shall form part of this By-law:

Schedule A - Components of Services Designated in section 2.1

Schedule B-1 - Residential and Non-Residential Development Charges for
“Hard Services”

Schedule B-2 - Residential and Non-Residential Development Charges for “Soft
Services”

Schedule C - Map of Harrow Primary Settlement Area

7. CONFLICTS

7.1 Where the Town and an owner or former owner have entered into an agreement with respect to land within the area to which this By-law applies, and a conflict exists between the provisions of this By-law and such agreement, the provisions of the agreement shall prevail to the extent that there is a conflict.

7.2 Notwithstanding section 7.1, where a development which is the subject of an agreement to which section 7.1 applies, is subsequently the subject of one or more of the actions described in subsection 3.4(a), an additional development charge in respect of the development permitted by the action shall be calculated, payable and collected in accordance with the provisions of this By-law if the development has the effect of increasing the need for services, unless such agreement provides otherwise.

8. SEVERABILITY

8.1 If, for any reason, any provision of this By-law is held to be invalid, it is hereby declared to be the intention of Council that all the remainder of this By-law shall continue in full force and effect until repealed, re-enacted, amended or modified.

9. DATE BY-LAW IN FORCE

9.1 This By-law shall come into effect at 12:01 AM on _____, 2019.

10. DATE BY-LAW EXPIRES



10.1 This By-law will expire at 12:01 AM on _____, 2019 unless it is repealed by Council at an earlier date.

11. EXISTING BY-LAW REPEALED

11.1 By-law Number xx is hereby repealed as of the date and time of this By-law coming into effect.

READ A FIRST, SECOND, THIRD TIME AND FINALLY PASSED THIS
_____ DAY OF AUGUST, 2019.

Mayor

Town Clerk



SCHEDULE “A”

TO BY-LAW NO. ____/2019

COMPONENTS OF SERVICES DESIGNATED IN SUBSECTION 2.1

100% Eligible Services

Wastewater Works

Wastewater Treatment, Pumping and Collection System

Services Related to a Highway

Roads

Depots and Domes

PW Rolling Stock

Fire Protection Services

Fire Facilities

Fire Vehicles

Fire Small Equipment & Gear

Policing Services

Policing Facilities

Policing Vehicles, Small Equipment and Gear

90% Eligible Services

Administration

Growth Related Studies – Essential Services Studies

Growth Related Studies – Community Based Services Studies



Library Services

Library Facilities

Outdoor Recreation Services

Parkland Development, Amenities & Trails

Vehicles and Equipment

Indoor Recreation Services

Recreation Facilities



SCHEDULE "B-1"
TO BY-LAW NO. ____/2019
SCHEDULE OF DEVELOPMENT CHARGES FOR "HARD SERVICES"

