2019 Development Charges Background Study

City of Burlington

For Public Circulation and Comment

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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
G.F.A.	Gross floor area
L.P.A.T.	Local Planning Appeal Tribunal
N.A.I.C.S.	North American Industry Classification System
N.F.P.O.W.	No Fixed Place of Work
O.M.B.	Ontario Municipal Board
O.P.A.	Official Plan Amendment
O.Reg.	Ontario Regulation
P.O.A.	Provincial Offences Act
P.P.U.	Persons per unit
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
s.s.	Subsection
sq.ft.	square foot
sq.m.	square metre

Development Charges Background Study

Chapter 1
Introduction

1. Introduction

1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the Development Charges Act (D.C.A.)., 1997 (s.10), and accordingly, recommends new Development Charges (D.C.s) and policies for the City of Burlington (City).

The City retained Watson & Associates Economists Ltd. (Watson) to undertake the D.C. study process in 2018. Watson worked with senior staff of the City in preparing this D.C. analysis and the policy recommendations. The City also formed a Strategy Committee and Consultation Committee for consultation throughout the process.

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 City's D.C. background study, as summarized in Chapter 4. It also addresses the forecast amount, type, and location of growth (Chapter 3), the requirement for "rules" governing the imposition of the charges (Chapter 7), and the proposed by-law to be made available as part of the approval process (Appendix F).

In addition, the report is designed to set out sufficient background on the legislation, the City's current D.C. policy (Chapter 2) and the policies underlying the proposed by-law, to make the exercise understandable to interested parties. Finally, the D.C. background study addresses post-adoption implementation requirements (Chapter 9) 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

As required under Section 12 of the D.C.A., 1997, a Public Meeting will be scheduled prior to Council considering the by-law for passage. Its purpose is to present the study to the public and to solicit public input on the proposed D.C. by-law. The meeting is also being held to answer any questions regarding the study's purpose, methodology, and the proposed modifications to the City's D.C. by-law. Table 1-1 outlines the proposed schedule to be followed with respect to the D.C. by-law adoption process.

In accordance with the legislation, the D.C. background study and proposed D.C. by-law were available for public review on March 28, 2019.

Throughout the D.C. background study process, two committees were established and consulted, i.e. Strategy Committee and Consultation Committee. The Strategy Committee consisting of senior staff from various City departments, with the primary role of providing strategic guidance and input throughout the study process regarding the analysis and proposed policies. The Consultation Committee consisting of representatives from various stakeholder groups, including members of Council, development industry, Burlington Economic Development Corporation, and citizen members. The mandate of the Consultation Committee is to advise and assist the City with respect to D.C.s, in particular:

1. Review the methodology and assumptions utilized in calculating the City's D.C.s and policies; and
2. Provide input on recommendations dealing with the proposed D.C. by-law.

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 study and Council consideration of the by-law.

Table 1-1
Schedule of Key D.C. Process Dates

Process Steps	Dates
1. Project initiation meetings with City staff	July 12 & 19, 2018
2. Data collection, staff interviews, preparation of D.C. calculations	July 2018 - March 2019
3. Preparation of draft D.C. background study and review of draft findings with staff, the Strategy Committee, and the Consultation Committee.	February 2019 - March 2019
4. D.C. background study and proposed D.C. by-law available to public	March 28, 2019
5. Statutory notice of Public Meeting advertisement placed in newspaper(s)	April 22, 2019
6. Public Meeting of Committee of the Whole	May 13, 2019
7. Council considers adoption of D.C. background study and passage of by-law (by-law effective date July 1, 2019)	May 27, 2019
8. Newspaper notice given of by-law passage	June 14, 2019
9. Last day for by-law appeal	July 8, 2019
10. Municipality makes available D.C. pamphlet	by 60 days after in force date

Chapter 2
City of Burlington Current D.C. Policy

2. City of Burlington Current D.C. Policy

2.1 By-law Enactment

On June 9, 2014, the City passed By-law 46-2014 under the D.C.A, 1997. The by-law came into effect on July 1, 2014 and imposes uniform City-wide D.C.s by service for all permissible municipal services.

2.2 Services Covered

The following services are included under By-law 46-2014:

- Transportation;
- Storm Drainage;
- Studies;
- Parks and Recreation;
- Library;
- Transit; and
- Fire.

The by-law provides for mandatory annual indexing of the charges on April 1st of each year. Table 2-1 provides the charges currently in effect, for residential and non-residential development types, as well as the breakdown of the charges by service.

2.3 Timing of D.C. Calculation and Payment

D.C.s are due and payable in full to the City on the date the first building permit approving the construction of a foundation is issued for any land, buildings, or structures affected by the applicable D.C. The By-law also allows the City to enter into alternative payment agreements with owners.

Table 2-1
City of Burlington
Schedule of D.C.s (as of April 1, 2018)

Service	RESIDENTIAL						NON-RESIDENTIAL (per m² of GFA)	
	Single and Semi-Detached Dwelling	Apartments - 2 or more Bedrooms	Apartments - Bachelor or 1 Bedroom	Multiples - 3 or more Bedrooms	Multiples - 1 or 2 Bedrooms	Special Care/Special Need	Retail	Non-Retail
Transportation	$ 5,993	$ 2,978	$ 2,211	$ 4,315	$ 3,416	$ 2,010	$ 118.69	$ 72.80
Storm Drainage	$ 558	$ 277	$ 206	$ 402	$ 318	$ 188	$ 3.27	$ 3.27
Fire Protection	$ 58	$ 29	$ 22	$ 42	$ 33	$ 20	$ 0.85	$ 0.85
Transit	$ 192	$ 95	$ 71	$ 138	$ 109	$ 64	$ 2.77	$ 2.77
Parks & Recreation	$ 2,079	$ 1,033	$ 767	$ 1,497	$ 1,185	$ 698	$ 0.99	$ 0.99
Library	$ 115	$ 57	$ 42	$ 83	$ 65	$ 39	$ 0.06	$ 0.06
Studies	$ 57	$ 29	$ 21	$ 42	$ 33	$ 20	$ 0.84	$ 0.84
TOTAL	**$ 9,054**	**$ 4,498**	**$ 3,340**	**$ 6,518**	**$ 5,160**	**$ 3,038**	**$ 127.46**	**$ 81.57**

2.4 Redevelopment Credit

The by-law provides for D.C. credits for residential and non-residential redevelopments for structures to be demolished or converted from one principal use to another. The credit for demolition of residential buildings or structures requires that a building permit have been issued within five years from the date the demolition permit was issued. The amount of the credit provided cannot exceed the total development charge that would otherwise be payable.

2.5 Exemptions

The Municipality's existing D.C. by-law includes statutory exemptions from payment of D.C.s with respect to:

- Industrial additions of up to and including 50% of the existing gross floor area (G.F.A.) of the building – for industrial additions which exceed 50% of the existing G.F.A., only the portion of the addition in excess of 50% is subject to D.C.s;
- Land used for Municipal or Board of Education purposes; and
- Residential development that results in only the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (as specified by O.Reg. 82/98).

The D.C. by-law also provides non-statutory exemptions from payment of D.C.s with respect to:

- Hospitals, excluding any portion of the lands, buildings, or structures occupied by a tenant of the hospital;
- A place of worship;
- A conservation authority, unless such buildings or structures are used primarily for recreation purposes, and which the conservation authority charges admission and/or fees, or any retail purposes;
- Seasonal structures;
- Agricultural uses; and
- Temporary venues.

In addition, a reduction is provided to non-residential development with floor area greater than the area of the property as follows:

- For the portion of the total floor area that is greater than the area of the lot or block, the non-residential D.C.s shall not apply. (s.24)

Chapter 3
Anticipated Development in the City of Burlington

3. Anticipated Development in the City of Burlington

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 City of Burlington will be required to provide services, over a 10-year (early-2019 to early-2029) and longer term (early-2019 to mid-2031) time horizon.

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

The D.C. growth forecast has been derived by Watson & Associates Economists Ltd. It is important to note that the City of Burlington's population in the 2016 Census tracked higher than forecasted in the Halton Region June 2011 Best Planning Estimates (B.P.E.'s). Halton Region and City of Burlington Official Plan growth forecast for the year 2031 are based on the B.P.E.'s, and are considered to be too low given the results of the 2016 Census, as well as recent residential development activity. Based on our review of recent development trends it has been determined that the Halton Region 2011 B.P.E. housing forecast to 2031 is appropriate for the purposes of this development charges background study report. In compiling the growth forecast, the following information sources were consulted to help assess the residential and non-residential development potential for the City of Burlington over the forecast period, including:

- City of Burlington 2014 Development Charge Background Study, Watson & Associates Economists Ltd., May 13, 2014;

- Region of Halton 2017 Development Charges Background Study for Water, Wastewater, Roads & General Services Development Charges (Draft), Watson & Associates Economists Ltd., November 30, 2016;
- Discussions with City planning staff regarding anticipated short and long-term development trends for Burlington;
- Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2011-2031, Regional Municipality of Halton, June 2011;
- Historical residential and non-residential building permit data over the 2008 to 2017 period;
- Population, housing and employment data from 2006, 2011 and 2016 Census; and
- Residential and non-residential supply opportunities as provided by the City of Burlington;

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 City 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 City's permanent population is anticipated to reach approximately 192,430 by early-2029 and 193,400 by mid-2031, resulting in an increase of 6,520 and 7,490 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 3.6%.

Figure 3-1
Population and Household Forecast Model

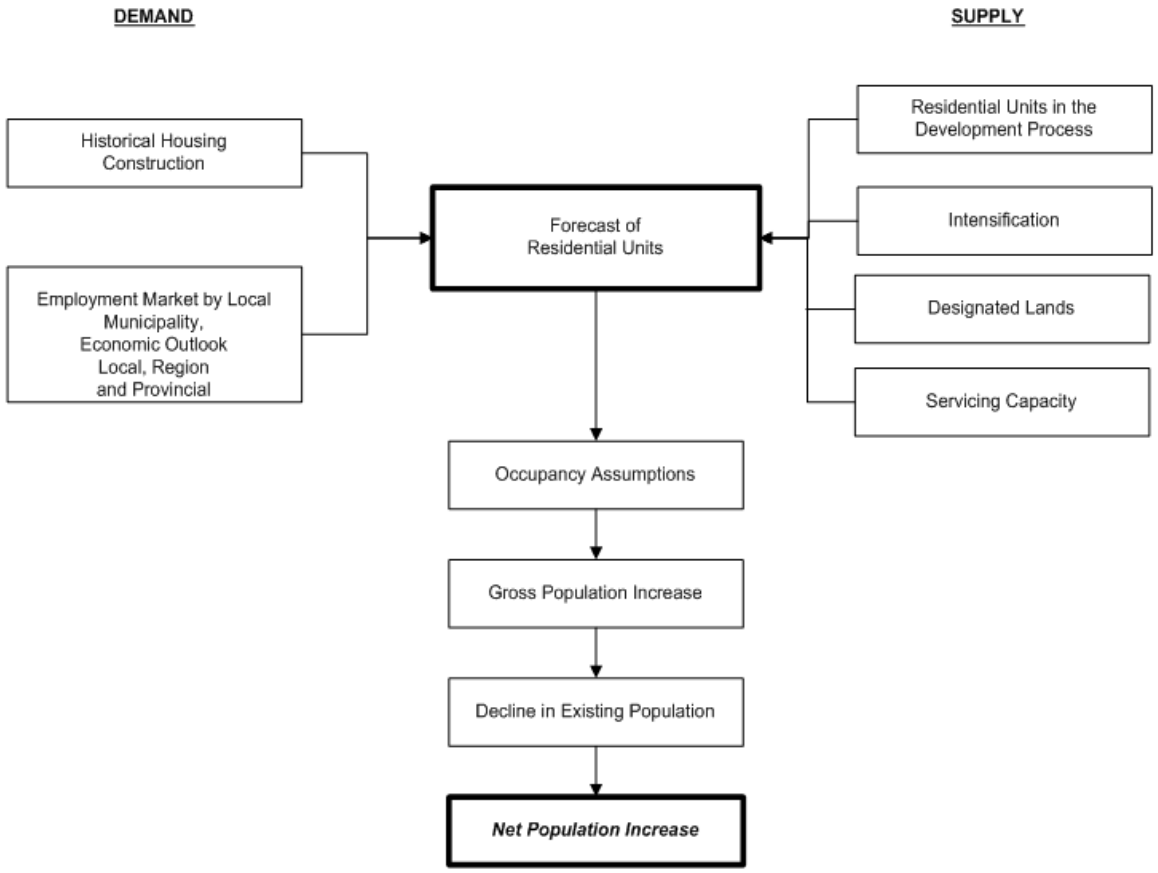


Table 3-1
City of Burlington
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units						Person Per Unit (PPU): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other[4]	Total Households	Equivalent Institutional Households	
Historical	*Mid 2011*	182,100	175,779	2,289	173,490	39,189	13,702	15,819	69	68,779	2,081	2.556
	Mid 2016	189,900	183,314	3,189	180,125	39,855	14,085	17,270	165	71,375	2,899	2.568
Forecast	*Early 2019*	192,600	185,911	3,244	182,667	40,104	14,211	19,207	165	73,687	2,949	2.523
	Early 2029	199,400	192,429	3,360	189,069	40,338	15,310	23,764	165	79,577	3,055	2.418
	Mid 2031	200,400	193,401	3,364	190,037	40,361	15,426	24,620	165	80,572	3,058	2.400
Incremental	**Mid 2011 - Mid 2016**	**7,800**	**7,535**	**900**	**6,635**	**666**	**383**	**1,451**	**96**	**2,596**	**818**	
	Mid 2016 - Early 2019	**2,700**	**2,597**	**55**	**2,542**	**249**	**126**	**1,937**	**0**	**2,312**	**50**	
	Early 2019 - Early 2029	**6,800**	**6,518**	**116**	**6,402**	**234**	**1,100**	**4,557**	**0**	**5,890**	**106**	
	Early 2019 - Mid 2031	**7,800**	**7,490**	**120**	**7,370**	**256**	**1,216**	**5,413**	**0**	**6,885**	**109**	

Source: Watson & Associates Economists Ltd., 2019.

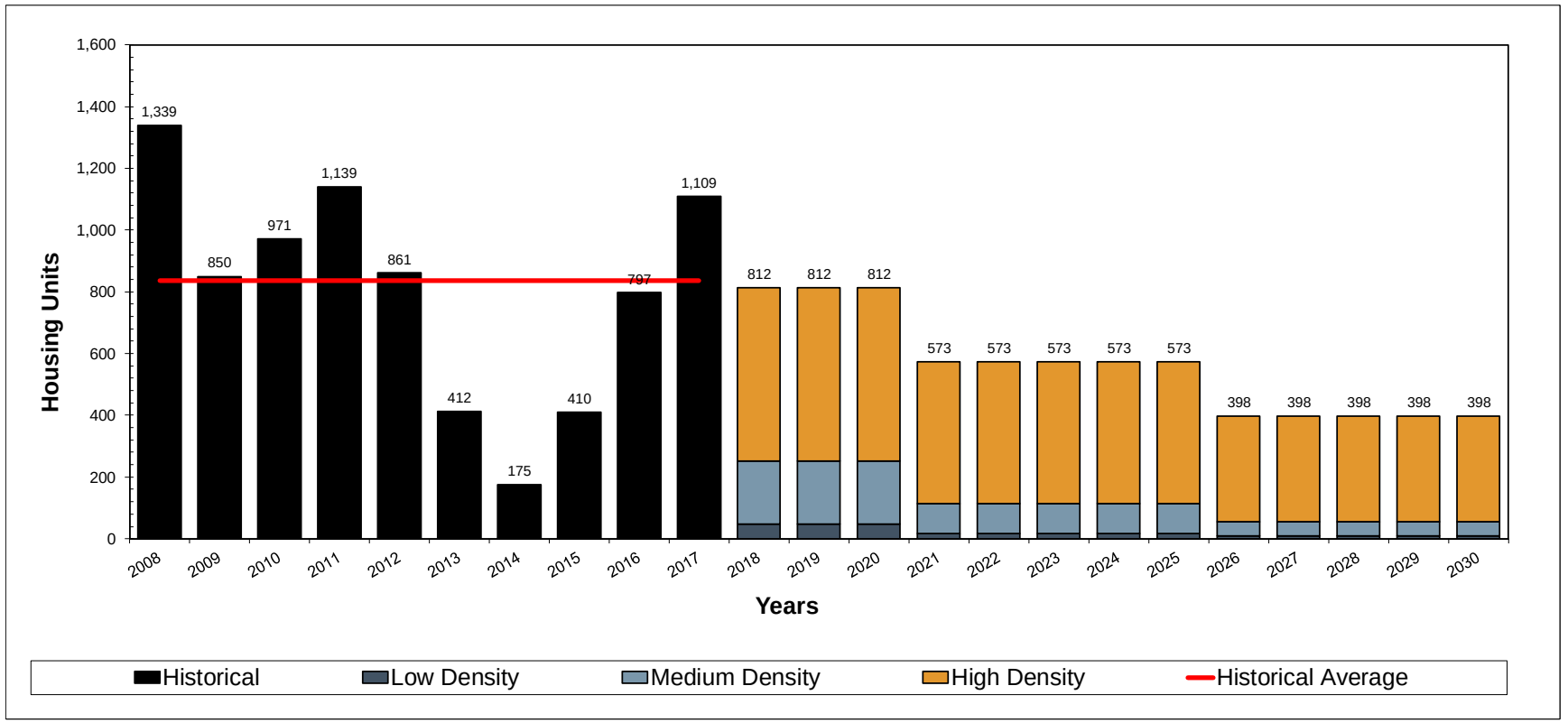
[1] Census Undercount estimated at approximately 3.6%. Note: Population Including the Undercount has been rounded

[2] Includes townhomes and apartments in duplexes.

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

[4] Other households defined by Statistics Canada as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g., a store or a church) or occasionally to another residential structure (e.g., an apartment building). Other households also includes mobile homes and other movable dwellings.

Figure 3-2
City of Burlington
Annual Housing Forecast



Source: Historical housing activity derived from Statistics Canada building permit data for the City of Burlington, 2008 to 2017.
[1] Growth Forecast represents calendar year.

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

    - The unit mix for the City was derived from a detailed review of historical development activity (as per Schedule 5) and discussions with City staff regarding anticipated development trends for the City.
    - Based on the above indicators, the 2019 to 2031 household growth forecast is comprised of a unit mix of 4% low density (single detached and semi-detached), 18% medium density (multiples) and 78% high density (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, police, stormwater, water and wastewater services can utilize a longer planning period.

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

    - The number of housing units to be constructed in the City of Burlington during the short- and long-term periods is presented on Figure 3-2. Over the 2019 to 2031 forecast period, the City is anticipated to average approximately 574 new permanent units per year.
    - The institutional population[1] is anticipated to grow by 120 persons between 2019 to 2031.
    - Population in new units is derived from Schedules 3, 4, and 5, which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit (P.P.U.) by dwelling type for new units.
    - Schedules 6 summarizes the P.P.U. for the new housing units by age and type of dwelling based on a 2016 custom Census data. The 15-year average P.P.U.s by dwelling type are as follows:

[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.

- Low density: 3.421
- Medium density: 2.305
- High density[1]: 1.576

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

    - Existing households for early-2019 are based on the 2016 Census households, plus estimated residential units constructed between mid-2016 and 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 2031 forecast period is approximately 4,840.

5. Employment (Appendix A, Schedules 8a, 8b, 9 and 10)

    - 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.
    - 2016 employment data[2] (place of work) for the City of Burlington is outlined in Schedule 8a. The 2016 employment base is comprised of the following sectors:
        - 440 primary (<1%);
        - 8,165 work at home employment (9%);
        - 24,853 industrial (28%);
        - 37,098 commercial/population related (43%); and
        - 16,265 institutional (20%).
    - The 2019 employment by usual place of work, including work at home, is estimated at 89,690. An additional 8,790 employees have been identified

[1] Includes bachelor, 1-bedroom and 2 or more bedroom apartments
[2] 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset.

for the City in 2019 that have no fixed place of work (N.F.P.O.W.).[1] The 2019 employment base, including N.F.P.O.W., totals approximately 98,490.

- Total employment, including work at home and N.F.P.O.W., for the City of Burlington is anticipated to reach approximately 107,780 by early-2029 and 109,640 by mid-2031. This represents an employment increase of 9,290 for the 10-year forecast period and 11,150 for the longer term (2019 to 2031) forecast period.
- Schedule 10b, Appendix A, summarizes the employment forecast, excluding work at home employment and N.F.P.O.W. employment, which is the basis for the D.C. employment forecast. The impact on municipal services from work at home employees has already been included in the population forecast. The need for municipal services related to N.F.P.O.W. employees has largely been included in the employment forecast by usual place of work (i.e. employment and gross floor area generated from N.F.P.O.W. construction employment). Furthermore, since these employees have no fixed work address, they cannot be captured in the non-residential gross floor area (G.F.A.) calculation.
- Total employment for the City of Burlington (excluding work at home and N.F.P.O.W. employment) is anticipated to reach approximately 88,890 by early-2029 and 90,410 by mid-2031. This represents an employment increase of 7,490 and 9,000 over the 10-year and longer term (2019 to 2031) forecast periods, respectively.

7. Non-Residential Square Foot (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:
        - 800 sq.ft. per employee for industrial;
        - 400 sq.ft. per employee for commercial/population-related; and
        - 400 sq.ft. per employee for institutional employment.

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

- The City-wide incremental Gross Floor Area (G.F.A.) increase is anticipated to be 3.67 million sq.ft. over the 10-year forecast period and 4.41 million sq.ft. over the 2019 to 2031 forecast period. It is noted that institutional gross floor area has been downwardly adjusted to account for institutional development associated with special care facilities.
- In terms of percentage growth, the 2019 to 2031 incremental G.F.A. forecast by sector is broken down as follows:
    - industrial – 41%;
    - commercial/population-related – 52%; and
    - institutional – 7%.

Chapter 4
Approach to the Calculation of the Charge

4. Approach to the Calculation of the Charge

4.1 Introduction

This chapter addresses the requirements of s.s.5(1) of the D.C.A., 1997 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 City.

A number of these services are defined in s.s.2(4) of the D.C.A., 1997 as being ineligible for inclusion in D.C.s. These are shown as "ineligible" on Table 4-1. In addition, two ineligible costs defined in s.s.5(3) of the D.C.A. are "computer equipment" and "rolling stock with an estimated useful life of [less than] seven years..." In addition, local roads are covered separately under subdivision agreements and related means (as are other local services). Services which are potentially eligible for inclusion in the City's D.C.s are indicated with a "Yes."