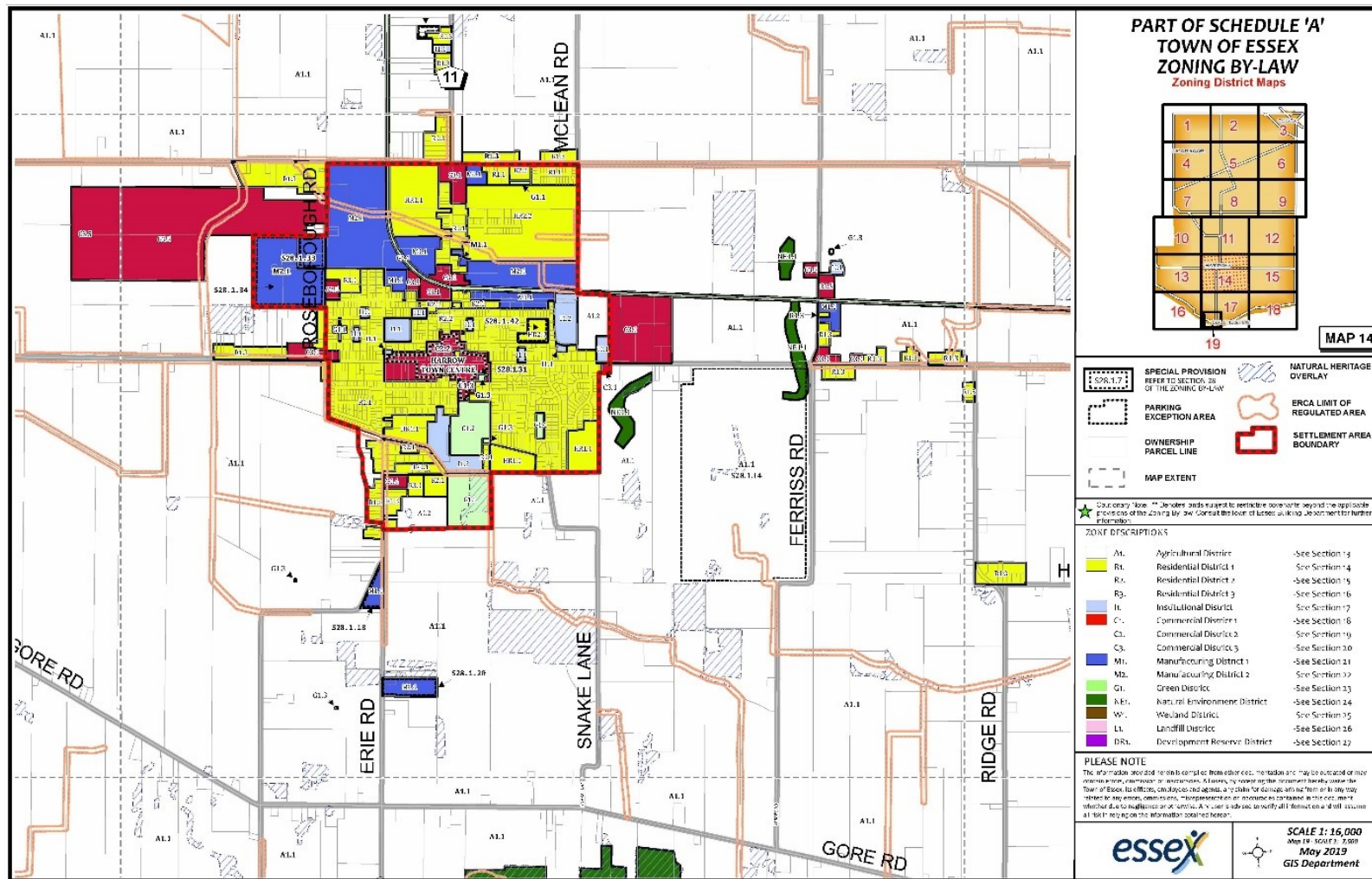
Service	RESIDENTIAL					NON-RESIDENTIAL	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units	(per sq.ft. of Gross Floor Area)		
Municipal Wide Services:								
Services Related to a Highway	1,552	783	653	940	554	0.73	1,552	0.73
Fire Protection Services	979	494	412	593	349	0.46	979	0.46
Policing Services	427	215	180	259	152	0.19	427	0.19
Administration - Essential Services Studies	90	45	38	55	32	0.04	90	0.04
Total Municipal Wide Services - "Hard Services"	3,048	1,537	1,283	1,847	1,087	1.42	3,048	1.42
Area Specific Services:								
Ward 1 - Essex Service Area	3,351	1,690	1,409	2,029	1,195	2.03	-	-
Ward 2 - Colchester North Service Area	872	440	367	528	311	0.00	-	-
Ward 3 - Colchester South Service Area	2,067	1,043	869	1,252	737	1.18	-	-
Ward 4 - Harrow Service Area	2,484	1,253	1,045	1,505	886	1.43	-	-

SCHEDULE "B-2"
TO BY-LAW NO. ____/2019
SCHEDULE OF DEVELOPMENT CHARGES FOR "SOFT SERVICES"

Service	RESIDENTIAL					NON-RESIDENTIAL	Wind Turbines and Telecommunication Towers	Solar Farms (per sq.ft)
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	Special Care/Special Dwelling Units	(per sq.ft. of Gross Floor Area)		
Outdoor Recreation Services	1,473	743	619	892	525	0.06	-	-
Indoor Recreation Services	3,248	1,639	1,366	1,967	1,158	0.11	-	-
Library Services	225	114	95	136	80	0.01	-	-
Administration - Community Based Studies	101	51	42	61	36	0.05	-	-
Total Municipal Wide Services - "Soft Services"	5,047	2,547	2,122	3,056	1,799	0.23	-	-



SCHEDULE "C"
TO BY-LAW NO. ____/2019
MAP OF HARROW PRIMARY SETTLEMENT AREA





Addendum #2 to the June 20, 2019 Development Charges Background Study

Town of Essex

July 11, 2019

Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca



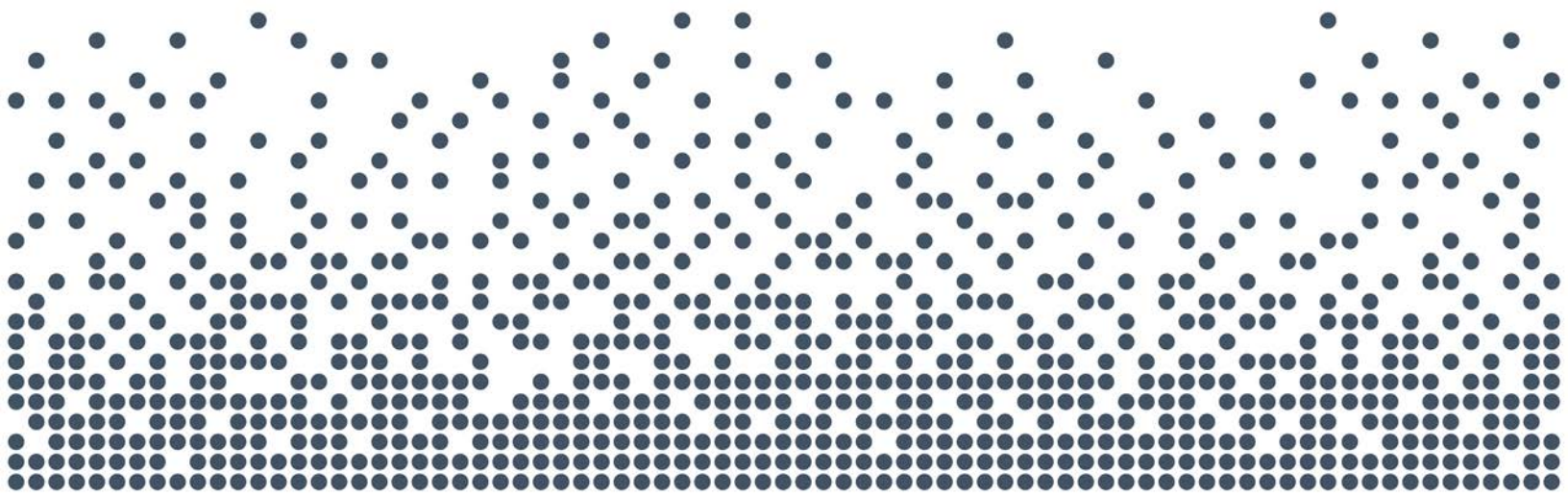
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3. Process for the Adoption of the Development Charges By-law	4



List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
D.C.	Development Charges
D.C.A.	Development Charges Act
sq.ft.	Square Foot
sq.m.	Square Metres