4.3 Increase in 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, s.s.5(1)3, which requires that municipal 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 D.C. under the Act

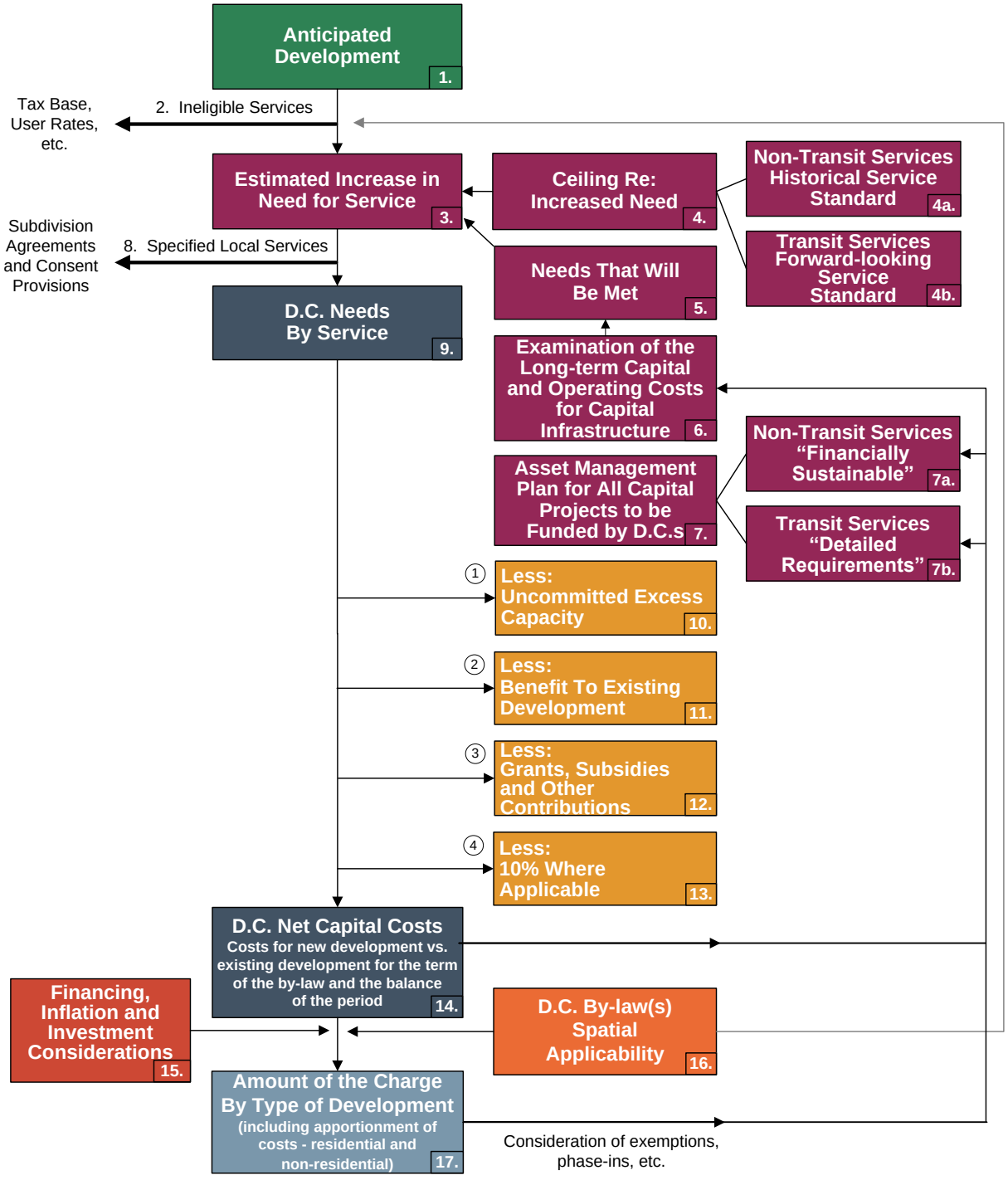


Table 4-1
Categories of Municipal Services
To Be Addressed as Part of the Calculation

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
1. Services Related to a Highway	Yes	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	Yes	2.1 Transit vehicles[1] & facilities	100
	Yes	2.2 Other transit infrastructure	100
	Yes	2.3 Municipal parking spaces - indoor	90
	Yes	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
3. Stormwater Drainage and Control Services	Yes	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.	Ineligible	5.1 Acquisition of land for parks, woodlots and E.S.A.s	0
	Yes	5.2 Development of area municipal parks	90

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

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
Parks and Open Space)	Yes	5.3 Development of district parks	90
	Yes	5.4 Development of municipal-wide parks	90
	n/a	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
	Yes	7.2 Library vehicles[1]	90
	Yes	7.3 Library materials	90
8. Electrical Power Services	Ineligible	8.1 Electrical substations	0
	Ineligible	8.2 Electrical distribution system	0
	Ineligible	8.3 Electrical system rolling stock	0
9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	9.1 Cultural space (e.g. art galleries, museums and theatres)	0
	Ineligible	9.2 Tourism facilities and convention centres	0
10. Wastewater Services	n/a	10.1 Treatment plants	100
	n/a	10.2 Sewage trunks	100
	n/a	10.3 Local systems	0
	n/a	10.4 Vehicles and equipment[1]	100
11. Water Supply Services	n/a	11.1 Treatment plants	100
	n/a	11.2 Distribution systems	100
	n/a	11.3 Local systems	0
	n/a	11.4 Vehicles and equipment[1]	100
12. Waste Management Services	Ineligible	12.1 Landfill collection, transfer vehicles and equipment	0
	Ineligible		

[1]with 7+ year life time

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
	No No	12.2 Landfills and other disposal facilities 12.3 Waste diversion facilities 12.4 Waste diversion vehicles and equipment[1]	0 90 90
13. Police Services	n/a n/a n/a	13.1 Police detachments 13.2 Police rolling stock[1] 13.3 Small equipment and gear	100 100 100
14. Homes for the Aged	n/a n/a	14.1 Homes for the aged space 14.2 Vehicles[1]	90 90
15. Child Care	n/a n/a	15.1 Child care space 15.2 Vehicles[1]	90 90
16. Health	n/a n/a	16.1 Health department space 16.2 Health department vehicles[1]	90 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
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

[1]with 7+ year life time

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

[1]with a 7+ year life time
[2]same percentage as service component to which it pertains

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

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 City's general policy guidelines on D.C. and local service funding is detailed in Appendix E to this report.

4.5 Capital Forecast

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

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

The capital costs include:

- costs to acquire land or an interest therein (including a leasehold interest);
- costs to improve land;
- costs to acquire, lease, construct or improve buildings and structures;
- 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;
- interest on money borrowed to pay for the above-referenced costs;
- costs to undertake studies in connection with the above-referenced matters; and
- costs of the D.C. background study.

In order for an increase in need for service to be included in the D.C. calculation, municipal council must indicate "...that it intends to ensure that such an increase in need will be met" (s.s.5(1)3). This can be done if the increase in service forms part of a Council-approved Official Plan, capital forecast or similar expression of the intention of

Council (O.Reg. 82/98 s.3). The capital program contained herein reflects the City's approved and proposed capital budgets and master servicing/needs studies.

4.6 Treatment of Credits

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

No development charge credit obligations have been included in the D.C. calculation contained herein.

4.7 Eligible Debt and Committed Excess Capacity

Section 66 of the D.C.A., 1997 states that for the purposes of developing a D.C. by-law, a debt incurred with respect to an eligible service may be included as a capital cost, subject to any limitations or reductions in the Act. Similarly, s.18 of O.Reg. 82/98 indicates that debt with respect to an ineligible service may be included as a capital cost, subject to several restrictions.

In order for such costs to be eligible, two conditions must apply. First, they must have funded excess capacity which is able to meet service needs attributable to the anticipated development. Second, the excess capacity must be "committed," that is, either before or at the time it was created, Council must have expressed a clear intention that it would be paid for by D.C.s or other similar charges. For example, this may have been done as part of previous D.C. processes.

4.8 Existing Reserve Funds

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

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

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

The City's D.C. Reserve Funds balances, by service, are presented in Table 4-2 below. 2018 year-end reserve fund balances have been adjusted to account for D.C. exemptions over the 2014-2018 period, and funds borrowed from Storm Drainage Services to fund D.C. recoverable capital costs within Fire Protection Services. These balances have been applied against future spending requirements for all services.

Table 4-2
City of Burlington
Estimated D.C. Reserve Funds Balances (as at December 31, 2018)

Service	December 31, 2018 Balance	Reserve Fund Adjustment for Exemptions	Revised December 31, 2018 Balance
Transportation Services	$ 9,919,081	1,450,388	$ 11,369,469
Storm Drainage Services	$ 3,927,890	65,393	$ 3,993,283
Fire Services	$ (49,713)	16,919	$ (32,794)
Transit Services	$ 1,317,620	55,154	$ 1,372,774
Parks and Recreation Services	$ 1,257,227	21,899	$ 1,279,126
Library Services	$ 57,467	1,216	$ 58,683
Development-Related Studies	$ 117,563	16,699	$ 134,262
Total	**$ 16,547,135**	**$ 1,627,669**	**$ 18,174,804**

4.9 Deductions

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

- the level of service ceiling;
- uncommitted excess capacity;

- benefit to existing development;
- anticipated grants, subsidies and other contributions; and
- a 10% reduction for certain services.

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

4.9.1 Reduction Required by Level of Service Ceiling

This is designed to ensure that the increase in need, for non-transit services, included in 4.2 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 City over the 10-year period immediately preceding the preparation of the background study…" O.Reg. 82.98 (s.4) goes further to indicate that, "…both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service."

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

With respect to transit services, the D.C.A requires that the estimate for the increase in the need cannot exceed the planned level of service over the 10-year period immediately following the preparation of the background study. The planned level of service for transit must not include a portion of the service that is intended to benefit anticipated development after the 10-year period immediately following the preparation of the background study or excess capacity at the end of the 10-year period immediately following the preparation of the background study.

Moreover, for transit services, the background study, must also include:

a) an assessment of ridership forecasts for all modes of transit services proposed to be funded by the D.C. over the 10-year period immediately following the preparation of the background study, categorized by development types, and

whether the forecasted ridership will be from existing or planned development; and

b) an assessment of the ridership capacity for all modes of transit services proposed to be funded by the D.C. over the 10-year period immediately following the preparation of the background study.

For non-transit services, the average service level calculation sheets for each service component in the D.C. calculation are set out in Appendix B. The requirements for transit services are included in Chapter 5.

4.9.2 Reduction for Uncommitted Excess Capacity

Paragraph 5 of s.s.5(1) requires a deduction from the increase in the need for service attributable to the anticipated development that can be met using the City's "excess capacity," other than excess capacity which is "committed" (discussed above in 4.6).

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

4.9.3 Reduction for Benefit to Existing Development

This step involves a further reduction to the need, by the extent to which such an increase in service would benefit existing development. The level of services cap in section 4.9.1 is related, but is not the identical requirement.

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 municipal-wide system basis. For example, facilities of the same type may provide different services (i.e. leisure pool vs. competitive pool), different programs (i.e. hockey vs. figure skating) and different time availability for the same service (i.e. leisure skating available on Wednesday in one arena and Thursday in another). As a result, residents will travel to different facilities to access the services they want at the times they wish to use them, and facility location generally does not correlate directly with residence location. Even where it does, displacing users from an existing facility to a new facility frees up capacity for use by others and generally results in only a very limited benefit to existing development. Further, where an increase in demand is not met for a number of years, a negative service impact to existing development is involved for a portion of the planning period.

4.9.4 Reduction for Anticipated Grants, Subsidies, and Other Contributions

This step involves reducing the capital costs necessary to provide the increased services by capital grants, subsidies and other contributions made or anticipated by Council and in accordance with various rules such as the attribution between the share related to new vs. existing development O.Reg. 82.98, s.6. Where grant programs do not allow funds to be applied to growth-related capital needs, the proceeds can be applied to the non-growth share of the project exclusively. Moreover, Gas Tax revenues are typically used to fund non-growth-related works or the non-growth share of D.C. projects, given that the contribution is not being made in respect of particular growth-related capital projects.

4.9.5 The 10% Reduction

Paragraph 8 of s.s.(1) of the D.C.A. requires that, "the capital costs must be reduced by 10 percent." This paragraph does not apply to water supply services, wastewater services, stormwater drainage and control services, services related to a highway, police, and fire protection services. The primary services that the 10% reduction does apply to include services such as parks and recreation and libraries. 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 cost sheets in Chapter 5

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 D.C. eligible costs for the D.C.s to be applied on a uniform basis. The required calculation process set out in s.5(1) paragraphs 2 to 8 in the D.C.A., 1997, and described in Chapter 4, was followed in determining D.C. eligible costs.

The nature of the capital projects and timing identified in this chapter reflects Council's current intention. However, over time, municipal 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 13-Year Capital Costs for Municipal-wide D.C. Calculation

This section evaluates the development-related capital requirements for select services over the 13-year planning period (2019-2031). 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 Transportation Services

The City's inventory of roadways is measured by lane-kilometres and is segregated by road classification and roadside environment. In total, the City has 740 lane-kilometres of arterial and collector roadways. In addition, Transportation Services are provided through the provisions of 9 multi-span bridges, 26 single-span bridges, 76 culverts, 639 kms of sidewalks, pathways, noise walls, and retaining walls, 44,200 streetlights, traffic signals, and signs, and 47,743 sq.ft. of public works facility space.

This total inventory of assets over the past 10-years results in an invested historical level of service of $13,732 per capita (including employees). When applied to the forecast population and employment growth to 2031 (i.e. 16,491 population and employees), a maximum D.C. eligible cost of approximately $226.5 million could be expected to meet the future increase in needs for service.

The increase in needs for Transportation Services, is based on the "Development Charge Background Study Final Transportation Report" prepared by Cole Engineering in March 2014, which underlies the City's 2014 D.C. Background Study. Further review of the City's 2014 D.C. Background Study, capital budget, and discussion with staff have identified future needs required to service new development in the City over the forecast period to 2031. The capital needs that have been identified, including bridge and culvert works, intersection improvements, road widenings, road construction and reconstruction, sidewalk and path projects, provisions for new traffic and pedestrian signals, provisions for upgrades to existing traffic signals, contributions to the Railway Crossing Reserve Fund (used to provide cashflow toward major crossings), integrated mobility plans, updates to the City's asset management plan, and various other provisions. In total, $139.3 million in gross capital costs have been identified. A total capital cost of $16.0 million has been deducted from the growth-related capital needs recognizing the benefit to existing development, based on the following assumptions.

Improvement Type	Allocation to Existing (B-to-E Deduction)	Remarks
Resurfacing existing road	100%	Same as 2014 D.C.B.S.
Reconstructing existing road (no lane expansion)	60-100% dependent on capacity increase, intersection improvements and usage by heavy trucks	Same as 2014 D.C.B.S.
Road widening	cost of repaving existing lanes (plus cost of rehabilitating existing structure if widening over a major structure)	Same as 2014 D.C.B.S.
New road alignments	0%	Same as 2014 D.C.B.S.
Alternative transportation – bicycle lane, multi-use paths, sidewalks		Same as 2014 D.C.B.S.
• widening existing road to accommodate bike lane	10%	
• sidewalk and multi-use paths in areas where development is not complete	10%	
• sidewalks and multi-use paths in areas of new development	0%	
• new sidewalks and multi-use paths in existing areas/Regional Roads	10%	
• new pedestrian crossing structures	10%	
Intersection improvements at existing intersections	5%	Same as 2014 D.C.B.S.
Traffic management	50%	Same as 2014 D.C.B.S.
Traffic signal / pedestrian crossing signal	5%	Same as 2014 D.C.B.S.
Priority measures for transit	50%	Same as 2014 D.C.B.S.
Freeway interchange	0%	Same as 2014 D.C.B.S.
Rail grade separation structures	based on delay savings and exposure index	Same as 2014 D.C.B.S.

Furthermore, $43.0 million has been deducted to account for anticipated contributions towards the capital costs. These include contributions from the Region of Halton for specific works with shared funding responsibilities and contributions from the Railway Crossing Reserve Fund. Moreover, the City's Transportation D.C. Reserve Fund balance of $11.4 million reflects funds already collected towards these needs. As a result, approximately $68.8 million in capital needs has been included in the D.C. calculation.

The City allocates the net growth-related capital costs for Transportation Services by development type for residential, retail and non-retail development. Maintaining the same methodology as in the City's 2014 D.C. Background Study. The D.C. recoverable capital costs have been allocated based on a combination incremental population and employment growth and anticipated traffic growth for future residential and non-residential development over the 2019-2031 forecast period. This resulted in the following allocations:

- Residential – 44%
- Non-Residential – 56%

Subsequently, the non-residential portion has been further subdivided into retail and non-retail uses on the basis of average vehicle km/employee, which produced the following allocation shares:

- Retail – 58%
- Non-Retail – 42%

The following table details the calculations used in the allocation of D.C. recoverable capital costs by development type.

	Population including Inst.	Employment excl. NFPOW/WAH
2019-2031 Population/Employment Growth	7,490	9,001
Allocation	45.00%	55.00%
Trip Rates	0.534	0.600
Trips	4,000	5,401
Allocation	43.00%	57.00%
Average Allocation	44.00%	56.00%

	Retail excl. NFPOW/WAH	Non-Retail excl. NFPOW/WAH
2019-2031 Employment Growth	4,272	4,729
Allocation	47.00%	53.00%
Trip Rates	0.977	0.391
Trips	4,174	1,849
Avg. Trip Length	6.5	10.6
Veh-km	27,134	19,600
Allocation	58.00%	42.00%
Average Allocation	32.48%	23.52%

5.2.2 Storm Drainage Services

Storm drainage needs provided in the increase in need for service reflect those in addition to the local service requirements necessary to maintain a consistent level of service for new development. In maintaining this level of service existing storm drainage infrastructure needs to be expanded or upgraded as development proceeds. The capital costs associated with urban growth include both the construction of new infrastructure, and upgrades to existing infrastructure to accommodate new upstream development. Typical components of the storm drainage system which require municipal funding include:

- storm sewer pipes to collect stormwater runoff;
- open watercourses to convey stormwater runoff through the City; and
- stormwater management facilities, such as stormwater ponds, to provide water quality and flood control.

For the purposes of establishing development charges, the required capital works projects are limited to those directly associated with the City's Creek systems and do not include local storm sewers and storm water quality control facilities to be provided pursuant to development agreements. The sizing of stormwater drainage works included in the City's development charges study is based on achieving flood protection to the Regulatory standards as set out in Provincial and Conservation Authority Regulations (Ontario Regulation 97/04 and Ontario Regulation 162/06).

For the purposes of establishing development charges, the required capital works projects related to storm drainage have been divided into two categories, i.e. erosion control and restoration works; and conveyance improvements. In total, the gross capital cost estimate for these needs over the 13-year planning period total $27.9 million.

Works that address historic flooding and erosion problems have been apportioned to the existing community based on an evaluation of the distribution of responsibility or cause of the problem and the benefits received from the mitigation works. In some watersheds, as part of new development, stormwater management facilities are constructed to control runoff rates from new development areas. However, these controls often do not prevent increased runoff volumes to an extent that will eliminate erosion potential. As urban development takes place within a watershed, the rainfall-runoff response is altered, resulting in increased rates of runoff and increased runoff volumes. This in turn results in erosion and channel enlargement within the receiving streams in the form of down cutting along the channel bed and widening of the channel banks. Therefore, it has been the City's strategy to undertake these remedial works after development has occurred and the areas requiring remedial works have been clearly exposed. The costs allocated to future development (i.e. growth) were set to equal the percentage of undeveloped land remaining within the respective watersheds.

In accordance with this rationale, approximately $15.3 million for benefits to existing development has been deduced from the gross capital cost estimates.

Moreover, approximately $30,000 for anticipated developer contributions related to the Roseland Creek Improvements (Harvester Road to CNR), and $4.0 million for current reserve fund balances available to fund the D.C. recoverable costs have been deducted. In total, the net D.C. eligible costs for inclusion in the calculation of the charge is approximately $8.6 million.

The allocation of costs between residential and non-residential development was evaluated on a project-by-project basis, based on the proportion of contributory drainage area or development benefiting from the proposed works. This method is appropriate because it recognizes the impacts or contribution that the different land uses have on the storm drainage system.