Addendum Report to the June 20, 2019 Development Charges Background Study



1. Background

With the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the Town has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The Town has also undertaken an amendment to the background study and released the first addendum report to the public. The following provides a summary of the key dates in the development charge by-law process:

June 20, 2019 – Release of the D.C. Background Study and draft by-law

July 4, 2019 – Addendum #1 to June 20th report released

July 11, 2019 – Addendum #2 to June 20th report released

July 15, 2019 – Public Meeting of Council

August 19, 2019 – Passage of Development Charges By-law

As per discussions with staff subsequent to the release of the background study and first addendum report, it was requested that the draft by-law to the background study be further amended to exempt affordable housing from the municipal-wide charges only.

These refinements will form part of the D.C. background study provided prior to by-law adoption.

2. Discussion

This section of the addendum report provides an explanation for the above-noted refinement. It is noted that the refinement does not impact the calculated development charges provided in the June 20, 2019 background study, as amended.

2.1 Affordable Housing Exemption Refinement

The June 20, 2019 background study and draft by-law provided an exemption for affordable housing for the municipal-wide charges as well as the area-specific wastewater charge. This report amends the background study and draft by-law to exempt affordable housing for the municipal-wide portion only. Charges for wastewater will still be imposed on affordable housing development.



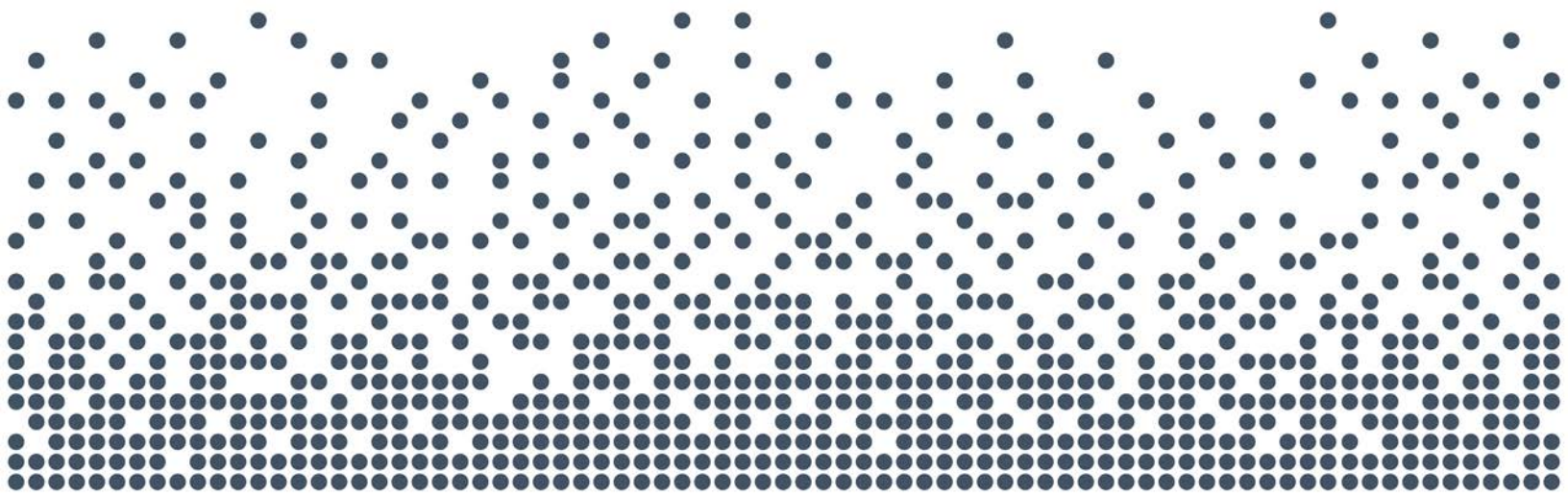
2.2 Changes to the Background Report

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

Page Reference	Description of Revisions
Page 1-2	Figure 1-1 Revised to include this second addendum report in the schedule of key D.C. process dates.
Page 7-5	Refinements to the list of exemptions to exempt affordable housing for the municipal-wide charges only.
Appendix G Page G-13	Revised verbiage related to the refinements to the exemption for affordable housing.