Infrastructure Costs Covered in the D.C. Calculation – Transportation Services

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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 44%	Retail Share 32%	Non-Retail Share 24%
BRIDGE/GRADE SEPARATION/CULVER PROJECTS												
RD-RA-776	King Road (Future South Service Road to North Service Road)	2025	1,000,000	-		1,000,000	-	250,000	750,000	330,000	243,600	176,400
RD-RA-776	King Road (Future South Service Road to North Service Road)	2028	17,280,000	-		17,280,000	-	7,361,280	9,918,720	4,364,237	3,221,600	2,332,883
RD-RA-1116	Burloak Drive - Grade Separation at C.N.R.	2020	7,500,000	-		7,500,000	-	7,500,000	-	-	-	-
RD-RA-1116	Burloak Drive - Grade Separation at C.N.R.	2021	3,750,000	-		3,750,000	-	3,750,000	-	-	-	-
RD-RA-1116	Burloak Drive - Grade Separation at C.N.R.	2022	3,750,000	-		3,750,000	-	3,750,000	-	-	-	-
RD-RA-769	Mainway Grade Separation	2029	500,000	-		500,000	120,000		380,000	167,200	123,424	89,376
RD-RA-769	Mainway Grade Separation	2031	25,000,000	-		25,000,000	6,000,000	4,404,333	14,595,667	6,422,093	4,740,673	3,432,901
INTERSECTION IMPROVEMENT PROJECTS												
RD-RA-167	Appleby Line at Harvester Road Intersection Improvements & Widening	2021	1,160,000	-		1,160,000	58,000	551,000	551,000	242,440	178,965	129,595
RD-RA-167	Appleby Line at Harvester Road Intersection Improvements & Widening	2022	8,652,600	-		8,652,600	432,630	4,109,985	4,109,985	1,808,393	1,334,923	966,668
RD-RA-763	Harvester Road at Guelph Line Intersection Improvements & Widening	2023	2,020,000	-		2,020,000	101,000	959,500	959,500	422,180	311,646	225,674
RD-RA-184	Harvester Road at Walker's Line Intersection Improvements & Widening	2028	5,800,000	-		5,800,000	290,000	2,755,000	2,755,000	1,212,200	894,824	647,976
RD-RA-1487	North Service Road at Walker's Line Ultimate Improvements	2028	5,400,000	-		5,400,000	270,000	-	5,130,000	2,257,200	1,666,224	1,206,576
RD-RA-1918	Walker's Line at Dundas Street Geometric Improvements (City's Share)	2028	600,000	-		600,000	30,000	-	570,000	250,800	185,136	134,064
WIDENING PROJECTS												
RD-RA-1304	Waterdown Rd Bridge Widening at Hwy 403	2028	9,000,000	-		9,000,000	33,120	7,158,600	1,808,280	795,643	587,329	425,307
RD-RA-1250	Harvester Road Reconstruction & Widening (Appleby Line to Century Drive) - Land Acquisition	2019	500,000	-		500,000	25,000		475,000	209,000	154,280	111,720
RD-RA-1250	Harvester Road Reconstruction & Widening (Appleby Line to Century Drive)	2030	626,500	-		626,500	31,325		595,175	261,877	193,313	139,985
RD-RA-1250	Harvester Road Reconstruction & Widening (Appleby Line to Century Drive)	2031	1,984,200	-		1,984,200	99,343		1,884,857	829,337	612,202	443,318
RD-RA-1113	Harvester Road Widening (Guelph Line to Walkers Line)	2029	6,185,500	-		6,185,500	309,275		5,876,225	2,585,539	1,908,598	1,382,088
RD-RA-1622	Harvester Rd Widening (Walker's Line-Appleby Line)	2030	6,000,000	-		6,000,000	900,000		5,100,000	2,244,000	1,656,480	1,199,520
RD-RA-787	Walker's Line Widening (Highway 407 to No. 1 Sideroad)	2022	1,770,000	-		1,770,000	1,416,000		354,000	155,760	114,979	83,261
RECONSTRUCTION PROJECTS												
RD-RA-1108	King Road Rehabilitation (King Forest Court to Top of Escarpment)	2025	3,700,000	-		3,700,000	3,330,000		370,000	162,800	120,176	87,024
NEW CONSTRUCTION PROJECTS												
RD-RA-964	South Service Road Construction (Aldershot GO Station to Development Boundary)	2023	1,250,000	-		1,250,000	-		1,250,000	550,000	406,000	294,000
ALTERNATIVE TRANSPORTATION PROJECTS (Sidewalk and Path)												
RD-SW-1920	Britannia Road Path (Willowgrove Trail to Guelph Line)	2030	100,000	-		100,000	90,000	-	10,000	4,400	3,248	2,352

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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 44%	Retail Share 32%	Non-Retail Share 24%
RD-RA-681	Cumberland Avenue Pedestrian - Railway Underpass	2025	4,400,000	-		4,400,000	220,000	500,000	3,680,000	1,619,200	1,195,264	865,536
RD-SW-1285	Eastport Drive Cycling Improvements	2029	200,000	-		200,000	20,000		180,000	79,200	58,464	42,336
RD-SW-1285	Eastport Drive Cycling Improvements	2030	800,000	-		800,000	80,000		720,000	316,800	233,856	169,344
RD-SW-261	Harvester Road Sidewalk (Walkers Line to Appleby Line, North Side)	2021	2,540,000	-		2,540,000	254,000		2,286,000	1,005,840	742,493	537,667
RD-SW-262	Highway 407 Bridge - Sidewalk	2029	400,000	-		400,000	40,000		360,000	158,400	116,928	84,672
RD-SW-1879	Harvester Road Sidewalk (South Service Road to Century Drive)	2020	1,080,000	-		1,080,000	108,000		972,000	427,680	315,706	228,614
SIGNAL PROVISIONS (Traffic and Pedestrian Signals)												
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2019	150,000	-		150,000	7,500		142,500	62,700	46,284	33,516
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2020	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2021	150,000	-		150,000	7,500		142,500	62,700	46,284	33,516
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2022	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2023	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2024	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2025	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2026	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2027	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
RD-TS-772	New Traffic Signal/Intersection Pedestrian Signal	2028	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
	New Traffic Signal/Intersection Pedestrian Signal	2029	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
	New Traffic Signal/Intersection Pedestrian Signal	2030	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
	New Traffic Signal/Intersection Pedestrian Signal	2031	100,000	-		100,000	5,000		95,000	41,800	30,856	22,344
TRAFFIC MANAGEMENT PROVISIONS												
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2019	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2020	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2021	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2022	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2023	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2024	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2025	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2026	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2027	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
RD-TS-287	Traffic Signals - Minor Improvements/Modifications	2028	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
	Traffic Signals - Minor Improvements/Modifications	2029	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
	Traffic Signals - Minor Improvements/Modifications	2030	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
	Traffic Signals - Minor Improvements/Modifications	2031	70,000	-		70,000	35,000		35,000	15,400	11,368	8,232
CONTRIBUTION TO RAILWAY CROSSING RESERVE FUND												
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2019	2,400,000	-		2,400,000	-		2,400,000	1,056,000	779,520	564,480
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2020	2,100,000	-		2,100,000	-		2,100,000	924,000	682,080	493,920
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2021	1,750,000	-		1,750,000	-		1,750,000	770,000	568,400	411,600
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2022	1,050,000	-		1,050,000	-		1,050,000	462,000	341,040	246,960
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2023	500,000	-		500,000	-		500,000	220,000	162,400	117,600
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2024	500,000	-		500,000	-		500,000	220,000	162,400	117,600
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2025	500,000	-		500,000	-		500,000	220,000	162,400	117,600

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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 44%	Retail Share 32%	Non-Retail Share 24%
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2026	500,000	-		500,000	-		500,000	220,000	162,400	117,600
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2027	500,000	-		500,000	-		500,000	220,000	162,400	117,600
RD-RA-481	Contribution to Railway Crossing Reserve Fund	2028	500,000	-		500,000	-		500,000	220,000	162,400	117,600
	Contribution to Railway Crossing Reserve Fund	2029	500,000	-		500,000	-		500,000	220,000	162,400	117,600
	Contribution to Railway Crossing Reserve Fund	2030	500,000	-		500,000	-		500,000	220,000	162,400	117,600
	Contribution to Railway Crossing Reserve Fund	2031	500,000	-		500,000	-		500,000	220,000	162,400	117,600
OTHER PROVISIONS												
RD-RL-325	Planning, Design and Survey of Future Year Projects	2020	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
RD-RL-325	Planning, Design and Survey of Future Year Projects	2022	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
RD-RL-325	Planning, Design and Survey of Future Year Projects	2024	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
RD-RL-325	Planning, Design and Survey of Future Year Projects	2026	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
RD-RL-325	Planning, Design and Survey of Future Year Projects	2028	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
	Planning, Design and Survey of Future Year Projects	2030	100,000	-		100,000	50,000	-	50,000	22,000	16,240	11,760
RD-RL-326	Design Services (External)	2020	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
RD-RL-326	Design Services (External)	2022	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
RD-RL-326	Design Services (External)	2024	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
RD-RL-326	Design Services (External)	2026	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
RD-RL-326	Design Services (External)	2028	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
	Design Services (External)	2030	40,000	-		40,000	30,000	-	10,000	4,400	3,248	2,352
RD-RL-1596	Digital Ortho Imagery	2019	36,000	-		36,000	18,000		18,000	7,920	5,846	4,234
RD-RL-1596	Digital Ortho Imagery	2021	36,000	-		36,000	18,000		18,000	7,920	5,846	4,234
RD-RL-1596	Digital Ortho Imagery	2023	36,000	-		36,000	18,000		18,000	7,920	5,846	4,234
RD-RL-1596	Digital Ortho Imagery	2025	36,000	-		36,000	18,000		18,000	7,920	5,846	4,234
RD-RL-1596	Digital Ortho Imagery	2027	36,000	-		36,000	18,000		18,000	7,920	5,846	4,234
	Digital Ortho Imagery	2029	36,000			36,000	18,000		18,000	7,920	5,846	4,234
	Digital Ortho Imagery	2031	36,000			36,000	18,000		18,000	7,920	5,846	4,234
RD-RA-199	Miscellaneous Land	2019	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2020	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2021	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2022	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2023	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2024	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2025	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2026	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2027	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RA-199	Miscellaneous Land	2028	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
	Miscellaneous Land	2029	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
	Miscellaneous Land	2030	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
	Miscellaneous Land	2031	20,000	-		20,000	10,000	-	10,000	4,400	3,248	2,352
RD-RL-1443	Integrated Mobility Plan	2025	400,000	-		400,000	240,000		160,000	70,400	51,968	37,632
RD-RL-1443	Integrated Mobility Plan	2030	400,000	-		400,000	240,000		160,000	70,400	51,968	37,632
RD-RL-1917	Asset Managemen Plan - Legislated Update	2020	50,000	-		50,000	30,000		20,000	8,800	6,496	4,704
	Reserve Fund Adjustment								(11,369,469)	(5,002,566)	(3,692,804)	(2,674,099)
	Total		**139,260,800**	**-**	**-**	**139,260,800**	**16,028,693**	**43,049,698**	**68,812,940**	**30,277,694**	**22,350,443**	**16,184,803**

Infrastructure Costs Covered in the D.C. Calculation – Storm Drainage Services

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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
SM-SD-512	Appleby Creek Erosion Control (Detailed Design and Partial Construction) (South Service Road to Lake Ontario)	2020	804,303	-		804,303	324,250		480,053	384,042	96,011
SM-SD-512	Appleby Creek Erosion Control (Detailed Design and Partial Construction) (South Service Road to Lake Ontario)	2021	2,263,992	-		2,263,992	1,018,897		1,245,095	996,076	249,019
SM-SD-512	Appleby Creek Erosion Control (Detailed Design and Partial Construction) (South Service Road to Lake Ontario)	2022	3,416,705	-		3,416,705	1,271,103		2,145,602	1,716,482	429,120
SM-SD-512	Appleby Creek Erosion Control (Detailed Design and Partial Construction) (South Service Road to Lake Ontario)	2023	859,063	-		859,063	300,672		558,391	446,713	111,678
SM-SD-512	Appleby Creek Erosion Control (Detailed Design and Partial Construction) (South Service Road to Lake Ontario)	2024	857,142	-		857,142	300,000		557,142	445,714	111,428
SM-SD-290	Bronte Creek Tributary Stormwater Management (City's Share for Detailed Design)	2028	200,000	-		200,000	-		200,000	60,000	140,000
SM-SD-290	Bronte Creek Tributary Stormwater Management	2030	545,000	-		545,000	-		545,000	163,500	381,500
SM-SD-1504	Falcon Creek Erosion Control (Class EA and Detailed Design) (CNR to Willowbrook Road)	2026	240,000	-		240,000	120,000		120,000	-	120,000
SM-SD-1504	Falcon Creek Erosion Control (Class EA and Detailed Design) (CNR to Willowbrook Road)	2027	900,000	-		900,000	450,000		450,000	-	450,000
SM-SD-1264	Falcon Creek Erosion Control (Class EA and Detailed Design) (North Shore Boulevard to Hamilton Harbour)	2022	250,000	-		250,000	200,000		50,000	50,000	-
SM-SD-1264	Falcon Creek Erosion Control (Class EA and Detailed Design) (North Shore Boulevard to Hamilton Harbour)	2023	400,000	-		400,000	320,000		80,000	80,000	-
SM-SD-295	Grindstone Creek Erosion Control (Class EA) (Waterdown Rd to Main Branch in Hidden Valley Park)	2019	290,000	-		290,000	145,000		145,000	116,000	29,000
SM-SD-295	Grindstone Creek Erosion Control (Class EA) (Waterdown Rd to Main Branch in Hidden Valley Park)	2020	250,000	-		250,000	125,000		125,000	100,000	25,000
SM-SD-295	Grindstone Creek Erosion Control (Class EA) (Waterdown Rd to Main Branch in Hidden Valley Park)	2021	1,920,000	-		1,920,000	960,000		960,000	768,000	192,000
SM-SD-685	Minor Erosion Control Projects	2019	153,834	-		153,834	76,917		76,917	38,459	38,459
SM-SD-685	Minor Erosion Control Projects	2020	200,000	-		200,000	100,000		100,000	50,000	50,000

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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
SM-SD-685	Minor Erosion Control Projects	2021	350,000	-		350,000	175,000		175,000	87,500	87,500
SM-SD-685	Minor Erosion Control Projects	2022	300,000	-		300,000	150,000		150,000	75,000	75,000
SM-SD-685	Minor Erosion Control Projects	2023	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2024	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2025	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2026	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2027	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2028	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2029	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2030	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-685	Minor Erosion Control Projects	2031	200,000	-		200,000	100,000		100,000	50,000	50,000
SM-SD-1074	Roseland Creek Erosion Control (Mayfair Place to Lakeshore Road), Phase 4	2019	1,300,000	-		1,300,000	1,040,000		260,000	130,000	130,000
SM-SM-941	Roseland Creek Flood Control Facility North of QEW (City's Share)	2022	668,914	-		668,914	334,457		334,457	200,674	133,783
SM-SM-941	Roseland Creek Flood Control Facility North of QEW (City's Share)	2023	1,160,760	-		1,160,760	580,380		580,380	348,228	232,152
SM-SM-941	Roseland Creek Flood Control Facility North of QEW (City's Share)	2025	2,000,000	-		2,000,000	1,000,000		1,000,000	600,000	400,000
SM-SD-537	Roseland Creek Improvements (Class EA and Detailed Design) (Harvester Road to CNR)	2023	150,000	-		150,000	120,000		30,000	18,000	12,000
		2024	1,005,527	-		1,005,527	804,422	29,561	171,544	102,927	68,618
SM-SD-1262	Shoreacres Creek Erosion Control (Class EA and Detailed Design) (Mainway to North Service Road)	2022	200,000	-		200,000	190,000		10,000	8,000	2,000
		2023	440,000	-		440,000	418,000		22,000	17,600	4,400
SM-SM-1623	Tuck Creek Culverts Upgrade and Channelization (North of New Street to Spruce Ave)	2019	2,500,000	-		2,500,000	1,750,000		750,000	750,000	-
SM-SD-1846	Shoreacres Creek Erosion Control (Class EA) (Harvester Road to New Street)	2025	200,000	-		200,000	170,000		30,000	16,500	13,500
		2026	155,882	-		155,882	132,500		23,382	12,860	10,522
		2028	1,152,824	-		1,152,824	979,903		172,921	95,107	77,815
		2029	791,294	-		791,294	672,600		118,694	65,282	53,412
RD-RL-1596	Digital Ortho Imagery	2019	14,000	-		14,000	7,000		7,000	4,200	2,800
RD-RL-1596	Digital Ortho Imagery	2021	14,000	-		14,000	7,000		7,000	4,200	2,800
RD-RL-1596	Digital Ortho Imagery	2023	14,000	-		14,000	7,000	-	7,000	4,200	2,800
RD-RL-1596	Digital Ortho Imagery	2027	14,000	-		14,000	7,000	-	7,000	4,200	2,800

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2018$)	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
RD-RL-1596	Digital Ortho Imagery	2029	14,000	-		14,000	7,000	-	7,000	4,200	2,800
RD-RL-1596	Digital Ortho Imagery	2031	14,000	-		14,000	7,000	-	7,000	4,200	2,800
RD-RL-326	Design Services (External)	2020	20,000	-		20,000	15,000		5,000	2,500	2,500
RD-RL-326	Design Services (External)	2022	20,000	-		20,000	15,000		5,000	2,500	2,500
RD-RL-326	Design Services (External)	2024	20,000	-		20,000	15,000		5,000	2,500	2,500
RD-RL-326	Design Services (External)	2026	20,000	-		20,000	15,000		5,000	2,500	2,500
RD-RL-326	Design Services (External)	2028	20,000	-		20,000	15,000		5,000	2,500	2,500
RD-RL-326	Design Services (External)	2030	20,000	-		20,000	15,000		5,000	2,500	2,500
	Reserve Fund Adjustment								(3,993,283)	(2,664,446)	(1,328,838)
	Total		**27,929,240**	**-**	**-**	**27,929,240**	**15,261,100**	**29,561**	**8,645,296**	**5,768,417**	**2,876,879**

5.3 Service Levels and 10-Year Capital Costs for Municipal-wide D.C. Calculation

This section evaluates the development-related capital requirements for select services over the 10-year planning period (2019-2028). 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.

5.3.1 Fire Services

There are currently eight fire stations located in the City, with a total size of 83,040 square feet (sq.ft.). The City also maintains 38 vehicles and 172 fully equipped firefighters. In total, the average level of service provided through the capital infrastructure has been $304 per capita (including employees). In aggregate, the maximum D.C. eligible amount that could be included in the calculation of the charge for Fire Services is approximately $4.3 million.

Based on discussions with City staff, the anticipated capital needs include a Fire Master Plan and Community Risk Assessment, as well as the repayment of internal borrowing for prior D.C. eligible capital costs for Fire Services from the Storm Drainage D.C. Reserve Fund.

The gross capital costs for the Fire Master Plan and Community Risk Assessment total $150,000, and $90,000 has been deducted to reflect the benefit to the existing community. Incorporating a negative reserve fund balance of approximately $33,000, and the aforementioned repayment to the Storm Drainage D.C. Reserve Fund, a total of approximately $1.1 million in growth-related needs have been included in the calculation of the D.C.

The allocation of net growth-related costs for Fire Services between residential and non-residential development is 47% residential and 53% non-residential, based on forecast incremental population and employment growth.

5.3.2 Parks and Recreation Services

The City currently maintains approximately 612 hectares of developed parkland and 771,034 sq.ft. of indoor facility space maintained for the provision of parks and

recreation services. The City's level of service over the historical 10-year period averaged $3,473 per capita. In total, the maximum D.C. eligible amount for Parks and Recreation Services over the 10-year forecast period is approximately $22.6 million based on the established level of service.

The 10-year capital needs for Parks and Recreation Services to accommodate growth has a total gross capital cost of approximately $12.8 million. These capital needs include development of City View Park and work on multi-use trails throughout the City, arising from the City's 2014 D.C. Background Study and active transportation plan.

Approximately $99,000 has been deduced as a post period benefit for the multi-use trial portion of the program. This reflects the underlying assumptions of the City's Transportation Master Plan to increase the pedestrian and cycling mode share from 6% to 10% by 2031. Recognizing the limitations under the Development Charges Act to forecast these services needs over a 10-year forecast period, as opposed to the longer term forecast period to 2031, a portion of these costs have been deferred for inclusion in future D.C. bylaws.

Moreover, $4.0 million has been deducted as a benefit to existing development. This maintains the City's 2014 D.C. Background Study assumptions of 5% benefit to existing for the new City View Park development, as well as a deduction for the multi-use trail needs reflecting the demands in from the existing community as the City increases the mode share for pedestrian and cycling trips.

Approximately, $11,000 has been deducted for anticipated contributions attributable to the Multi-Use Trail, Hydro Corridor - Mainway to Upper Middle new development, and $865,000 for the statutory 10% deduction. A further $1.3 million has been deducted in recognition of D.Cs. already collected towards these needs, as represented by the uncommitted balance in the D.C. reserve fund.

The resulting net growth-related capital costs for inclusion in the calculation totals approximately $6.5 million.

As the predominant users of Parks and Recreation Services tend to be residents of the City, the forecast growth-related costs have been allocated 95% to residential and 5% to non-residential.

5.3.3 Library Services

The City Library Services are provided seven libraries, which provide a total 104,925 sq.ft. of library space. In addition, the City currently has an inventory of 409,913 library collection items, one vehicle, and six distinct software tools.

The average level of service over the past 10 years was approximately $398 per capita. Based on the application of this level of service to the incremental forecast growth, the City would be eligible to collect approximately $2.6 million from D.C.s for library services over the forecast period.

The capital needs required to accommodate growth have a total gross capital cost estimate of $615,000. These costs include a provision to maintain the current level of service regarding library collection materials and a southeast service library expansion study. Approximately $3,000 has been deducted for post period benefit related to the expansion study. Deductions of $10,000 for the benefits to existing development arising from the study have also been applied. The statutory 10% deduction required for library services totals approximately $60,000. Lastly, the Library Services D.C. Reserve Fund balance is currently in a positive position of approximately $59,000, which has been deducted from the calculation of the charge in recognition of these funds having already been collected.

As such, approximately $483,000 of growth-related costs have been included in the calculation of the charge for the 10-year forecast period.

As with Parks and Recreation Services, the predominant users of Library Services are residents of the Municipality, and therefore, the forecast growth-related costs have been allocated 95% to residential and 5% to non-residential.

5.3.4 Administration Studies

The D.C.A. permits the inclusion of studies undertaken to facilitate the completion of the City's capital works program and to support the preparation of future D.C. background studies. The City has made provisions for the inclusion of two future D.C. background studies in the calculation of the charge.

The cost of these projects totals $250,000 over the 10-year forecast period. A deduction of approximately $134,000 has been applied for existing reserve fund

balances. A further deduction of $25,000 is provided for the 10% statutory deduction requirements. As such, the net growth-related capital costs included in the calculation of the charge totals approximately $91,000. These costs have been allocated 47% residential and 53% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

Infrastructure Costs Covered in the D.C. Calculation – Fire Services

Prj .No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2018$)	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 47%	Non-Residential Share 53%
FB-FI-1914	Fire Master Plan and Community Risk Assessment	2019	150,000	-		150,000	90,000		60,000	28,200	31,800
				-		-	-		-	-	-
	Principal owing to the Storm Drainage DC Reserve Fund								959,727	451,071	508,655
	Reserve Fund Adjustment								32,794	15,413	17,381
	Total		**150,000**	**0**	**0**	**150,000**	**90,000**	**0**	**1,052,521**	**494,685**	**557,836**

Infrastructure Costs Covered in the D.C. Calculation – Parks and Recreation Services

Prj. No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2018$)	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%
PO-PD-115	City View Park	2019	1,564,000	-		1,564,000	78,200		1,485,800	148,580	1,337,220	1,270,359	66,861
PO-PD-115	City View Park	2020	1,110,000	-		1,110,000	55,500		1,054,500	105,450	949,050	901,598	47,453
PO-PD-115	City View Park	2021	2,070,000	-		2,070,000	103,500		1,966,500	196,650	1,769,850	1,681,358	88,493
PO-PD-115	City View Park	2022	1,018,100	-		1,018,100	50,905		967,195	96,720	870,476	826,952	43,524
PO-PD-115	City View Park	2023	1,109,100	-		1,109,100	55,455		1,053,645	105,365	948,281	900,866	47,414
PO-PD-115	City View Park	2024	1,000,000	-		1,000,000	50,000		950,000	95,000	855,000	812,250	42,750
PO-PR-877	Multi-Use Trail	2024	100,000	2,000		98,000	74,000		24,000	2,400	21,600	20,520	1,080
PO-PR-877	Multi-Use Trail	2025	909,100	18,182		890,918	672,734		218,184	21,818	196,366	186,547	9,818
PO-PR-877	Multi-Use Trail	2026	909,100	18,182		890,918	672,734		218,184	21,818	196,366	186,547	9,818
PO-PR-877	Multi-Use Trail	2027	909,100	18,182		890,918	672,734		218,184	21,818	196,366	186,547	9,818
PO-PR-877	Multi-Use Trail	2028	909,100	18,182		890,918	672,734		218,184	21,818	196,366	186,547	9,818
PO-PD-1648	Multi-Use Trail - Alton Village	2020	200,000	4,000		196,000	148,000		48,000	4,800	43,200	41,040	2,160
PO-PD-1733	Multi-Use Trail - Sheldon Creek	2020	25,000	500		24,500	18,500		6,000	600	5,400	5,130	270
PO-PD-1733	Multi-Use Trail - Sheldon Creek	2021	200,000	4,000		196,000	148,000		48,000	4,800	43,200	41,040	2,160
PO-PD-1647	Multi-Use Trail, Hydro Corridor - Mainway to Upper Middle	2019	194,625	3,893		190,733	144,023	10,710	36,000	3,600	32,400	30,780	1,620
PO-PD-1647	Multi-Use Trail, Hydro Corridor - Mainway to Upper Middle	2022	350,000	7,000		343,000	259,000		84,000	8,400	75,600	71,820	3,780
PO-PD-1872	Multi-Use Trail, Sutton to Bronte Creek Trail	2019	20,000	400		19,600	14,800		4,800	480	4,320	4,104	216
PO-PD-1872	Multi-Use Trail, Sutton to Bronte Creek Trail	2020	200,000	4,000		196,000	148,000		48,000	4,800	43,200	41,040	2,160
	Reserve Fund Adjustment								(1,279,126)		(1,279,126)	(1,215,170)	(63,956)
	Total		**12,797,225**	**98,521**	**-**	**12,698,705**	**4,038,819**	**10,710**	**7,370,050**	**864,918**	**6,505,132**	**6,179,875**	**325,257**

Infrastructure Costs Covered in the D.C. Calculation – Library Services

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2028	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%
LB-LI-1588	Additional Collection Materials	2019-2028	585,000	-		585,000	-		585,000	58,500	526,500	500,175	26,325
NEW PROJECTS													
LB-LI-1916	Library (New Appleby) - Southeast Service Expansion Study	2020	30,000	2,571		27,429	10,185		17,244	1,724	15,519	14,743	776
	Reserve Fund Adjustment								(58,683)		(58,683)	(55,749)	(2,934)
	Total		**615,000**	**2,571**	**-**	**612,429**	**10,185**	**-**	**543,561**	**60,224**	**483,336**	**459,170**	**24,167**

Infrastructure Costs Covered in the D.C. Calculation – Administration Studies

Prj.No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2018$)	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 47%	Non-Residential Share 53%
RD-RL-327	Development Charges Study	2020	125,000	-		125,000	-		125,000	12,500	112,500	52,875	59,625
RD-RL-327	Development Charges Study	2025	125,000	-		125,000	-		125,000	12,500	112,500	52,875	59,625
	Reserve Fund Adjustment								(134,262)		(134,262)	(63,103)	(71,159)
	Total		**250,000**	**-**	**-**	**250,000**	**-**	**-**	**115,738**	**25,000**	**90,738**	**42,647**	**48,091**

5.4 Transit Services

5.4.1 Transit Services

The provincial government enacted changes to the D.C.A, which came into effect January 2016, with direct implications for Ontario municipalities fund future transit services. These changes, as summarized in Chapter 4, include the removal of the mandatory 10% capital cost reduction for transit services, prescribed criteria to estimate the planned level of service for transit over the forecast period, and the requirement to include in the D.C. Background Study a forecast of transit ridership and a detailed asset management plan.

The planned level of service underlying the increase in needs for Transit Services arise from the City's Transportation Master Plan and 10-year capital forecast. The "Development Charge Background Study Final Transportation Report" prepared by Cole Engineering in March 2014, which underlies the City's 2014 D.C. Background Study, identifies the modeled assumptions for transit services over the long-term as part of the broader transportation needs of the City. The following excepts explain the modeling assumptions for transit underlying the increase in need for service.

"3.2.1. Travel Demand Model

The future travel demand on the transportation system in Burlington was developed using the City's PM Peak Hour Travel Demand Model, which is an adaptation of the Halton Region Travel Demand Model. The Model was originally calibrated for Halton's 2011 Transportation Master Plan with a calibration year of 2006.

For the City of Burlington, the Model was refined with a focus on Burlington. The calibration year of 2006 was retained as the 2006 Transportation Tomorrow Survey (TTS), which is the primary source of input parameters for the model, is still the most recent data available. An update to the TTS was conducted in 2011/2012 but the data is still in the review and validation phase. A re-calibration of the Model by the Region is anticipated in a year or two.

3.2.3. Travel Demand Scenarios

The Halton TMP targeted a high level of growth in alternative modes, i.e. transit, walking and cycling and travel demand management measures, that resulted in lower

dependency on the automobile. Overall, the Region's 2031 transit share target for the City of Burlington is 20% (including Burlington Transit and GO Transit). Currently, transit share in Burlington is 6%, including both local transit and GO Transit usage.

For the DC study, two demand scenarios were assessed using the Burlington Model. Firstly, the trend demand scenario was considered. That is, the proportion of travel by transit, walking, cycling, carpooling, etc, remains the same as it is under current conditions (6% transit, 7% walk and cycle). A second scenario, where there is a moderate 9% shift in travel demand from the single-occupant vehicle to transit, walking, cycling and other travel demand measures (+6% to transit, +3% to walking/cycling/ TDM). A third scenario which meets the targets of the Region of an overall 20% transit share in Burlington was also investigated. However, as the City's TMP is not completed and a strategy on how this major shift in transit demand can be achieved has not yet been developed, therefore the trend and moderate growth scenarios were assessed for the purpose of this transportation background study."

Based on the foregoing planned level of service criteria, the City developed the following transit plan by corridor to 2031 to achieve the intended transit mode share of 12% by 2031. It is further noted that the City's projections updated the 2016 transit mode share based on updated TTS data. The following summarizes the total peak vehicle requirements and ridership to achieve this planned level of service target.

The City's 10-year capital forecast includes the additional fleet, facilities and equipment required to meet the anticipated increase in needs over the 2019-2029 forecast period. The capital program include 26 additional conventional transit vehicles, 8 additional handi-van vehicles, transit operations facility expansions, stop and shelter improvements, bus stop location upgrades, and a transit 5 year business plan update. The gross capital costs for the program total $42.7 million. Based on the following table, which allocates the benefits of the cost of service over the longer-term forecast period to 2031, and between existing and future development based on project mode share assumptions underlying the capital needs,

- A deduction of $433,000 has been provided for oversizing within the future operations facility expansions to accommodate fleet requirements to 2031.
- A deduction of $35.5 million has been applied to reflect the benefit to existing development arising from the change in transit mode share for chose for existing trips.

- Approximately $4.3 million has been deducted reflecting the growth-related share of anticipated grant funding for transit under the PTIF program, as per the City's capital forecast.
- Approximately $1.4 million has been deducted for existing reserve fund balances.

This results in a total D.C. eligible capital cost for inclusion in the calculation of the charge of $1.13 million. These costs have been allocated 47% residential and 53% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

	City 2016 PM Peak Period	Interpolated 2019 PM Peak Period	Interpolated 2029 PM Peak Period	City 2031 PM Peak Period
Mode Share				
Auto	93%	90%	80%	78%
Transit	2%	3%	10%	12%
Pedestrian/Cycling	5%	6%	9%	10%
Total Trips (all modes) - PM Peak Period	54,992	57,252	64,416	66,229
Transit				
Transit Trips	1,169	1,720	6,137	7,947
Existing Trips	1,169	1,720	5,454	6,870
New Development Trips	-	-	682	1,077
Total Growth in Trips			4,417	6,227
New Development Share of Incremental Trips			15%	17%
Proportionate Share of Ridership (existing)			7,569,130	9,304,734
Proportionate Share of Ridership (new development)			947,092	1,458,903
Total Ridership	1,900,094	2,696,224	8,516,223	10,763,637

Table 5-4-1
City of Burlington
2031 Transit Corridor Projections to 2031

Route	Corridors	(A) Length (KM)			(B) Scheduled Average Speed			(C = A/B*60) Travel Time (mins)			(D = C*.10) Minimum Layover (mins)			(E) Peak Headway (mins)			(F = C+D/E, rounded up) Peak Vehicle Requirement		
		2018	2031	Difference	2018	2031	Difference	2018	2031	Difference	2018	2031	Difference	2018	2031	Difference	2018	2031	Difference
101	Plains	31.13	30.08	- 1.05	28.6	30.0	1.4	65.31	60.16	- 5.15	6.53	6.02	- 0.51	15	6	- 9	5	12	7
21	Fairview	13.68	13.68	-	27.5	25.0	- 2.5	29.85	32.83	2.98	2.98	3.28	0.30	30	6	- 24	2	7	5
2	Brant	19.34	24.24	4.90	24.4	25.0	0.6	47.56	58.18	10.62	4.76	5.82	1.06	30	10	- 20	2	7	5
3	Guelph	32.78	25.80	- 6.98	21.1	25.0	3.9	93.21	61.92	- 31.29	9.32	6.19	- 3.13	30	10	- 20	4	7	3
10	New	24.75	24.75	-	25.0	25.0	-	59.40	59.40	-	5.94	5.94	-	20	8	- 12	4	9	5
11	Appleby	24.47	23.30	- 1.17	29.4	25.0	- 4.4	49.94	55.92	5.98	4.99	5.59	0.60	30	12	- 18	2	6	4
20	Burloak-Lakeshore	10.58	10.58	-	33.7	25.0	- 8.7	18.84	25.39	6.56	1.88	2.54	0.66	30	12	- 18	1	3	2
12	Upper Middle	23.77	23.77	-	30.5	25.0	- 5.5	46.76	57.05	10.29	4.68	5.70	1.03	30	8	- 22	2	8	6
25	Walkers	21.34	21.34	-	29.0	25.0	- 4.0	44.15	51.22	7.06	4.42	5.12	0.71	30	10	- 20	2	6	4
	Dundas		14.73	14.73		25.0	25.0		35.35	35.35		3.54	3.54		15	15		3	3
80	Harvester	14.82	14.82	-	25.5	20.0	- 5.5	34.87	44.46	9.59	3.49	4.45	0.96	30	10	- 20	2	5	3
1	Plains	25.60	30.08	4.48	25.6	25.0	- 0.6	60.00	72.19	12.19	6.00	7.22	1.22	30	20	- 10	3	4	1
5	North Shore	15.73	15.73	-	24.8	25.0	0.2	38.06	37.75	- 0.30	3.81	3.78	- 0.03	30	30	-	2	2	-
6	Mainway-Headon	21.52	21.52	-	26.5	25.0	- 1.5	48.72	51.65	2.92	4.87	5.16	0.29	30	20	- 10	2	3	1
48	Millcroft	6.96	6.96	-	22.6	25.0	2.4	18.48	16.70	- 1.77	1.85	1.67	- 0.18	30	30	-	1	1	-
81	North Service	33.51	33.51	-	29.5	30.0	0.5	68.16	67.02	- 1.14	6.82	6.70	- 0.11	30	20	- 10	3	4	1
87	Tyandaga Park	18.47	18.47	-	25.0	25.0	-	44.33	44.33	-	4.43	4.43	-	60	60	-	1	1	-
	Total/Average	338.45	353.36	14.91	26.8	25.3	- 1.5	47.98	48.91	0.94	4.80	4.89	0.09	30.31	16.88	- 11.65	38	88	50

Route	Corridors	(G) Ridership		
		2018	2031	Difference
	Total	**1,950,000**	**10,763,637**	**8,813,637**

Infrastructure Costs Covered in the D.C. Calculation – Transit Services

Prj.No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2018$)	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 47%	Non-Residential Share 53%
FB-BD-1863	Burlington Transit Operations Expansion	2021	650,000	13,000		637,000	539,500	71,175	26,325	12,373	13,952
FB-BD-1863	Burlington Transit Operations Expansion	2022	10,500,000	210,000		10,290,000	8,715,000	1,149,750	425,250	199,868	225,383
FB-BD-1863	Burlington Transit Operations Expansion	2023	10,500,000	210,000		10,290,000	8,715,000	1,149,750	425,250	199,868	225,383
VE-VN-1901	Transit 5 Year Business Plan Update	2023	250,000	-		250,000	207,500	31,025	11,475	5,393	6,082
RD-TR-1903	Stop and Shelter Improvements at Key City Locations	2020	500,000	-		500,000	415,000	62,050	22,950	10,787	12,164
RD-TR-1903	Stop and Shelter Improvements at Key City Locations	2021	500,000	-		500,000	415,000	62,050	22,950	10,787	12,164
RD-TR-1864	Fairview Street Bus Bays	2019	402,000	-		402,000	333,660		68,340	32,120	36,220
VE-VN-1503	Expansion Conventional Transit Vehicles	2019	1,901,745	-		1,901,745	1,578,448		323,297	151,949	171,347
VE-VN-1503	Expansion Conventional Transit Vehicles	2020	1,267,830	-		1,267,830	1,052,299	157,338	58,193	27,351	30,842
VE-VN-1503	Expansion Conventional Transit Vehicles	2021	1,267,830	-		1,267,830	1,052,299	157,338	58,193	27,351	30,842
VE-VN-1503	Expansion Conventional Transit Vehicles	2022	1,267,830	-		1,267,830	1,052,299	157,338	58,193	27,351	30,842
VE-VN-1503	Expansion Conventional Transit Vehicles	2023	1,267,830	-		1,267,830	1,052,299	157,338	58,193	27,351	30,842
VE-VN-1503	Expansion Conventional Transit Vehicles	2024	1,901,745	-		1,901,745	1,578,448	236,007	87,290	41,026	46,264
VE-VN-1503	Expansion Conventional Transit Vehicles	2025	1,901,745	-		1,901,745	1,578,448	236,007	87,290	41,026	46,264
VE-VN-1503	Expansion Conventional Transit Vehicles	2026	1,901,745	-		1,901,745	1,578,448	236,007	87,290	41,026	46,264
VE-VN-1503	Expansion Conventional Transit Vehicles	2027	1,901,745	-		1,901,745	1,578,448	236,007	87,290	41,026	46,264
VE-VN-1503	Expansion Conventional Transit Vehicles	2028	1,901,745	-		1,901,745	1,578,448	236,007	87,290	41,026	46,264
VE-VN-1502	Expansion Handi-Van Vehicles	2019	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2020	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2021	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2022	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2024	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2026	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2027	233,700	-		233,700	193,971		39,729	18,673	21,056
VE-VN-1502	Expansion Handi-Van Vehicles	2028	233,700	-		233,700	193,971		39,729	18,673	21,056

Prj.No 2019 Budget	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2018$)	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 47%	Non-Residential Share 53%
Projects from Roads & Related											
ALTERNATIVE TRANSPORTATION PROJECTS (Transit-Related Road Infrastructure)											
RD-TR-270	Bus Stop Locations Upgrades	2019	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2020	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2021	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2022	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2023	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2024	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2025	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2026	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2027	110,000	-		110,000	91,300		18,700	8,789	9,911
RD-TR-270	Bus Stop Locations Upgrades	2028	110,000	-		110,000	91,300		18,700	8,789	9,911
				-		-	-		-	-	-
				-		-	-		-	-	-
				-		-	-		-	-	-
	Reserve Fund Adjustment			-		-	-		(1,372,774)	(645,204)	(727,570)
	Total		**42,753,390**	**433,000**	**-**	**42,320,390**	**35,485,314**	**4,335,184**	**1,127,118**	**529,746**	**597,373**

Chapter 6
D.C. Calculation

6. D.C. Calculation

The calculation of the maximum D.C.s that could be imposed by Council have been undertaken using a cash-flow approach for the growth-related capital costs identified in Chapter 5. Table 6-1 presents the City-wide D.C. calculation for Transportation over the 13-year period, Table 6-2 presents the City-wide D.C. calculation for Storm Drainage over the 13-year period, and Table 6-3 presents the City-wide D.C. calculation for City-wide services over the 10-year planning horizon.

The calculation for residential development is generated on a per capita basis and is based upon six forms of housing types (single and semi-detached, apartments 2+ bedrooms, bachelor and 1-bedroom apartments, multiples 3+ bedrooms, multiples 1-2 bedrooms, and special care/special dwelling units). The non-residential development charge has been calculated on a per square metre of gross floor area basis for retail and non-retail development.

The cash-flow calculations of the maximum D.C.s s that could be imposed by Council have been undertaken to account for the timing of revenues and expenditures and the resultant financing needs. The cash-flow calculations have been undertaken for each forecast development type (i.e. residential, and non-residential) for all services. Cashflow calculations are provided for Transportation Services and Storm Drainage Services separately, with all other services provided in a single cashflow, reflecting the potential interim finance D.C. eligible costs between services. D.C. cash flow calculation tables are provided in Appendix C and have been undertaken to account for 3.0% earnings on D.C. reserve fund balances and 5.5% interest charged for reserve fund borrowing).

Table 6-4 summarizes the recommended schedule of charges, reflecting the maximum D.C.s by residential dwelling type and per sq.m. of G.F.A. for non-residential development.

Table 6-5 compares the City's existing charges to the charges proposed herein (Table 6-4), for a single detached residential dwelling unit and per sq.m. of G.F.A. for non-residential development. The calculated charges are $12,419 for a single detached residential dwelling unit, and $141.92 and $77.44 per sq.m. of retail and non-retail G.F.A, respectively. The residential charges for a single detached dwelling unit represent a 37% increase (+$3,365) over the current charges of $9,054. For non-

residential development, the proposed charges for retail development are 11% greater than the current charges of $127.46 per sq.m. (+$14.46/sq.m.), and the proposed charges for non-retail development are 5% lower than the current charges of $81.57 per sq.m. (-$4.13)/sq.m.).

Table 6-1
City-Wide Services D.C. Calculation
Cash Flow Calculation
2019-2031

SERVICE	2019$ D.C.-Eligible Cost			2019$ D.C.-Eligible Cost		
	Residential	Non-Residential				
		Retail	Non-Retail	SDU	Retail per m²	Non-Retail per m²
1. Transportation Services						
1.1 Capital Costs	$ 30,277,694	$ 22,350,443	$ 16,184,803			
1.2 Financing Costs	$ (73,265)	$ (54,374)	$ (38,566)			
	$ 30,204,428	$ 22,296,069	$ 16,146,237	$ 8,381	$ 131.64	$ 67.16
TOTAL	**$ 30,204,428**	**$ 22,296,069**	**$ 16,146,237**	**$ 8,381**	**$ 131.64**	**$ 67.16**
D.C.-Eligible Capital Cost	$ 30,204,428	$ 22,296,069	$ 16,146,237			
13 Year Gross Population/GFA Growth (sq.m.)	12,329	169,372	240,414			
Cost Per Capita/Non-Residential GFA (sq.m.)	**$ 2,449.87**	**$ 131.64**	**$ 67.16**			

By Residential Unit Type	P.P.U.	
Single and Semi-Detached Dwelling	3.421	$ 8,381
Apartments - 2 Bedrooms +	1.740	$ 4,263
Apartments - Bachelor and 1 Bedroom	1.282	$ 3,141
Multiples - 3 or More Bedrooms	2.463	$ 6,034
Multiples - 1 or 2 Bedrooms	1.950	$ 4,777
Special Care/Special Dwelling Units	1.100	$ 2,695

Table 6-2
City-Wide Services D.C. Calculation
Cash Flow Calculation
2019-2031

SERVICE	2019$ D.C.-Eligible Cost		2019$ D.C.-Eligible Cost	
	Residential	Non-Residential	SDU	per m²
2. Storm Drainage Services				
2.1 Capital Costs	$ 5,768,417	$ 2,876,879		
2.2 Financing Costs	$ (344,522)	$ (557,490)		
	$ 5,423,895	$ 2,319,389	$ 1,505	$ 5.66
TOTAL	**$ 5,423,895**	**$ 2,319,389**	**$ 1,505**	**$ 5.66**
D.C.-Eligible Capital Cost	$ 5,423,895	$ 2,319,389		
13 Year Gross Population/GFA Growth (sq.m.)	12,329	409,786		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$ 439.93**	**$ 5.66**		
By Residential Unit Type P.P.U.				
Single and Semi-Detached Dwelling 3.421	$ 1,505			
Apartments - 2 Bedrooms + 1.740	$ 765			
Apartments - Bachelor and 1 Bedroom 1.282	$ 564			
Multiples - 3 or More Bedrooms 2.463	$ 1,084			
Multiples - 1 or 2 Bedrooms 1.950	$ 858			
Special Care/Special Dwelling Units 1.100	$ 484			

Table 6-3
City-Wide Services D.C. Calculation
Cash Flow Calculation
2019-2028

SERVICE	2019$ D.C.-Eligible Cost		2019$ D.C.-Eligible Cost	
	Residential	Non-Residential	SDU	per m²
3. Fire Services				
3.1 Capital Costs	$ 494,685	$ 557,836		
	$ 494,685	$ 557,836	$ 163	$ 1.66
4. Transit Services				
4.1 Capital Costs	$ 529,746	$ 597,373		
	$ 529,746	$ 597,373	$ 174	$ 1.78
5. Parks and Recreation Services				
5.1 Capital Costs	$ 6,179,875	$ 325,257		
	$ 6,179,875	$ 325,257	$ 2,031	$ 0.97
6. Library Services				
6.1 Capital Costs	$ 459,170	$ 24,167		
	$ 459,170	$ 24,167	$ 151	$ 0.07
7. Development-Related Studies				
7.1 Capital Costs	$ 42,647	$ 48,091		
	$ 42,647	$ 48,091	$ 14	$ 0.14
TOTAL	**$ 7,706,122**	**$ 1,552,723**	**$ 2,533**	**$ 4.62**
Financing Costs	$ 165,355	$ 20,854		
D.C.-Eligible Capital Cost	$ 7,871,477	$ 1,573,577		
10 Year Gross Population/GFA Growth (sq.m.)	10,631	340,601		
Cost Per Capita/Non-Residential GFA (sq.m.)	**$ 740.43**	**$ 4.62**		
By Residential Unit Type P.P.U.				
Single and Semi-Detached Dwelling 3.421	$ 2,533			
Apartments - 2 Bedrooms + 1.740	$ 1,288			
Apartments - Bachelor and 1 Bedroom 1.282	$ 949			
Multiples - 3 or More Bedrooms 2.463	$ 1,824			
Multiples - 1 or 2 Bedrooms 1.950	$ 1,444			
Special Care/Special Dwelling Units 1.100	$ 814			

Table 6-4
Schedule of Calculated D.C.s

Service	RESIDENTIAL						NON-RESIDENTIAL (per m² of GFA)	
	Single and Semi-Detached Dwelling	Apartments - 2 or more Bedrooms	Apartments - Bachelor or 1 Bedroom	Multiples - 3 or more Bedrooms	Multiples - 1 or 2 Bedrooms	Special Care/Special Need	Retail	Non-Retail
Transportation	$ 8,381	$ 4,263	$ 3,141	$ 6,034	$ 4,777	$ 2,695	$ 131.64	$ 67.16
Storm Drainage	$ 1,505	$ 765	$ 564	$ 1,084	$ 858	$ 484	$ 5.66	$ 5.66
Fire	$ 163	$ 83	$ 61	$ 117	$ 93	$ 52	$ 1.66	$ 1.66
Transit	$ 174	$ 89	$ 65	$ 125	$ 99	$ 56	$ 1.78	$ 1.78
Parks & Recreation	$ 2,031	$ 1,033	$ 761	$ 1,462	$ 1,158	$ 653	$ 0.97	$ 0.97
Library	$ 151	$ 77	$ 57	$ 109	$ 86	$ 49	$ 0.07	$ 0.07
Studies	$ 14	$ 7	$ 5	$ 10	$ 8	$ 5	$ 0.14	$ 0.14
TOTAL	**$ 12,419**	**$ 6,317**	**$ 4,654**	**$ 8,941**	**$ 7,079**	**$ 3,994**	**$ 141.92**	**$ 77.44**

Table 6-5
Comparison of Current and Calculated D.C.s

Service	Residential (Single Detached)		Non-Residential (per sq.m.)			
			Retail		Non-Retail	
	Current	Calculated	Current	Calculated	Current	Calculated
Municipal Wide Services:						
Transportation Services	$ 5,993	$ 8,381	$ 118.69	$ 131.64	$ 72.80	$ 67.16
Storm Drainage Services	$ 558	$ 1,505	$ 3.27	$ 5.66	$ 3.27	$ 5.66
Fire Services	$ 58	$ 163	$ 0.85	$ 1.66	$ 0.85	$ 1.66
Transit Services	$ 192	$ 174	$ 2.77	$ 1.78	$ 2.77	$ 1.78
Parks and Recreation Services	$ 2,079	$ 2,031	$ 0.99	$ 0.97	$ 0.99	$ 0.97
Library Services	$ 115	$ 151	$ 0.06	$ 0.07	$ 0.06	$ 0.07
Development-Related Studies	$ 57	$ 14	$ 0.84	$ 0.14	$ 0.84	$ 0.14
Total Municipal Wide Services	**$ 9,054**	**$ 12,419**	**$ 127.46**	**$ 141.92**	**$ 81.57**	**$ 77.44**

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

7. D.C. Policy Recommendations and D.C. Policy Rules

7.1 Introduction

This chapter outlines the D.C. policy recommendations and by-law rules.

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

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

Paragraph 10 of subsection 5(1) goes on to state that the rules may provide for exemptions, phasing in and/or indexing of D.C.s.

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

7.2 D.C. By-law Structure

It is recommended that:

- the City uses a uniform municipal-wide D.C. calculation for all municipal services; and

- one municipal D.C. by-law be used for all services.

7.3 D.C. By-law Rules

The following sets out the recommended rules governing the calculation, payment and collection of D.C.s in accordance with subsection 6 of the D.C.A., 1997.

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

7.3.1 Payment in any Particular Case

In accordance with the D.C.A., 1997, s.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 Section 50(7) of the *Planning Act* applies;
d) the approval of a plan of subdivision under Section 51 of the *Planning Act*;
e) a consent under Section 53 of the *Planning Act*;
f) the approval of a description under Section 50 of the *Condominium Act*; or
g) the issuing of a building permit under the *Building Code Act* in relation to a building or structure.

As the D.C.A. requires the payment of the development charge at the issuance of the first building permits (i.e. foundation the City will develop a new policy to deal with "super structures", capturing the deferral of D.C. payments for both residential and non-residential developments to allow for deferral based on timing of super structures (e.g. towers) and not foundation building permit.

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 15 years. Costs allocated to non-residential uses will be assigned to retail

and non-retail uses based on the G.F.A. constructed. For greater clarity and consistency with the Region of Halton D.C. bylaw and the underlying growth forecast the definitions for "industrial" and "retail" development types have been refined in the proposed D.C. bylaw.

2. Costs allocated to residential and non-residential uses are based upon a number of conventions, as may be suited to each municipal circumstance. These are summarized in Chapter 5 herein.

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

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

- 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
- the G.F.A. of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. is payable.

The demolition credit is allowed only if the land was improved by occupied structures, if the demolition permit has not been revoked. Additionally, demolition credits for residential buildings or structures is allowed only if the demolition permit related to the site was issued less than 5 years prior to the issuance of a building permit.

No credit shall be given with respect to the redevelopment, conversions, demolition, or change of use of a building or structure or part thereof where the existing building or structure or part thereof would have been exempt from D.C.s in accordance with the active by-law. 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)

Statutory exemptions

- Industrial building additions of up to and including 50% of the existing G.F.A. (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions

which exceed 50% of the existing G.F.A., only the portion of the addition in excess of 50% is subject to D.C.s (s.4(3));
- Buildings or structures owned by and used for the purposes of any Municipality, local board or Board of Education (s.3); and
- Residential development that results in only the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in s.2 of O.Reg. 82/98).

Non-statutory exemptions

- A hospital, excluding any portion of the lands, buildings, or structures occupied by a tenant of the hospital;
- A place of worship;
- A conservation authority, unless such buildings or structures are used primarily for or in connection with (i) recreation purposes for which the conservation authority charges admission and/or fees, or (ii) any retail purposes;
- Seasonal structures;
- Agricultural uses;
- Temporary venues;
- Hospices;
- Facilities providing health and wellness services to senior citizens through programs administered by the Region of Halton or its affiliates; and
- A memorial home, clubhouse or athletic grounds of an Ontario branch of the Royal Canadian Legion, pursuant to paragraph 3 of section 3 of the Assessment Act, R.S.O. 1990, c. A.31.

With respect the exemption for agricultural use exemptions, in discussion with City staff and the Strategy Committee, the proposed definition is being refined to exclude marijuana production facilities and facilities for the breeding and grooming of household pets. Moreover a definition for a "marijuana production facilities" is being included in the proposed bylaw to mean "a building or structure connected to Regional water services or wastewater services that is used, designed or intended for growing, producing, testing, destroying, storing or distribution, excluding retail sales, of marijuana or cannabis authorized by a license issued by the federal Minister of Health pursuant to section 25 of the Marihuana for Medical Purposes Regulations, SOR/2013-119, under the Controlled Drugs and Substances Act, S.C. 1996, c.19".

Moreover, with respect to the non-statutory exemption for seasonal structures, the definition of a seasonal structure is proposed to be expanded to include “mobile homes unable to be occupied year-round.

Additional non-statutory exemptions have also been proposed based on discussions with the Consultation Committee, as identified above, for hospices, facilities providing health and wellness services to senior citizens, and facilities for the purposes of the Royal Canadian Legion.

7.3.5 Lot Coverage Relief

Where there is a non-residential development, the development charges otherwise payable shall be calculate4d in accordance with the following:

- For the portion of the total floor area of such development that is less than or equal to one (1.0) times the area of the lot or block, the non-residential development charges under the by-law apply; and
- For the portion of the total floor area of such development that is greater than one (1.0) times the area of the lot or block, non-residential development charges shall not apply.

7.3.6 Phase in Provision(s)

The proposed D.C. By-law will come into effect at the time of By-law passage, and no transition policy has been proposed.

7.3.7 Timing of Collection

The D.C.s for all services are payable upon issuance of a building permit for each dwelling unit, building, or structure, subject to early or late payment agreements entered into by the City and an owner under s.27 of the D.C.A., 1997.

7.3.8 Indexing

All D.C.s will be subject to mandatory indexing annually on April 1st of each year, in accordance with provisions under the D.C.A.

7.3.9 D.C. Spatial Applicability

The D.C.A. historically has provided the opportunity for a municipality to impose municipal-wide charges or area specific charges. Sections 2(7) and 2(8) of the D.C.A. provide that a D.C. by-law may apply to the entire municipality or only part of it and more than one D.C. by-law may apply to the same area. Amendments to the D.C.A. now require municipalities to consider the application of municipal-wide and area-specific D.C.s. s.10(2)(c.1) requires Council to consider the use of more than one D.C. by-law to reflect different needs from services in different areas. Most municipalities in Ontario have established uniform, municipal-wide D.C.s. This has been the City's approach in prior D.C. by-laws. When area-specific charges are used, it is generally to underpin master servicing and front-end financing arrangements for more localized capital costs.

The rationale for maintaining a City-wide D.C. approach is based, in part, on the following:

- The ten-year service level from all applicable services across the City can be included to establish an upper ceiling on the amount of funds which can be collected. If a D.C. by-law applied to only a part of the municipality, the level of service cannot exceed that which would be determined if the by-law applied to the whole municipality. As such, when applied to forecast growth within the specific area, it would establish an area specific level of service ceiling which could reduce the total revenue recoverable for the City, potentially resulting in D.C. revenue shortfalls and impacts on property taxes and user rates.
- City-wide D.C.s ensures a consistent approach to financing the entire cost associated with growth-related capital projects. For example, user rates and property taxes are required to finance the share of growth-related capital projects not recoverable by D.C.s and all associated operating costs. Therefore, the use of area specific D.C.s results in a share of growth-related capital costs being recovered from a specific area, with the remaining capital costs of the projects (i.e. non-D.C. recoverable share) and the associated operating costs with those new assets being recovered from uniform user rates and property taxes, applied to the entire City.
- Attempting to impose an area-specific D.C. potentially causes equity issues in transitioning from a City-wide approach to an area-specific approach. An area of a municipality that is less developed and becomes subject to an area specific

D.C. could face a significant increase in D.C. rates, as the municipality will not benefit from drawing on the pool of D.C. funding and may have contributed regional D.C.s to fund capital required to support development in other communities of the municipality. Whereas, another part of the municipality that has experienced significant growth which required substantial capital investments, benefitted from the capital investments being financed by municipal-wide D.C.s. The implementation of area specific development charges could result in varying D.C.s across the City, which may impact the ability to attract investment into parts of the community.

- Services are generally available across the City, used often by all residents and are not restricted to one specific geographic area. The use of a City-wide D.C. approach reflects these system-wide benefits of service and more closely aligns with the funding principles of service provision (e.g. uniform City-wide property tax rates, etc.).

Based on the foregoing and discussions with City staff, there is no apparent justification for the establishment of area-specific D.C.s at this time. The recommendation is to continue to apply City-wide D.C.s for all services.

7.4 Other D.C. By-law Provisions

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

It is recommended that the City's D.C. collections be contributed into seven (7) separate reserve funds, including: Transportation Services, Storm Drainage Services, Fire Services, Transit Services, Parks and Recreation Services, Library Services, and Administration Studies.

7.4.2 By-law In-force Date

The proposed by-law under D.C.A., 1997 will come into force on the date of by-law passage.

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

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

7.5 Other Recommendations

It is recommended that Council:

"Approve the capital project listing set out in Chapter 5 of the D.C. Background Study dated March 28, 2019, subject to further annual review during the capital budget process;"

"Approve the D.C. Background Study dated March 28, 2019"

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

"Approve the D.C. By-law as set out in Appendix F."

Chapter 8
Asset Management Plan

8. Asset Management Plan

8.1 Introduction

The changes to the D.C.A. (new section 10(c.2)) in 2016 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 A.M.P. 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.**

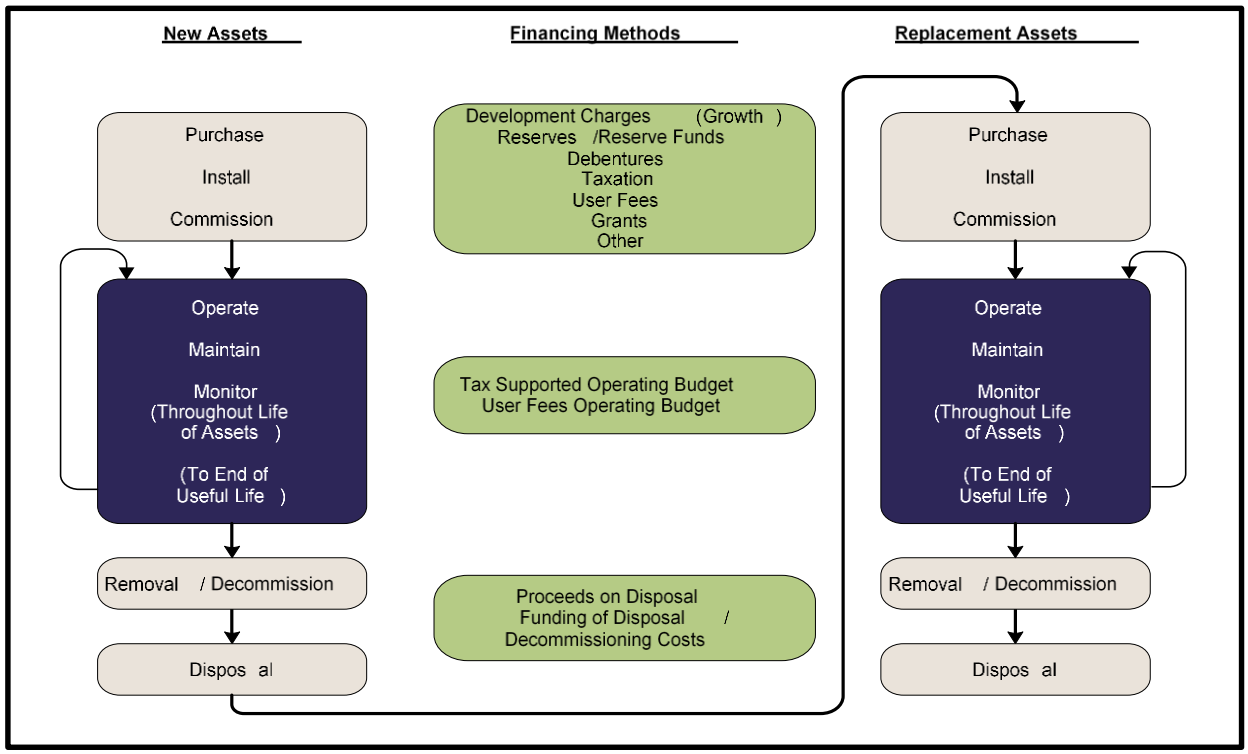
In regard to the above, subsection 8(3) of the Regulations was amended to include specific detailed requirements for transit services A.M.P.s. As contained in this subsection there are specific requirements to the content of the A.M.P., particularly the state of local infrastructure, proposed level of service, asset management strategy, and financial strategy. For all services except transit, there are no prescribed requirements at this time, thus requiring municipalities 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.

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.

The above provides for the general approach to be considered by Ontario municipalities. At this time, there is not a mandated approach for municipalities hence leaving discretion to individual municipalities as to how they plan for the long-term replacement of their assets. The City has previously completed it's A.M.P. for all assets, but which does not address the impact of growth-related assets. As a result, the asset management requirement for this D.C. must be undertaken in the absence of this complete information.

8.2 Non-Transit Municipal Services

In recognition to the schematic in Section 8.1, 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. Furthermore, 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 City financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing, totalling $5.7 million.

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. Total incremental costs attributable to the growth-related expenditures (i.e. annual lifecycle costs and incremental operating costs) total approximately $3.6 million.

5. The resultant total annualized expenditures are $9.3 million.

6. 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

$8.1 million. This amount, totalled with the existing operating revenues of $258.0 million, provide annual revenues of approximately $266.2 million by the end of the forecast period.

7. The incremental operating revenues of $8.1 million will adequately cover the incremental growth-related expenditures of approximately $3.6 million. The remainder of the incremental operating revenues and the existing operating revenues of $258.0 million can cover the $5.7 million of non-D.C. recoverable expenditures.

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

Table 8-1
City of Burlington
Asset Management – Future Expenditures and Associated Revenues (2019$)

Description	2031 (Total)
Expenditures (Annualized)[1]	
Annual Debt Payment on Non-Growth Related Capital[2]	5,737,604
Annual Debt Payment on Post Period Capital[3]	7,439
Annual Lifecycle - City-Wide Services	3,497,028
Incremental Operating Costs (for D.C. Services)[1]	$81,152
Total Expenditures (Net of Interim Funding of Post Period Benefit)	**$9,315,784**
Revenue (Annualized)	
Total Existing Revenue[4]	$258,030,198
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	$8,128,356
Total Revenues	**$266,158,554**

[1] Excluding Transit Services

[2] Non-Growth Related component of Projects including 10% mandatory deduction on soft services

[3] Interim Debt Financing for Post Period Benefit

[4] As per Sch. 10 of FIR

8.3 Transit Services

In regard to the D.C.A. requirements for asset management for transit services, Ontario Regulation 82/98 (as amended) provides the following:

> "8(3) If a council of a municipality proposes to impose a development charge in respect of transit services, the asset management plan referred to in subsection 10 (2) (c.2) of the Act shall include the following in respect of those services."

Provided in Table 8-2 are the individual items prescribed by subsection 8(3) of the Regulation (as amended), which are addressed in the following sections.

Table 8-2
Transit Services D.C. Background Study A.M.P. Requirements

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
1. A section that sets out the state of local infrastructure and that sets out, i. the types of assets and their quantity or extent, ii. the financial accounting valuation and replacement cost valuation for all assets, iii. the asset age distribution and asset age as a proportion of expected useful life for all assets, and iv. the asset condition based on standard engineering practices for all assets.
2. A section that sets out the proposed level of service and that, i. defines the proposed level of service through timeframes and performance measures, ii. discusses any external trends or issues that may affect the proposed level of service or the municipality's ability to meet it, and iii. shows current performance relative to the targets set out.
3. An asset management strategy that, i. sets out planned actions that will enable the assets to provide the proposed level of service in a sustainable way, while managing risk, at the lowest life cycle cost, ii. is based on an assessment of potential options to achieve the proposed level of service, which assessment compares, A. life cycle costs, B. all other relevant direct and indirect costs and benefits, and C. the risks associated with the potential options, iii. contains a summary of, in relation to achieving the proposed level of service, A. non-infrastructure solutions,

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities, iv. discusses the procurement measures that are intended to achieve the proposed level of service, and v. includes an overview of the risks associated with the strategy and any actions that will be taken in response to those risks.
4. A financial strategy that, i. shows the yearly expenditure forecasts that are proposed to achieve the proposed level of service, categorized by, A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities, ii. provides actual expenditures in respect of the categories set out in sub-subparagraphs i A to F from the previous two years, if available, for comparison purposes, iii. gives a breakdown of yearly revenues by source, iv. discusses key assumptions and alternative scenarios where appropriate, and v. identifies any funding shortfall relative to financial requirements that cannot be eliminated by revising service levels, asset management or financing strategies, and discusses the impact of the shortfall and how the impact will be managed. O. Reg. 428/15, s. 4.

8.3.1 State of Local Infrastructure

The City currently owns and manages capital assets for the provision of Transit Services including facilities, equipment, bus stops and shelters, and fleet. Provided in Table 8-3 is a high-level summary of the transit assets, useful life estimates, age, and 2019$ replacement cost, where data is readily available. Asset valuations have been provided from staff estimates. In total, transit assets (excluding land) within the City have a replacement value of approximately $64.6 million.

Table 8-3
Asset Inventory and Valuation

Asset	Quantity	Useful Life (Years)	Asset Age	Total Replacement Cost
Support Vehicles	8	7-10	4.8	$ 330,000
Buses	73	7-12	7.2	$ 35,907,140
Equipment	Various	7-10	Unk.	$ 4,429,200
Bus Stops and Shelters	Various	15	Unk.	$ 6,225,040
Transit Facilities (excl. land)	Various	60	Unk.	$ 17,736,126
Total				**$ 64,627,506**

Asset age and useful life data have been provided by the City where available, resulting in only fleet assets having a known age. Weighted by replacement cost, support vehicles and buses have a weighted average useful life of 4.8 years and 7.2 years, respectively. Summarized in Table 8-4 is the distribution of total fleet asset replacement value by the percentage of estimated useful life consumed. Based on the distribution of replacement value, 60% of transit fleet assets have consumed less than 75% of their respective useful lives, with the remaining 40% being at or near the end of their expected useful life.

Table 8-4
Distribution of Asset Value by Percentage of Useful Life Consumed

Asset	Percentage of Useful Life Consumed			
	0% - 25%	25% - 50%	50% - 75%	75% - 100%
Support Vehicles	75,000	40,000	40,000	175,000
Buses	6,423,065	5,632,635	9,495,710	14,355,730
Total Fleet Replacement Value	**6,498,065**	**5,672,635**	**9,535,710**	**14,530,730**

8.3.2 Levels of Service

A level of service (L.O.S.) analysis gives the City an opportunity to document the L.O.S. that is currently being provided and compare with the L.O.S. that is expected. This can be done through a review of current practices and procedures, an examination of trends or issues facing the City, or through an analysis of performance measures and targets that staff can use to measure performance.

Expected L.O.S. can be impacted by a number of factors, including:

- Legislative requirements;

- Strategic planning goals and objectives;
- Resident expectations;
- Council or City staff expectations; and
- Financial or resource constraints.

The previous task of determining the state of the City's Transit asset infrastructure establishes the asset inventory and condition (based on useful life), to guide the refinement and upkeep of asset infrastructure. It is important to document an expected L.O.S. that is realistic to the City. It is common to strive for the highest L.O.S., however, these service levels usually come at a cost.

Expected L.O.S. of the City's Transit Services relates to multiple asset classes and is defined through several sources. The City's A.M.P. indicates that the expected L.O.S. for all fleet assets is their replacement by the end of their useful life, while facilities should be kept to a facility condition index rating of 0.08 or lower. In addition, as summarized in Section 5.4.1, expected L.O.S. have been established within the City's Transportation Master Plan, and 10-year capital forecast.

8.3.3 Asset Management Strategy

The asset management strategy provides the recommended course of actions required to deliver the expected L.O.S. discussed in the previous section in a sustainable fashion. The course of actions, when combined together, form a long-term forecast that includes:

a) Non-infrastructure solutions: reduce costs and/or extend expected useful life estimates;
b) Maintenance activities: regularly scheduled activities to maintain existing useful life levels, or repairs needed due to unplanned events;
c) Renewal/Rehabilitation: significant repairs or maintenance planned to increase the useful life of assets;
d) Replacement/Disposal: complete disposal and replacement of assets, when renewal or rehabilitation is no longer an option; and
e) Expansion: given planned growth as outlined in Chapter 3.

Continuing to provide services at the current L.O.S., as planned by the City, results in budget impacts over the forecast period. This has to be taken into consideration, with the overall objective of reaching sustainable levels.

Table 8-5 presents the annual lifecycle costs for the transit service assets based on the recommended actions described above. A fundamental approach to calculating the cost of using a capital asset and for the provision of the revenue required when the time comes to retire and replace it is the "sinking fund method". This method first estimates the future value of the asset at the time of replacement, by inflating the current value of the asset at an assumed annual capital inflation rate. A calculation is then performed to determine annual contributions which, when invested in a reserve fund, will grow with interest to a balance equal to the future replacement cost. The contributions are calculated such that they also increase annually with inflation.

Table 8-5
Annual Lifecycle Cost

Asset	Annual Lifecycle Cost
Support Vehicles	45,136
Buses	3,364,302
Equipment	419,355
Bus Stops and Shelters	448,293
Transit Facilities (excl. land)	392,425
Total	**4,669,511**

Risk calculations, as identified in the City's A.M.P., are utilized in the prioritization of assets when facing budget constraints. As the majority of assets employed in the delivery of transit services to the public are fleet, the prevailing risk to the City of not setting aside funds to pay for the lifecycle costs of its assets would mean running buses for longer than their useful life. This would mean that the City would not be meeting its expected L.O.S. of replacing assets before their useful life is consumed, and could also mean fewer available buses as potential increased break-downs occur and increased operating costs to maintain an older fleet.

It is recommended that the City's procurement policies and procedures be reviewed and compared against procurement best practices to ensure resources are being allocated in an efficient manner to meet the A.M.P. strategy.

8.3.4 Financing Strategy

The financing strategy outlines the suggested financial approach to fund the recommended asset management strategy outlined in Section 8.3.3. This section of the asset management plan includes:

- Annual expenditure forecast broken down by:
    - Maintenance/non-infrastructure solutions;
    - Renewal/rehabilitation/replacement activities;
    - Disposal activities; and
    - Expansion activities.
- A breakdown of annual funding/revenue by source.

Table 8-6 details the financing strategy forecast, which is presented in 2019$. Maintenance/non-infrastructure solutions consist of operating and minor capital equipment costs from the City's budget, which has been increased annually by the growth rate of the City's transit fleet to reflect increases in maintenance costs that arise from additional buses. Renewal/rehabilitation/replacement activity expenditures are consistent with the lifecycle costs of existing transit assets identified in Section 8.3.3, and disposal activities have been assumed to bear no additional cost to the City. Expansion activities are the gross capital costs of capital projects identified in Section 5.4.1. Not included in this financing strategy are those operating costs not directly related to the maintenance of capital (i.e. salaries, wages, benefits, contracted services, utility costs, internal charges, etc.).

The funding sources included in the financing strategy consist of dependable and known sources that can be relied upon during the forecast period. Controllable revenues consist of transit fares and fees from the City's budget, which have been increased annually to account for the growth in ridership detailed in Section 5.4.1. Transfers from the D.C. Reserve Fund have been included for the infrastructure costs included in the Transit D.C. calculation. Additionally, general revenues and recoveries have been included as a stable source of funding for transit, which are mostly comprised of Gas Tax funds. Lastly, grant funding provided by the Provincial Transit Infrastructure Fund has been included in the financing strategy where these amounts are known.

The forecast indicates that there is a funding shortfall of approximately $1.2 million in 2019. This shortfall could be offset through transfers from the tax levy, which is a major funding source for the overall transit budget. For the remainder of the forecast period, there is a projected funding surplus, beginning at approximately $1.4 million in 2020 and growing to over $10.8 million by 2028. In consideration of these surpluses, the capital plan is deemed to be financially sustainable.

Table 8-6
Financing Strategy

Description	Forecast									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Expenditures										
Maintenance/Non-Infrastructure Solutions	3,596,843	3,723,791	3,850,738	3,977,685	4,062,317	4,231,580	4,358,528	4,527,791	4,697,054	4,866,317
Renewal/Rehabilitation/Replacement Activities	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511	4,669,511
Disposal Activities	-	-	-	-	-	-	-	-	-	-
Expansion Activities	2,647,445	2,111,530	2,761,530	12,111,530	12,127,830	2,245,445	2,011,745	2,245,445	2,245,445	2,245,445
Total Expenditures	**10,913,799**	**10,504,831**	**11,281,779**	**20,758,726**	**20,859,658**	**11,146,536**	**11,039,783**	**11,442,747**	**11,612,010**	**11,781,273**
Financing										
Controllable Revenues	6,104,875	7,422,658	8,740,440	10,058,223	11,376,006	12,693,788	14,011,569	15,329,351	16,647,134	17,964,917
DC Reserve Fund	450,066	139,572	165,897	541,872	513,618	145,719	105,990	145,719	145,719	145,719
General Revenues & Recoveries	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229	3,115,229
PTIF	-	1,290,516	1,765,016	8,590,516	8,773,016	1,388,274	1,388,274	1,388,274	1,388,274	1,388,274
Total Financing	**9,670,170**	**11,967,975**	**13,786,583**	**22,305,840**	**23,777,869**	**17,343,010**	**18,621,062**	**19,978,573**	**21,296,356**	**22,614,139**
Funding Shortfall/(Surplus)	**1,243,629**	**(1,463,144)**	**(2,504,804)**	**(1,547,114)**	**(2,918,211)**	**(6,196,474)**	**(7,581,278)**	**(8,535,827)**	**(9,684,346)**	**(10,832,866)**

Chapter 9
By-Law Implementation

9. By-Law Implementation

9.1 Public Consultation

This chapter addresses the mandatory, formal public consultation process (subsection 9.1.2), as well as the optional, informal consultation process (subsection 9.1.3). The latter is designed to seek the co-operation and involvement of those involved, in order to produce the most suitable policy. Section 9.2 addresses the anticipated impact of the D.C. on development, from a generic viewpoint.

9.1.1 Public Meeting of Council

Section 12 of the D.C.A., 1997 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, the Council must determine whether a further meeting (under this section) is necessary. For example, if the by-law which is proposed for adoption has been changed in any respect, the 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.)).

9.1.2 Other Consultation Activity

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

1. 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 municipal 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 (e.g. in encouraging a higher non-automobile modal split).

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 municipal D.C. policy. Their primary concern is frequently with the quantum of the charge, G.F.A. exclusions such as basement, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

9.2 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 municipal 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.

9.3 Implementation Requirements

Once the City 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 following provides an overview of the requirements in each case.

9.3.1 Notice of Passage

In accordance with s.13 of the D.C.A., when a D.C. by-law is passed, the municipal 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 not later than 20 days after the day the by-law is passed (i.e. as of the day of newspaper publication or the mailing of the notice).

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

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

9.3.2 By-law Pamphlet

In addition to the "notice" information, the City 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 general description of the general purpose of the Treasurer’s statement and where it may be received by the public.

Where a by-law is not appealed to the 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 City must give one copy of the most recent pamphlet, without charge, to any person who requests one.

9.3.3 Appeals

Sections 13 to 19 of the D.C.A., 1997 set out requirements relative to making and processing a D.C. by-law appeal and an 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 municipal 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.

9.3.4 Complaints

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

- the amount of the charge was incorrectly determined;
- the credit 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., 1997 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 municipal council to the L.P.A.T.

9.3.5 Credits

Sections 38 to 41 of the D.C.A., 1997 set out a number of credit requirements, which apply where a municipality agrees to allow a person to perform work in the future that relates to a service in the D.C. by-law.

These credits would be used to reduce the amount of 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 City agrees to expand the credit to other services for which a D.C. is payable.

9.3.6 Front-Ending Agreements

The City 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 City 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., 1997 (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 City assesses whether this mechanism is appropriate for its use, as part of funding projects prior to municipal funds being available.

9.3.7 Severance and Subdivision Agreement Conditions

Section 59 of the D.C.A., 1997 prevents a municipality from imposing directly or indirectly, a charge related to development or a requirement to construct a service related to development, by way of a condition or agreement under s.51 or s.53 of the Planning Act, except for:

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

It is also noted that s.s.59(4) of the D.C.A., 1997 requires that the municipal approval authority for a draft plan of subdivision under s.s.51(31) of the Planning Act, use its power to impose conditions to ensure that the first purchaser of newly subdivided land is informed of all the D.C.s related to the development, at the time the land is transferred.

In this regard, if the municipality in question is a commenting agency, in order to comply with subsection 59(4) of the D.C.A., 1997 it would need to provide to the approval authority, information regarding the applicable municipal D.C.s related to the site.

If the municipality 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
City of Burlington
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units						Person Per Unit (PPU): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other[4]	Total Households	Equivalent Institutional Households	
Historical	*Mid 2011*	182,100	175,779	2,289	173,490	39,189	13,702	15,819	69	68,779	2,081	2.556
	Mid 2016	189,900	183,314	3,189	180,125	39,855	14,085	17,270	165	71,375	2,899	2.568
Forecast	*Early 2019*	192,600	185,911	3,244	182,667	40,104	14,211	19,207	165	73,687	2,949	2.523
	Early 2029	199,400	192,429	3,360	189,069	40,338	15,310	23,764	165	79,577	3,055	2.418
	Mid 2031	200,400	193,401	3,364	190,037	40,361	15,426	24,620	165	80,572	3,058	2.400
Incremental	**Mid 2011 - Mid 2016**	**7,800**	**7,535**	**900**	**6,635**	**666**	**383**	**1,451**	**96**	**2,596**	**818**	
	Mid 2016 - Early 2019	**2,700**	**2,597**	**55**	**2,542**	**249**	**126**	**1,937**	**0**	**2,312**	**50**	
	Early 2019 - Early 2029	**6,800**	**6,518**	**116**	**6,402**	**234**	**1,100**	**4,557**	**0**	**5,890**	**106**	
	Early 2019 - Mid 2031	**7,800**	**7,490**	**120**	**7,370**	**256**	**1,216**	**5,413**	**0**	**6,885**	**109**	

Source: Watson & Associates Economists Ltd., 2019.

[1] Census Undercount estimated at approximately 3.6%. Note: Population Including the Undercount has been rounded

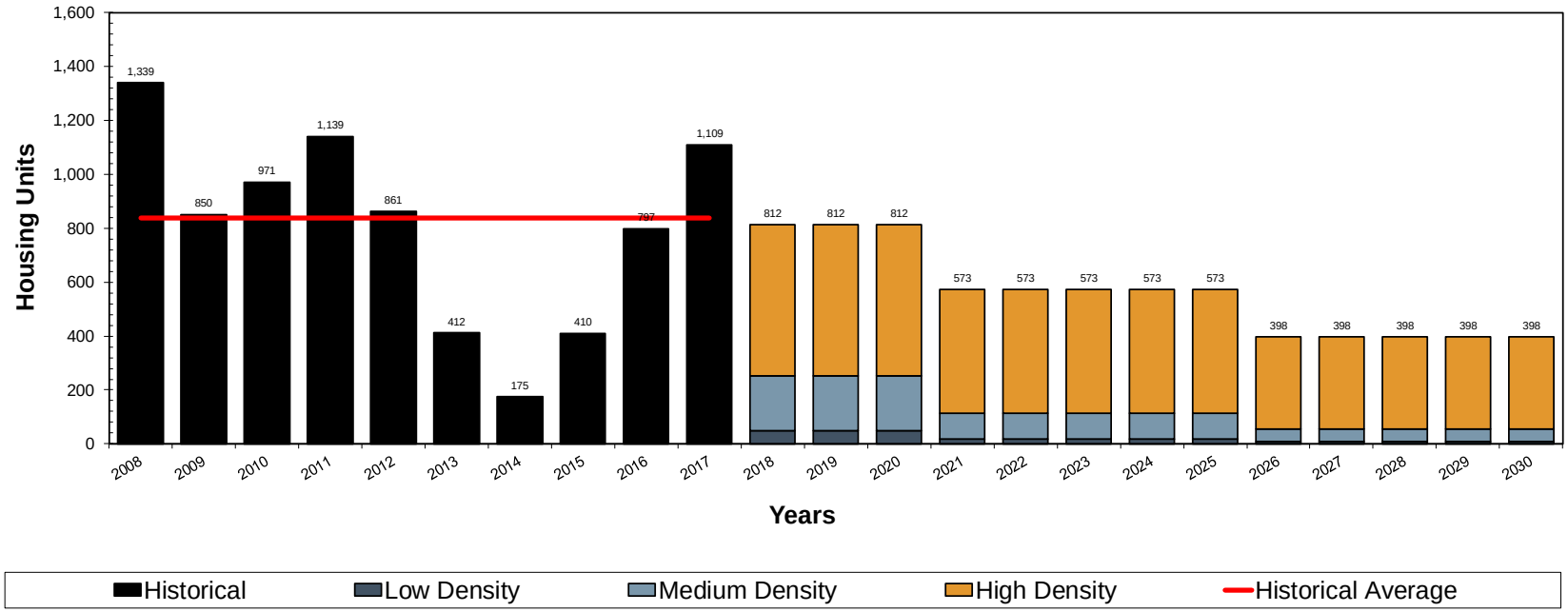
[2] Includes townhomes and apartments in duplexes.

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

[4] Other households defined by Statistics Canada as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g., a store or a church) or occasionally to another residential structure (e.g., an apartment building). Other households also includes mobile homes and other movable dwellings.

Figure A-1

Annual Housing Forecast[1]



Source: Historical housing activity derived from Statistics Canada building permit data for the City of Burlington, 2008 to 2017.

[1] Growth Forecast represents calendar year.

Schedule 2
City of Burlington
Current Year Growth Forecast
Mid 2016 to Early 2019

			Population
Mid 2016 Population			183,314
Occupants of New Housing Units, Mid 2016 to Early 2019	*Units (2)*	2,312	
	multiplied by persons per unit (3)	1.802	
	gross population increase	4,166	4,166
Occupants of New Equivalent Institutional Units, Mid 2016 to Early 2019	*Units*	50	
	multiplied by persons per unit	1.100	
	gross population increase	55	55
Decline in Housing Unit Occupancy, Mid 2016 to Early 2019	*Units (4)*	71,375	
	multiplied by ppu decline rate (5)	-0.0228	
	total decline in population	-1,624	-1,624
Population Estimate to Early 2019			185,911
Net Population Increase,Mid 2016 to Early 2019			*2,597*

(1) 2016 population based on StatsCan 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 (ppu) is assumed to be:

Structural Type	Persons Per Unit[1]	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.336	11%	0.360
Multiples (6)	2.016	5%	0.109
Apartments (7)	1.590	84%	1.333
Total		100%	1.802

[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 townhomes and apartments in duplexes.

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

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

Schedule 3
City of Burlington
Ten Year Growth Forecast
Early 2019 to Early 2029

			Population
Early 2019 Population			185,911
Occupants of New Housing Units, Early 2019 to Early 2029	*Units (2)*	5,890	
	multiplied by persons per unit (3)	1.785	
	gross population increase	10,514	10,514
Occupants of New Equivalent Institutional Units, Early 2019 to Early 2029	*Units*	106	
	multiplied by persons per unit	1.100	
	gross population increase	117	117
Decline in Housing Unit Occupancy, Early 2019 to Early 2029	*Units (4)*	73,687	
	multiplied by ppu decline rate (5)	-0.0558	
	total decline in population	-4,113	-4,113
Population Estimate to Early 2029			192,429
Net Population Increase, Early 2019 to Early 2029			*6,518*

(1) Early 2019 Population based on:

2016 Population (183,314) + Mid 2016 to Early 2019 estimated housing units to beginning of forecast period (2,312 x 1.802 = 4,166) + (50 x 1.100 = 55) + (71,375 x -0.0228 = -1,624) = 185,911

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

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

Structural Type	Persons Per Unit[1]	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.421	4%	0.136
Multiples (6)	2.305	19%	0.430
Apartments (7)	1.576	77%	1.219
one bedroom or less	1.282		
two bedrooms or more	1.740		
Total		100%	1.785

[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) Early 2019 households based upon 71,375 (2016 Census) + 2,312 (Mid 2016 to Early 2019 unit estimate) = 73,687

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

(6) Includes townhomes and apartments in duplexes.

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

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

Schedule 4
City of Burlington
2031 Growth Forecast
Early 2019 to Mid 2031

			Population
Early 2019 Population			185,911
Occupants of New Housing Units, Early 2019 to Mid 2031	*Units (2)*	6,885	
	multiplied by persons per unit (3)	1.773	
	gross population increase	12,209	12,209
Occupants of New Equivalent Institutional Units, Early 2019 to Mid 2031	*Units*	109	
	multiplied by persons per unit	1.100	
	gross population increase	120	120
Decline in Housing Unit Occupancy, Early 2019 to Mid 2031	*Units (4)*	73,687	
	multiplied by ppu. decline rate (5)	-0.0657	
	total decline in population	-4,839	-4,839
Population Estimate to Mid 2031			193,401
Net Population Increase, Early 2019 to Mid 2031			*7,490*

(1) Early 2019 Population based on:

2016 Population (183,314) + Mid 2016 to Early 2019 estimated housing units to beginning of forecast period (2,312 x 1.802 = 4,166) + (50 x 1.100 = 55) + (71,375 x -0.0228 = -1,624) = 185,911

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

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

Structural Type	Persons Per Unit[1]	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.421	3.7%	0.127
Multiples (6)	2.305	17.7%	0.407
Apartments (7)	1.576	78.6%	1.239
one bedroom or less	1.282		
two bedrooms or more	1.740		
Total		100%	1.773

[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) Early 2019 households based upon 71,375 (2016 Census) + 2,312 (Mid 2016 to Early 2019 unit estimate) = 73,687

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

(6) Includes townhomes and apartments in duplexes.

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

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

Schedule 5

City of Burlington
Historical Residential Building Permits
Years 2008 to 2017

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples[1]	Apartments[2]	Total
2008	412	418	509	1,339
2009	131	164	555	850
2010	355	307	309	971
2011	316	125	698	1,139
2012	117	181	563	861
Sub-total	1,331	1,195	2,634	5,160
Average (2008 - 2012)	***266***	***239***	***527***	***1,032***
% Breakdown	25.8%	23.2%	51.0%	100.0%
2013	86	132	194	412
2014	103	72	0	175
2015	68	84	258	410
2016	75	0	722	797
2017	150	24	935	1,109
Sub-total	482	312	2,109	2,903
Average (2013 - 2017)	***96***	***62***	***422***	***581***
% Breakdown	16.6%	10.7%	72.6%	100.0%
2008 - 2017 Total	1,813	1,507	4,743	8,063
Average	***181***	***151***	***474***	***806***
% Breakdown	22.5%	18.7%	58.8%	100.0%

Source: Statistics Canada Publication, 64-001XIB

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

Schedule 6

City of Burlington
Persons Per Unit By Age And Type Of Dwelling
(2016 Census)

Age of Dwelling	Singles and Semi-Detached						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average
1-5	-	1.563	1.963	3.548	3.964	**3.336**	
6-10	-	-	2.091	3.451	4.474	**3.504**	
11-15	-	-	1.938	3.371	4.267	**3.424**	3.421
16-20	-	-	1.615	3.120	4.390	**3.145**	
20-25	-	-	1.778	3.158	4.000	**3.232**	
25-35	-	-	1.889	3.012	3.917	**3.066**	
35+	-	1.742	1.840	2.724	3.638	**2.726**	
Total	**-**	**1.677**	**1.846**	**2.938**	**3.917**	**2.956**	

Age of Dwelling	Multiples[1]						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average
1-5	-	-	1.803	2.263	-	**2.016**	
6-10	-	-	1.886	2.647	-	**2.436**	
11-15	-	-	1.735	2.669	-	**2.464**	2.305
16-20	-	1.286	1.747	2.508	-	**2.301**	
20-25	-	-	1.762	2.568	-	**2.330**	
25-35	-	1.769	1.800	2.633	-	**2.319**	
35+	-	1.167	1.921	2.702	4.917	**2.541**	
Total	**-**	**1.386**	**1.814**	**2.631**	**3.808**	**2.410**	

Age of Dwelling	Apartments[2]						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	15 Year Average
1-5	-	1.337	1.845	-	-	**1.590**	
6-10	-	1.244	1.768	1.929	-	**1.614**	
11-15	-	1.195	1.634	2.200	-	**1.523**	1.576
16-20	-	1.257	1.654	2.417	-	**1.574**	
20-25	-	1.217	1.706	2.444	-	**1.624**	
25-35	-	1.280	1.715	2.708	-	**1.620**	
35+	-	1.245	1.801	2.445	-	**1.643**	
Total	**1.462**	**1.258**	**1.757**	**2.439**	**-**	**1.617**	

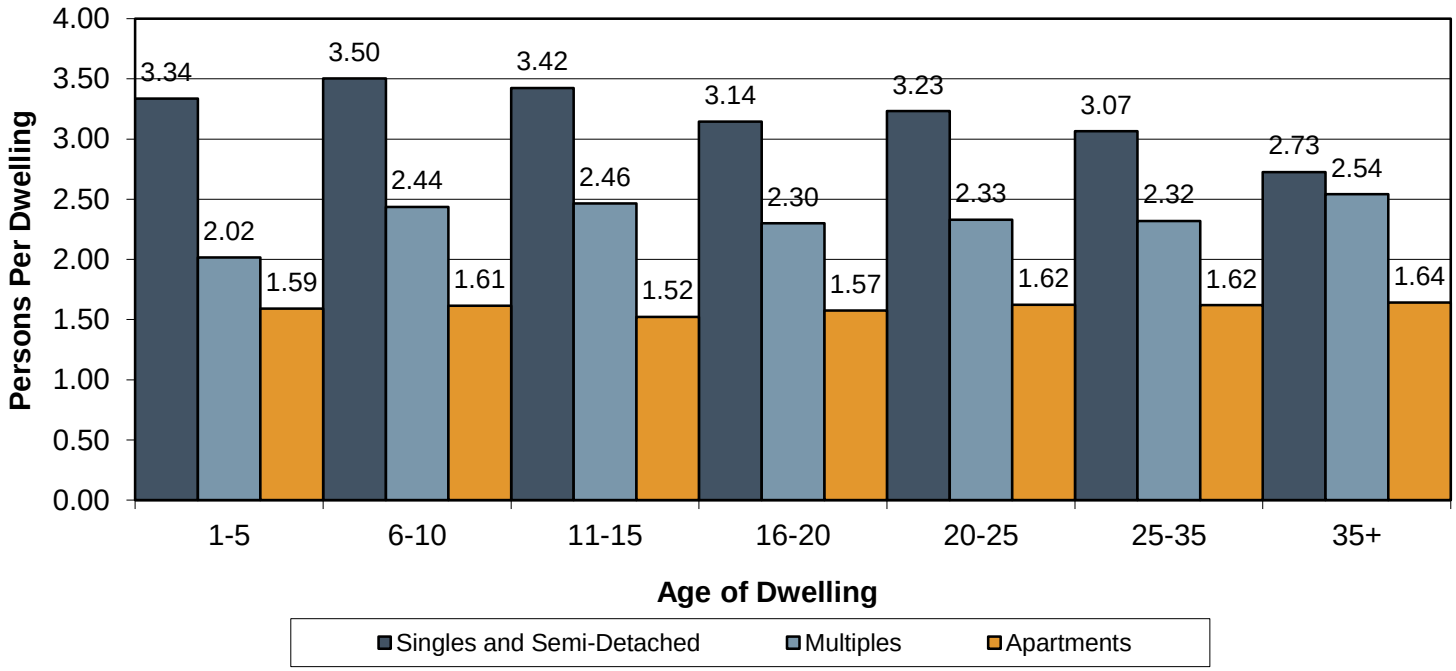
Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	-	1.358	1.855	3.255	4.148	**2.300**
6-10	-	1.303	1.835	3.165	4.456	**2.758**
11-15	-	1.196	1.689	3.076	4.267	**2.724**
16-20	-	1.310	1.682	2.886	4.377	**2.568**
20-25	-	1.293	1.755	2.912	4.077	**2.505**
25-35	-	1.309	1.761	2.942	3.985	**2.606**
35+	-	1.260	1.825	2.710	3.630	**2.442**
Total	**1.643**	**1.284**	**1.788**	**2.855**	**3.929**	**2.524**

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

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

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

Schedule 7
City of Burlington
Persons Per Unit By Structural Type And Age Of Dwelling
(2016 Census)



Schedule 8a
City of Burlington
Employment Forecast, 2019 to 2031

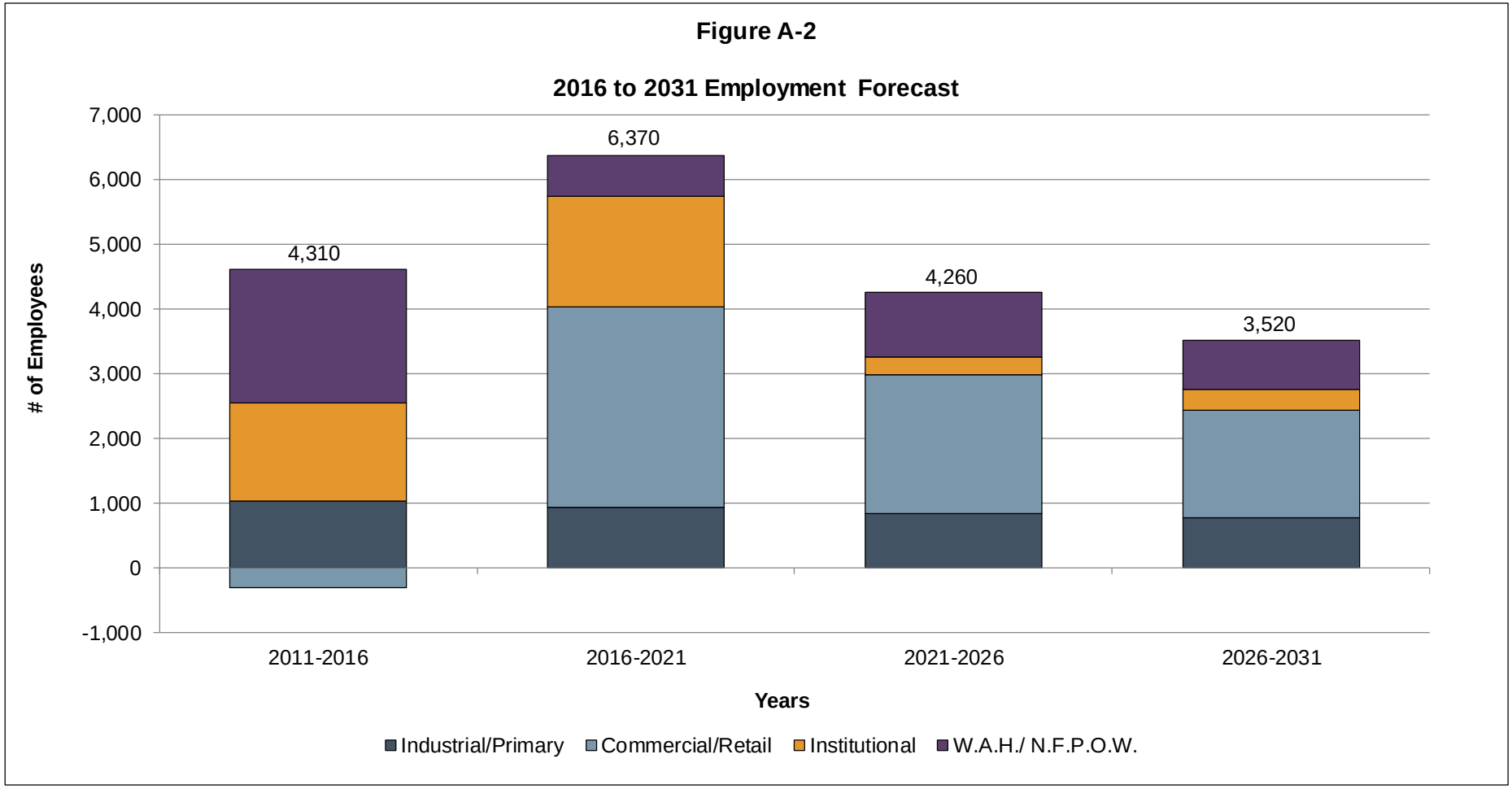
Period	Population	Activity Rate										Employment										Employment
		Primary	Work at Home	Industrial	Commercial/ Population Related	Commercial (Retail)	Commercial (Non-Retail)	Institutional	Total	NFPOW[1]	Total Including NFPOW	Primary	Work at Home	Industrial	Commercial/ Population Related	Commercial (Retail)	Commercial (Non-Retail)	Institutional	Total	NFPOW [1]	Total Employment (Including NFPOW)	Total (Excluding NFPOW and Work at Home)
Mid 2011	175,779	0.001	0.038	0.137	0.213	0.159	0.054	0.084	0.472	0.046	0.519	260	6,625	24,005	37,400	27,910	9,490	14,735	83,025	8,155	91,180	76,400
Mid 2016	183,314	0.002	0.045	0.136	0.202	0.153	0.049	0.089	0.474	0.047	0.521	440	8,165	24,853	37,098	28,105	8,993	16,265	86,820	8,670	95,490	78,655
Early 2019	185,911	0.002	0.045	0.135	0.206	0.156	0.050	0.094	0.482	0.047	0.530	440	8,281	25,147	38,299	29,013	9,286	17,525	89,692	8,793	98,485	81,411
Early 2029	192,429	0.002	0.049	0.141	0.223	0.169	0.054	0.096	0.511	0.049	0.560	440	9,495	27,050	42,983	32,528	10,455	18,421	98,389	9,390	107,779	88,894
Mid 2031	193,401	0.002	0.050	0.142	0.228	0.172	0.055	0.096	0.518	0.049	0.567	440	9,736	27,400	44,000	33,285	10,715	18,572	100,148	9,495	109,643	90,412
Incremental Change																						
Mid 2006 - Mid 2011	11,364	-0.001	-0.004	-0.018	0.001	-0.004	0.005	0.009	-0.013	-0.002	-0.016	-125	-185	-1,465	2,580	1,105	1,475	2,355	3,160	166	3,326	3,345
Mid 2011 - Mid 2016	7,535	0.0009	0.0069	-0.0010	-0.0104	-0.0055	-0.0049	0.0049	0.0013	0.0009	0.0022	180	1,540	848	-303	195	-498	1,530	3,795	515	4,310	2,255
Mid 2016 - Early 2019	2,597	0.0000	0.0000	-0.0003	0.0036	0.0027	0.0009	0.0055	0.0088	0.0000	0.0088	0	116	294	1,202	908	294	1,260	2,872	123	2,995	2,756
Early 2019 - Early 2029	6,518	-0.0001	0.0048	0.0053	0.0174	0.0130	0.0044	0.0015	0.0289	0.0015	0.0304	0	1,214	1,903	4,684	3,515	1,169	896	8,697	597	9,294	7,483
Early 2019 - Mid 2031	7,490	-0.0001	0.0058	0.0064	0.0215	0.0160	0.0055	0.0018	0.0354	0.0018	0.0372	0	1,455	2,253	5,701	4,272	1,429	1,047	10,456	702	11,158	9,001
Annual Average																						
Mid 2006 - Mid 2011	2,273	-0.00017	-0.00075	-0.00367	0.00020	-0.00085	0.00105	0.00171	-0.00269	-0.00044	-0.00312	-25	-37	-293	516	221	295	471	632	33	665	669
Mid 2011 - Mid 2016	1,507	0.0002	0.0014	-0.0002	-0.0021	-0.0011	-0.0010	0.0010	0.0003	0.0002	0.0004	36	308	170	-61	39	-100	306	759	103	862	451
Mid 2016 - Early 2019	1,039	0.0000	0.0000	-0.0001	0.0015	0.0011	0.0004	0.0022	0.0035	0.0000	0.0035	0	46	118	481	363	117	504	1,149	49	1,198	1,103
Early 2019 - Early 2029	652	-0.00001	0.00048	0.00053	0.00174	0.00130	0.00044	0.00015	0.00289	0.00015	0.00304	0	121	190	468	351	117	90	870	60	929	748
Early 2019 - Mid 2031	599	-0.00001	0.00046	0.00051	0.00172	0.00128	0.00044	0.00014	0.00283	0.00014	0.00297	0	116	180	456	342	114	84	836	56	893	720

Source: Watson & Associates Economists Ltd., 2019. Employment forecast and corresponding employment activty rate forecast by sector derived from Halton Best Planning Estimates, June 2011 and adjusted for 2016 Census. Early 2019 employment base by sector derived by Watson & Associates Economists Ltd.

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

Figure A-2

2016 to 2031 Employment Forecast



Source: Watson & Associates Economists Ltd.

Schedule 8b
City of Burlington
Employment & Gross Floor Area (G.F.A) Forecast, 2019 to 2031

Period	Population	Employment						Gross Floor Area in Square Feet (Estimated)[1]					
		Industrial	Commercial/ Population Related	Commercial (Retail)	Commercial (Non-Retail)	Institutional	Total	Industrial	Commercial/ Population Related	Commercial (Retail)	Commercial (Non-Retail)	Institutional[2]	Total
Mid 2011	175,779	24,005	37,400	27,910	9,490	14,735	76,400						
Mid 2016	183,314	24,853	37,098	28,105	8,993	16,265	78,655						
Early 2019	185,911	25,147	38,299	29,013	9,286	17,525	81,411						
Early 2029	192,429	27,050	42,983	32,528	10,455	18,421	88,894						
Mid 2031	193,401	27,400	44,000	33,285	10,715	18,572	90,412						
Incremental Change													
Mid 2011 - Mid 2016	7,535	848	-303	195	-498	1,530	2,255						
Mid 2016 - Early 2019	2,597	294	1,202	908	294	1,260	2,756	235,300	480,700	386,800	93,900	462,400	1,178,400
Early 2019 - Early 2029	6,518	1,903	4,684	3,515	1,169	896	7,483	1,522,700	1,873,500	1,499,500	374,000	270,000	3,666,200
Early 2019 - Mid 2031	7,490	2,253	5,701	4,272	1,429	1,047	9,001	1,802,700	2,280,300	1,823,100	457,200	327,900	4,410,900
Annual Average													
Mid 2011 - Mid 2016	1,507	170	-61	39	-100	306	451						
Mid 2016 - Early 2019	1,039	118	481	363	117	504	1,103	94,120	192,280	154,720	37,560	184,960	471,360
Early 2019 - Early 2029	652	190	468	351	117	90	748	152,270	187,350	149,950	37,400	27,000	366,620
Early 2019 - Mid 2031	599	180	456	342	114	84	720	144,216	182,424	145,848	36,576	26,232	352,872

Source: Watson & Associates Economists Ltd., 2019.

[1] Square Foot Per Employee Assumptions

Industrial	800
Commercial/ Population Related	400
Retail	427
Non-Retail	320
Institutional	400

[2] Forecast institutional gross floor area has been adjusted downward to account for institutional development associated with special care facilities.

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

Schedule 9
City of Burlington
Non-Residential Construction Value
Years 2007 to 2016
(000's $ 2018)

YEAR	Industrial				Commercial				Institutional				Total			
	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total
2007	44,238	7,296	5,587	57,121	19,045	19,559	17,245	55,849	62,253	1,539	8,963	72,755	125,536	28,393	31,795	185,724
2008	12,865	8,094	30,210	51,169	88,258	32,335	85,295	205,887	11,403	1,255	0	12,659	112,526	41,684	115,505	269,715
2009	646	3,592	20,210	24,449	13,588	51,329	24,917	89,834	25,349	1,953	7,574	34,876	39,584	56,874	52,701	149,159
2010	4,454	3,139	279	7,872	31,480	48,446	2,342	82,267	12,282	3,936	1,383	17,600	48,216	55,520	4,003	107,739
2011	4,355	7,764	16,211	28,330	38,487	56,699	6,033	101,219	56,050	1,239	0	57,290	98,893	65,702	22,244	186,839
2012	619	13,974	55,253	69,845	55,413	44,256	36,126	135,796	34,665	5,741	15,614	56,020	90,697	63,971	106,993	261,660
2013	57,254	20,815	1,368	79,437	52,020	51,724	4,492	108,236	29,601	4,863	999	35,464	138,876	77,402	6,859	223,137
2014	14,133	4,406	12,384	30,923	27,970	24,677	4,334	56,982	8,142	3,043	8,720	19,906	50,246	32,126	25,439	107,811
2015	19,593	7,385	293	27,271	12,846	26,122	9,988	48,956	183,661	6,403	8,327	198,390	216,099	39,911	18,607	274,617
2016	9,906	2,595	0	12,501	41,676	32,401	245	74,322	14,534	11,066	1,429	27,029	66,115	46,061	1,675	113,851
Subotal	168,063	79,059	141,794	388,917	380,783	387,547	191,017	959,347	437,941	41,038	53,009	531,988	986,787	507,644	385,820	1,880,252
Percent of Total	43%	20%	36%	100%	40%	40%	20%	100%	82%	8%	10%	100%	52%	27%	21%	100%
Average	***16,806***	***7,906***	***14,179***	***38,892***	***38,078***	***38,755***	***19,102***	***95,935***	***43,794***	***4,104***	***5,301***	***53,199***	***98,679***	***50,764***	***38,582***	***188,025***
2007 - 2011																
Period Total				168,941				535,056				195,180				899,176
2007 - 2011 Average				***33,788***				***107,011***				***39,036***				***179,835***
% Breakdown				18.8%				59.5%				21.7%				100.0%
2012 - 2016																
Period Total				219,976				424,291				336,809				981,076
2012 - 2016 Average				***43,995***				***84,858***				***67,362***				***196,215***
% Breakdown				22.4%				43.2%				34.3%				100.0%
2007 - 2016																
Period Total				388,917				959,347				531,988				1,880,252
2007 - 2016 Average				***38,892***				***95,935***				***53,199***				***188,025***
% Breakdown				20.7%				51.0%				28.3%				100.0%

Source: Statistics Canada Publication, 64-001-XIB
Note: Inflated to year-end 2017 (January, 2018) dollars using Reed Construction Cost Index

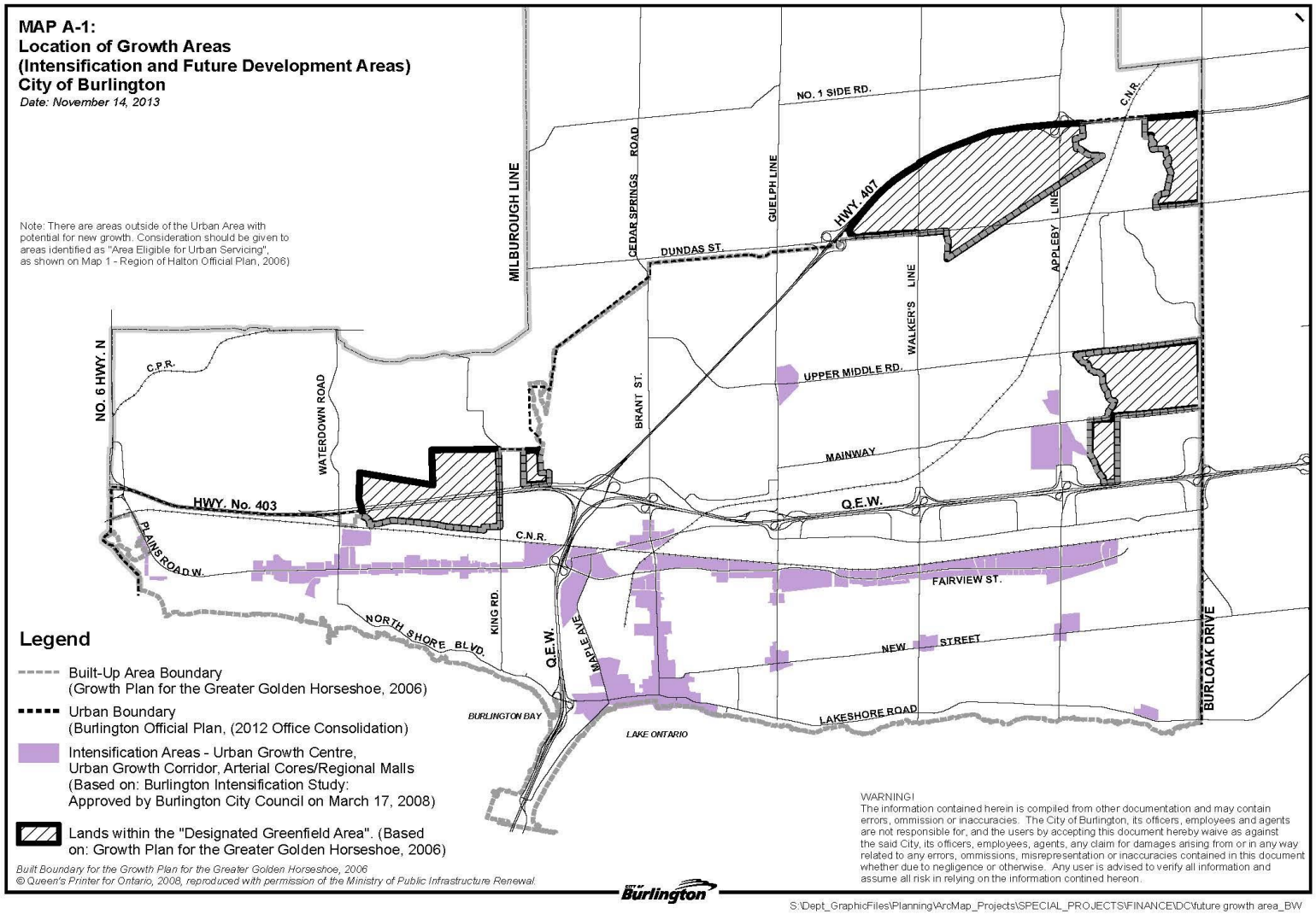
Schedule 10

City of Burlington

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

NAICS		Year			Change		Comments
		2006	2011	2016	06-11	11-16	
	Employment by industry						
	Primary Industry Employment						
11	*Agriculture, forestry, fishing and hunting*	265	315	375	50	60	Categories which relate to
21	*Mining and oil and gas extraction*	200	95	110	-105	15	local land-based resources.
	Sub-total	**465**	**410**	**485**	**-55**	**75**	
	Industrial and Other Employment						
22	*Utilities*	340	435	380	95	-55	
23	*Construction*	2,545	2,990	3,290	445	300	Categories which relate
31-33	*Manufacturing*	14,095	12,105	12,450	-1,990	345	primarily to industrial land
41	*Wholesale trade*	6,240	6,240	6,245	0	5	supply and demand.
48-49	*Transportation and warehousing*	2,500	2,395	2,840	-105	445	
56	*Administrative and support*	1,453	1,558	1,605	105	48	
	Sub-total	**27,173**	**25,723**	**26,810**	**-1,450**	**1,088**	
	Population Related Employment						
44-45	*Retail trade*	11,330	12,235	12,930	905	695	
51	*Information and cultural industries*	2,230	2,575	2,245	345	-330	
52	*Finance and insurance*	4,810	4,645	3,945	-165	-700	
53	*Real estate and rental and leasing*	1,745	1,570	1,940	-175	370	Categories which relate
54	*Professional, scientific and technical services*	6,325	7,440	7,770	1,115	330	primarily to population
55	*Management of companies and enterprises*	170	195	210	25	15	growth within the municipality.
56	*Administrative and support*	1,453	1,558	1,605	105	48	
71	*Arts, entertainment and recreation*	1,395	1,515	1,585	120	70	
72	*Accommodation and food services*	5,680	6,195	6,375	515	180	
81	*Other services (except public administration)*	3,780	3,460	3,670	-320	210	
	Sub-total	**38,918**	**41,388**	**42,275**	**2,470**	**888**	
	Institutional						
61	*Educational services*	4,590	5,370	5,680	780	310	
62	*Health care and social assistance*	6,535	7,340	8,860	805	1,520	
91	*Public administration*	2,185	2,795	2,710	610	-85	
	Sub-total	**13,310**	**15,505**	**17,250**	**2,195**	**1,745**	
	Total Employment	**79,865**	**83,025**	**86,820**	**3,160**	**3,795**	
	Population	**164,415**	**175,779**	**183,314**	**11,364**	**7,535**	
	Employment to Population Ratio						
	Industrial and Other Employment	**0.17**	**0.15**	**0.15**	**-0.02**	**0.00**	
	Population Related Employment	**0.24**	**0.24**	**0.23**	**0.00**	**0.00**	
	Institutional Employment	**0.08**	**0.09**	**0.09**	**0.01**	**0.01**	
	Primary Industry Employment	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
	Total	**0.49**	**0.47**	**0.47**	**-0.01**	**0.00**	

Source: Statistics Canada Employment by Place of Work
Note: 2006-2016 employment figures are classified by North American Industry Classification System (NAICS) Code


MAP A-1:
Location of Growth Areas
(Intensification and Future Development Areas)
City of Burlington
Date: November 14, 2013
Note: There are areas outside of the Urban Area with potential for new growth. Consideration should be given to areas identified as "Area Eligible for Urban Servicing", as shown on Map 1 - Region of Halton Official Plan, 2006)
MILBUROUGH LINE
CEDAR SPRINGS ROAD
GUELPH LINE
NO. 1 SIDE RD.
C.N.R.
HWY. 407
APPLEBY LINE
DUNDAS ST.
WALKER'S LINE
NO. 6 HWY. N
C.P.R.
WATERDOWN ROAD
BRANT ST.
UPPER MIDDLE RD.
MAINWAY
HWY. No. 403
Q.E.W.
C.N.R.
PLAINS ROAD W.
FAIRVIEW ST.
NORTH SHORE BLVD.
KING RD.
Q.E.W.
MAPLE AVE
NEW STREET
BURLOAK DRIVE
BURLINGTON BAY
LAKE ONTARIO
LAKESHORE ROAD
Legend
Built-Up Area Boundary
(Growth Plan for the Greater Golden Horseshoe, 2006)
Urban Boundary
(Burlington Official Plan, (2012 Office Consolidation)
Intensification Areas - Urban Growth Centre, Urban Growth Corridor, Arterial Cores/Regional Malls
(Based on: Burlington Intensification Study: Approved by Burlington City Council on March 17, 2008)
Lands within the "Designated Greenfield Area". (Based on: Growth Plan for the Greater Golden Horseshoe, 2006)
Built Boundary for the Growth Plan for the Greater Golden Horseshoe, 2006
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Appendix B
Historical Level of Service Calculations

Service: Roads
Unit Measure: lane-km of roadways

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Road Value	Land Value	2018 Value ($/lane km)
Arterial - Rural	29	29	29	29	29	28	28	28	28	28	$482,409	$4,130,184	$4,612,593
Arterial - Urban	382	381	379	378	377	375	374	373	371	370	$1,054,582	$3,075,455	$4,130,037
Collector - Commercial/ Industrial	42	43	44	45	47	48	49	50	52	53	$843,626	$3,461,801	$4,305,427
Collector - Residential	199	204	209	214	219	224	229	234	239	244	$896,488	$3,720,247	$4,616,735
Collector - Rural	45	45	45	45	45	45	45	45	45	45	$463,303	$3,517,128	$3,980,431
Total	**697**	**702**	**706**	**711**	**717**	**720**	**725**	**730**	**735**	**740**			

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard (per 1,000)	2.82	2.81	2.80	2.79	2.78	2.78	2.78	2.79	2.79	2.78

10 Year Average	2009-2018
Quantity Standard (per 1,000)	2.7910
Quality Standard	$4,301,290
Service Standard	$12,005

D.C. Amount (before deductions)	13 Year
Forecast Population + Employment	16,491
$ per Capita + Employee	$12,005
Eligible Amount	$197,972,806

Service: Bridges, Culverts & Structures
Unit Measure: Number of Bridges, Culverts & Structures

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/item)
Multi-Span Bridges	8	8	8	8	8	9	9	9	9	9	$12,926,590
Single-Span Bridges	26	26	26	26	26	26	26	26	26	26	$1,584,914
Large Culverts	59	61	63	65	67	68	70	72	74	76	$1,776,561
Total	**93**	**95**	**97**	**99**	**101**	**103**	**105**	**107**	**109**	**111**	

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard (per 1,000)	0.38	0.38	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42

10 Year Average	2009-2018
Quantity Standard (per 1,000)	0.3960
Quality Standard	$2,656,566
Service Standard	$1,052

D.C. Amount (before deductions)	13 Year
Forecast Population + Employment	16,491
$ per Capita + Employee	$1,052
Eligible Amount	$17,348,532

Service: Sidewalks, Guiderails, and Walls
Unit Measure: km of item

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/km)
Sidewalks - concrete	492.40	500.69	508.98	517.27	525.56	533.86	542.15	550.44	558.73	567.02	$150,000
Multi-Use Pathways - asphalt	35.00	36.56	38.11	39.67	41.22	42.78	44.33	45.89	47.44	49.00	$265,499
Multi-Use Pathways - gravel	0.50	0.50	0.49	0.49	0.48	0.48	0.47	0.47	0.46	0.46	$100,000
Guiderails	14.35	14.55	14.76	14.96	15.16	15.37	15.57	15.77	15.98	16.18	$100,000
Noise Walls											
Concrete w/ Concrete Posts	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	$1,090,000
Concrete w/ Steel Posts	0.10	0.15	0.19	0.24	0.29	0.33	0.38	0.43	0.47	0.52	$1,090,000
Wood	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	$950,000
Retaining Walls											
Armour Stone	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28	0.28	$850,000
Brick	-	-	-	-	-	-	-	-	-	-	$250,000
Concrete	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	$250,000
Gravity Interlock	1.57	1.61	1.65	1.68	1.72	1.76	1.80	1.83	1.87	1.91	$235,000
Stone Mortar	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	$235,000
Wood	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	$160,000
Total	**547.56**	**557.71**	**567.83**	**577.97**	**588.09**	**598.25**	**608.37**	**618.50**	**628.63**	**638.77**	

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard (per 1,000)	2.21	2.24	2.25	2.26	2.28	2.31	2.34	2.36	2.38	2.40

10 Year Average	2009-2018
Quantity Standard (per 1,000)	2.3034
Quality Standard	$162,369
Service Standard	$374

D.C. Amount (before deductions)	13 Year
Forecast Population + Employment	16,491
$ per Capita + Employee	$374
Eligible Amount	$6,167,634

Service: Traffic Signals, Streetlights, and Signs
Unit Measure: No. of Items

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/item)
Streetlights (Fixtures and Plant)	6,510	6,568	6,627	6,685	6,743	6,802	6,860	6,918	6,977	7,035	$4,885
Traffic Signals	172	177	177	177	177	177	177	177	177	177	$135,000
Signs (Traffic & Highway Gateway) and Posts	36,988	36,988	36,988	36,988	36,988	36,988	36,988	36,988	36,988	36,988	$38
Total	**43,670**	**43,733**	**43,792**	**43,850**	**43,908**	**43,967**	**44,025**	**44,083**	**44,142**	**44,200**	

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17

10 Year Average	2009-2018
Quantity Standard	0.1708
Quality Standard	$1,327
Service Standard	$227

D.C. Amount (before deductions)	13 Year
Forecast Population + Employment	16,491
$ per Capita + Employee	$227
Eligible Amount	$3,738,510

Service: Depots and Domes
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Bld'g Value ($/sq.ft.)	Value/ft² with land, site works, etc.
Operations Centre-Main Building (Roads portion)	25,042	25,042	25,042	25,042	25,042	25,042	25,042	25,042	25,042	25,042	$350	$698
Operations Centre-Storage Building (Roads portion)	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	$72	$76
Operations Centre-Salt Dome	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	$66	$69
Operations Centre-Sand Dome	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	5,005	$66	$69
Operations Centre-Equipment Storage Building	10,290	10,290	10,290	10,290	10,290	10,290	10,290	10,290	10,290	10,290	$77	$81
Total	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**	**47,743**		

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard	0.1930	0.1914	0.1893	0.1871	0.1853	0.1842	0.1833	0.1822	0.1810	0.1792

10 Year Average	2009-2018
Quantity Standard	0.1856
Quality Standard	$402
Service Standard	$75

D.C. Amount (before deductions)	13 Year
Forecast Population + Employment	16,491
$ per Capita + Employee	$75
Eligible Amount	$1,230,064

Service: Fire Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Bld'g Value ($/sq.ft.)	2018 Value ($/ft²)
Station No.1 - 1255 Fairview Street	19,872	19,872	19,872	19,872	19,872	19,872	19,872	21,409	21,409	21,409	$505	$701
Station No.1 - Training Tower	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	1,913	$261	$686
Station No.1 - Maintenance Building	-	-	-	-	-	-	-	6,232	6,232	6,232	$409	$485
Station No.2 - 2300 Upper Middle	8,310	8,310	8,310	8,310	8,310	8,310	8,310	8,310	8,310	8,310	$472	$694
Station No.3 - 1044 Waterdown Rd.	7,707	7,707	7,707	7,707	7,707	7,707	7,707	7,707	7,707	7,707	$473	$672
Station No.4 - 711 Appleby Line	8,320	8,320	8,320	8,320	8,320	8,320	8,320	8,320	8,320	8,320	$439	$702
Station No.5 - 2241 Kilbride St.	4,693	4,693	4,693	4,693	4,693	4,693	4,693	4,693	4,693	4,693	$554	$962
Station No.6 - 455 Cumberland Ave.	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	$365	$536
Station No.7 - 4100 Dundas St.	7,201	7,201	7,201	7,201	7,201	7,201	7,201	7,201	7,201	7,201	$507	$817
Station No.8 - 1837 Ironstone Drive	-	-	7,255	7,255	7,255	7,255	7,255	7,255	7,255	7,255	$503	$870
Total	**68,016**	**68,016**	**75,271**	**75,271**	**75,271**	**75,271**	**75,271**	**83,040**	**83,040**	**83,040**		

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard	0.2749	0.2727	0.2985	0.2949	0.2922	0.2904	0.2890	0.3170	0.3147	0.3118

10 Year Average	2009-2018
Quantity Standard	0.2956
Quality Standard	$710
Service Standard	$210

D.C. Amount (before deductions)	10 Year
Forecast Population + Employment	14,001
$ per Capita + Employee	$210
Eligible Amount	$2,938,670

Service: Fire Vehicles
Unit Measure: No. of vehicles

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/Vehicle)
Emergency Response											
Pump / Rescue	6	6	9	9	9	7	7	7	7	7	$1,200,000
Ladder (Aerial)	2	2	2	2	2	1	1	1	1	1	$1,600,000
Support Unit	2	2	2	2	2	2	2	2	2	2	$1,000,000
Tanker	1	1	1	1	1	1	1	1	1	1	$600,000
Quint	3	3	2	2	2	2	2	2	2	2	$1,600,000
Rescue	2	2	2	2	2	2	2	2	2	2	$900,000
Platoon Chief	1	1	1	1	1	1	1	1	1	1	$75,000
Reserve	-	-	-	-	-	3	3	3	3	3	$1,233,333
Support											
Fire Prevention & PubEd	8	8	8	8	8	8	8	8	8	8	$50,000
Training	2	2	2	2	2	2	2	2	2	2	$70,000
Administration	4	4	4	4	4	4	4	4	4	4	$57,500
Maintenance	3	3	3	3	3	3	3	3	3	3	$70,000
Specialized	2	2	2	2	2	2	2	2	2	2	$27,500
Total	**36**	**36**	**38**	**38**	**38**	**38**	**38**	**38**	**38**	**38**	

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard (per 1,000)	0.15	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14

10 Year Average	2009-2018
Quantity Standard (per 1,000)	0.1461
Quality Standard	$589,391
Service Standard	$86

D.C. Amount (before deductions)	10 Year
Forecast Population + Employment	14,001
$ per Capita + Employee	$86
Eligible Amount	$1,205,626

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/item)
Number of equipped fire fighters	168	172	172	172	172	172	172	172	172	172	$11,630
Total	**168**	**172**	**172**	**172**	**172**	**172**	**172**	**172**	**172**	**172**	

Population + Employment	247,405	249,445	252,179	255,229	257,602	259,208	260,437	261,969	263,843	266,353
Per Capita + Employee Standard (per 1,000)	0.68	0.69	0.68	0.67	0.67	0.66	0.66	0.66	0.65	0.65

10 Year Average	2009-2018
Quantity Standard (per 1,000)	0.6671
Quality Standard	$11,632
Service Standard	$8

D.C. Amount (before deductions)	10 Year
Forecast Population + Employment	14,001
$ per Capita + Employee	$8
Eligible Amount	$108,648

Service: Parkland Development
Unit Measure: Hectacres of Parkland

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/Hectacre)
City	140	140	140	207	207	207	207	207	207	207	$373,828
Community	129	129	129	136	136	136	136	136	136	136	$354,390
Neighbourhood	144	144	149	152	152	152	152	152	152	152	$235,638
Parkette	8	8	8	8	8	8	8	8	9	9	$735,678
Special Resources	90	90	90	90	90	90	90	104	104	108	$207,661
Total	**510**	**510**	**515**	**593**	**593**	**593**	**593**	**607**	**608**	**612**	

Population	172,343	173,714	175,779	178,378	180,300	181,455	182,233	183,314	184,085	185,493
Per Capita Standard (per 1,000 population)	2.96	2.94	2.93	3.32	3.29	3.27	3.25	3.31	3.30	3.30

10 Year Average	2009-2018
Quantity Standard (per 1,000 population)	3.1873
Quality Standard	$310,846
Service Standard	$991

D.C. Amount (before deductions)	10 Year
Forecast Population	6,518
$ per Capita	$991
Eligible Amount	$6,457,774

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

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Bld'g Value ($/sq.ft.)	2018 Value ($/ft²)
Arena	242,360	313,046	313,046	313,046	313,046	313,046	313,046	313,046	313,046	313,046	$395	$543
Community Centre	174,753	174,753	174,753	174,753	228,637	228,637	240,358	240,358	240,358	240,358	$421	$598
Maintenance Building	35,203	35,203	35,203	35,203	38,018	38,018	38,018	38,018	38,018	38,018	$382	$778
Operations Centre (Parks & Rec. Portion)	27,443	27,443	27,443	27,443	27,443	27,443	27,443	27,443	27,443	27,443	$326	$644
Pool	48,836	48,836	48,836	48,836	48,836	48,836	48,836	48,836	48,836	48,836	$435	$587
Specialty	88,296	88,296	88,296	88,296	88,296	88,296	88,296	88,296	88,296	88,296	$506	$726
Tyandaga	15,037	15,037	15,037	15,037	15,037	15,037	15,037	15,037	15,037	15,037	$364	$964
Total	**631,928**	**702,614**	**702,614**	**702,614**	**759,313**	**759,313**	**771,034**	**771,034**	**771,034**	**771,034**		

Population	172,343	173,714	175,779	178,378	180,300	181,455	182,233	183,314	184,085	185,493
Per Capita Standard	3.6667	4.0447	3.9971	3.9389	4.2114	4.1846	4.2310	4.2061	4.1885	4.1567

10 Year Average	2009-2018
Quantity Standard	4.0826
Quality Standard	$608
Service Standard	$2,482

D.C. Amount (before deductions)	10 Year
Forecast Population	6,518
$ per Capita	$2,482
Eligible Amount	$16,179,762

Service: Library Facilities
Unit Measure: ft² of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Bld'g Value ($/sq.ft.)	2018 Value ($/ft²)
Central Library	63,313	63,313	63,313	63,313	63,313	63,313	63,313	63,313	63,313	63,313	$399	$521
Aldershot	5,000	5,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	$470	$610
Appleby	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	$448	$589
Brant Hills	6,878	6,878	6,878	6,878	6,878	6,878	6,878	6,878	6,878	6,878	$478	$596
Kilbride	800	800	800	800	800	800	800	800	800	800	$448	$599
Tansley	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	$462	$703
Alton	-	-	-	-	11,840	11,840	11,840	11,840	11,840	11,840	$416	$523
Total	**91,085**	**91,085**	**93,085**	**93,085**	**104,925**	**104,925**	**104,925**	**104,925**	**104,925**	**104,925**		

Population	172,343	173,714	175,779	178,378	180,300	181,455	182,233	183,314	184,085	185,493
Per Capita Standard	0.5285	0.5243	0.5296	0.5218	0.5819	0.5782	0.5758	0.5724	0.5700	0.5657

10 Year Average	2009-2018
Quantity Standard	0.5548
Quality Standard	$554
Service Standard	$307

D.C. Amount (before deductions)	10 Year
Forecast Population	6,518
$ per Capita	$307
Eligible Amount	$2,003,372

Service: Library Vehicles and Equipment
Unit Measure: No. of library vheicles and equipment

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/item)
Vehicle	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$56,000
Software											
OCS public printing	-	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	$30,000
Integrated Library System	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0	1.0	1.0	$120,000
Cassie	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$3,000
Website	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	$40,000
Digital signage software	-	-	-	-	-	1.0	1.0	1.0	1.0	1.0	$4,000
Public event and room booking	-	-	-	-	-	-	-	-	-	1.0	$17,000
Total	**3.8**	**3.8**	**3.8**	**3.8**	**4.8**	**5.8**	**5.8**	**6.0**	**6.0**	**7.0**	

Population	172,343	173,714	175,779	178,378	180,300	181,455	182,233	183,314	184,085	185,493
Per Capita Standard (per 1,000 population)	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04

10 Year Average	2009-2018
Quantity Standard (per 1,000 population)	0.0282
Quality Standard	$44,681
Service Standard	$1

D.C. Amount (before deductions)	10 Year
Forecast Population	6,518
$ per Capita	$1
Eligible Amount	$8,213

Service: Library Collection Materials
Unit Measure: No. of library collection items

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Value ($/item)
Library Collection Materials	382,348	391,870	387,250	389,109	389,109	396,470	417,461	382,608	391,964	409,913	$41
Total	**382,348**	**391,870**	**387,250**	**389,109**	**389,109**	**396,470**	**417,461**	**382,608**	**391,964**	**409,913**	

Population	172,343	173,714	175,779	178,378	180,300	181,455	182,233	183,314	184,085	185,493
Per Capita Standard	2.22	2.26	2.20	2.18	2.16	2.18	2.29	2.09	2.13	2.21

10 Year Average	2009-2018
Quantity Standard	2.1919
Quality Standard	$41
Service Standard	$90

D.C. Amount (before deductions)	10 Year
Forecast Population	6,518
$ per Capita	$90
Eligible Amount	$585,773

Appendix C
D.C. Cash-Flow Calculations

Cash-Flow Calculation – Transportation Services (Residential)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		SDE per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)						
2019	$ 5,002,566	$ (1,355,420)	$ (1,355,420)	310.8	$ 8,381.12	$ 2,604,492	$ 1,249,072	$ 168,813	$ 6,420,451
2020	$ 6,420,451	$ (1,448,480)	$ (1,491,934)	310.8	$ 8,632.55	$ 2,682,627	$ 1,190,692	$ 210,474	$ 7,821,618
2021	$ 7,821,618	$ (2,108,700)	$ (2,237,120)	310.8	$ 8,891.53	$ 2,763,105	$ 525,986	$ 242,538	$ 8,590,142
2022	$ 8,590,142	$ (2,514,153)	$ (2,747,283)	310.8	$ 9,158.27	$ 2,845,999	$ 98,715	$ 259,185	$ 8,948,042
2023	$ 8,948,042	$ (1,261,700)	$ (1,420,054)	310.8	$ 9,433.02	$ 2,931,379	$ 1,511,324	$ 291,111	$ 10,750,477
2024	$ 10,750,477	$ (308,000)	$ (357,056)	310.8	$ 9,716.01	$ 3,019,320	$ 2,662,264	$ 362,448	$ 13,775,189
2025	$ 13,775,189	$ (2,471,920)	$ (2,951,602)	310.8	$ 10,007.49	$ 3,109,900	$ 158,298	$ 415,630	$ 14,349,117
2026	$ 14,349,117	$ (308,000)	$ (378,801)	310.8	$ 10,307.72	$ 3,203,197	$ 2,824,395	$ 472,839	$ 17,646,352
2027	$ 17,646,352	$ (289,520)	$ (366,755)	310.8	$ 10,616.95	$ 3,299,292	$ 2,932,537	$ 573,379	$ 21,152,267
2028	$ 21,152,267	$ (9,188,080)	$ (11,988,360)	310.8	$ 10,935.46	$ 3,398,271	$ (8,590,089)	$ 505,717	$ 13,067,895
2029	$ 13,067,895	$ (3,279,859)	$ (4,407,856)	165.4	$ 11,263.52	$ 1,863,535	$ (2,544,321)	$ 353,872	$ 10,877,446
2030	$ 10,877,446	$ (3,205,477)	$ (4,437,130)	165.4	$ 11,601.43	$ 1,919,441	$ (2,517,689)	$ 288,558	$ 8,648,315
2031	$ 8,648,315	$ (7,540,951)	$ (10,751,592)	165.4	$ 11,949.47	$ 1,977,024	$ (8,774,568)	$ 126,253	$ -

Cash-Flow Calculation – Transportation Services (Retail)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		GFA per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)						
2019	$ 3,692,804	$ (1,000,546)	$ (1,000,546)	13,930.8	$ 131.64	$ 1,833,897	$ 833,351	$ 123,284	$ 4,649,439
2020	$ 4,649,439	$ (1,069,242)	$ (1,101,319)	13,930.8	$ 135.59	$ 1,888,914	$ 787,596	$ 151,297	$ 5,588,332
2021	$ 5,588,332	$ (1,556,604)	$ (1,651,401)	13,930.8	$ 139.66	$ 1,945,582	$ 294,181	$ 172,063	$ 6,054,575
2022	$ 6,054,575	$ (1,855,902)	$ (2,027,995)	13,930.8	$ 143.85	$ 2,003,949	$ (24,045)	$ 181,277	$ 6,211,806
2023	$ 6,211,806	$ (931,364)	$ (1,048,258)	13,930.8	$ 148.17	$ 2,064,068	$ 1,015,809	$ 201,591	$ 7,429,207
2024	$ 7,429,207	$ (227,360)	$ (263,573)	13,930.8	$ 152.61	$ 2,125,990	$ 1,862,417	$ 250,812	$ 9,542,437
2025	$ 9,542,437	$ (1,824,726)	$ (2,178,819)	13,930.8	$ 157.19	$ 2,189,769	$ 10,951	$ 286,437	$ 9,839,825
2026	$ 9,839,825	$ (227,360)	$ (279,624)	13,930.8	$ 161.90	$ 2,255,463	$ 1,975,838	$ 324,832	$ 12,140,496
2027	$ 12,140,496	$ (213,718)	$ (270,732)	13,930.8	$ 166.76	$ 2,323,126	$ 2,052,394	$ 395,001	$ 14,587,891
2028	$ 14,587,891	$ (6,782,474)	$ (8,849,590)	13,930.8	$ 171.76	$ 2,392,820	$ (6,456,769)	$ 340,785	$ 8,471,906
2029	$ 8,471,906	$ (2,421,132)	$ (3,253,799)	10,021.1	$ 176.92	$ 1,772,916	$ (1,480,884)	$ 231,944	$ 7,222,967
2030	$ 7,222,967	$ (2,366,225)	$ (3,275,409)	10,021.1	$ 182.23	$ 1,826,103	$ (1,449,305)	$ 194,949	$ 5,968,611
2031	$ 5,968,611	$ (5,566,593)	$ (7,936,630)	10,021.1	$ 187.69	$ 1,880,886	$ (6,055,744)	$ 87,133	$ 0

Cash-Flow Calculation – Transportation Services (Non-Retail)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		GFA per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)						
2019	$ 2,674,099	$ (724,534)	$ (724,534)	20,129.3	$ 67.16	$ 1,351,851	$ 627,317	$ 89,633	$ 3,391,049
2020	$ 3,391,049	$ (774,278)	$ (797,507)	20,129.3	$ 69.17	$ 1,392,407	$ 594,900	$ 110,655	$ 4,096,604
2021	$ 4,096,604	$ (1,127,196)	$ (1,195,842)	20,129.3	$ 71.25	$ 1,434,179	$ 238,336	$ 126,473	$ 4,461,414
2022	$ 4,461,414	$ (1,343,929)	$ (1,468,548)	20,129.3	$ 73.39	$ 1,477,204	$ 8,656	$ 133,972	$ 4,604,042
2023	$ 4,604,042	$ (674,436)	$ (759,084)	20,129.3	$ 75.59	$ 1,521,520	$ 762,437	$ 149,558	$ 5,516,037
2024	$ 5,516,037	$ (164,640)	$ (190,863)	20,129.3	$ 77.85	$ 1,567,166	$ 1,376,303	$ 186,126	$ 7,078,465
2025	$ 7,078,465	$ (1,321,354)	$ (1,577,765)	20,129.3	$ 80.19	$ 1,614,181	$ 36,415	$ 212,900	$ 7,327,781
2026	$ 7,327,781	$ (164,640)	$ (202,486)	20,129.3	$ 82.60	$ 1,662,606	$ 1,460,120	$ 241,735	$ 9,029,636
2027	$ 9,029,636	$ (154,762)	$ (196,047)	20,129.3	$ 85.07	$ 1,712,484	$ 1,516,437	$ 293,636	$ 10,839,708
2028	$ 10,839,708	$ (4,911,446)	$ (6,408,324)	20,129.3	$ 87.63	$ 1,763,859	$ (4,644,465)	$ 255,524	$ 6,450,768
2029	$ 6,450,768	$ (1,753,234)	$ (2,356,200)	13,040.5	$ 90.26	$ 1,176,972	$ (1,179,227)	$ 175,835	$ 5,447,376
2030	$ 5,447,376	$ (1,713,473)	$ (2,371,848)	13,040.5	$ 92.96	$ 1,212,282	$ (1,159,566)	$ 146,028	$ 4,433,837
2031	$ 4,433,837	$ (4,030,981)	$ (5,747,215)	13,040.5	$ 95.75	$ 1,248,650