3. Process for the Adoption of the Development Charges By-law

Sections 1 & 2 provide for a summary of the revisions to the Town's D.C. Background Study, as amended. If Council is satisfied with the above changes to the Background Study and based on the public submissions made at the public meeting, this addendum report #2 will be considered for approval by Council along with the Background Study as amended by addendum report #1.



Amended Pages



1.2 Summary of the Process

The public meeting required under section 12 of the D.C.A., has been scheduled for July 15, 2019. 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 Town's D.C.s.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on June 20, 2019.

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

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

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

Figure 1-1
Schedule of Key D.C. Process Dates for the Town of Essex

1. Data collection, staff review, engineering work, D.C. calculations and policy work	January to May 2019
2. Public meeting advertisement placed in newspaper(s)	No later than June 24, 2019
3. Background study and proposed by-law available to public	June 20, 2019
4. Addendum Report #1 released	July 4, 2019
5. Addendum Report #2 released	July 11, 2019
6. Public meeting of Council	July 15, 2019
7. Council considers adoption of background study and passage of by-law	August 19, 2019
8. Newspaper notice given of by-law passage	By 20 days after passage
9. Last day for by-law appeal	40 days after passage
10. Town makes pamphlet available (where by-law not appealed)	By 60 days after in force date



- The development of non-residential farm buildings constructed for bona fide farm uses, being that which operates with a valid Farm Business Number and is assessed in the Farmland Realty Tax Class;
- A hospital under the Public Hospitals Act;
- The development of affordable housing is exempt from the municipal-wide development charges only;
- The development of apartment rental housing is exempt from the municipal-wide development charges only;
- Residential charges shall not be imposed in the Harrow Primary Settlement Area; and
- non-residential development.

7.3.5 Phasing in

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

7.3.6 Timing of Collection

A D.C. that is applicable under section 5 of the D.C.A. 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 D.C. prior to the issuance of a permit of prior to the commencement of development or redevelopment as the case may be; and
- despite the above, Council, from time to time and at any time, may enter into agreements providing for all or any part of a D.C. to be paid before or after it would otherwise be payable.

7.3.7 Wind Turbines, Communication Towers and Solar Farms

Charges have also been calculated for Wind Turbines, Telecommunication Towers and Solar Farms. For each type of development, charges will be imposed for Services Related to a Highway, Fire Protection Services, Policing Services, and Administration. Solar farms will be charged on a per square foot basis for the panel surfaces whereas the other two forms of development will be charged on a per unit basis.



Notwithstanding the provision of this by-law, development charges shall not be imposed with respect to:

- a) lands, buildings or structures used or to be used for a place of worship or for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act;
- b) a public hospital receiving aid under the Public Hospitals Act, R.S.O. 1990, Chap. P.40, as amended, or any successor thereof;
- c) the development of non-residential farm buildings constructed for bona fide farm uses, which qualify as a farm business, being that which operates with a valid Farm Business Registration Number and is assessed in the Farmland Realty Tax Class;
- d) the development of affordable housing is exempt from the municipal-wide charges only;
- e) the development of apartment rental housing is exempt from the municipal-wide charges only; and
- f) non-residential development.

Amount of Charges

Residential

3.11.1 The development charges set out in Schedules B-1 and B-2 shall be imposed on residential uses of lands, buildings or structures, including a dwelling unit accessory to a non-residential use and, in the case of a mixed use building or structure, on the residential uses in the mixed use building or structure, according to the type of residential unit, and calculated with respect to each of the services according to the type of residential use.

3.11.2 The following percentage of each service for residential uses within the Harrow Primary Settlement Area, outlined in Schedule C, as provided in Schedules B-1 and B-2, shall be imposed: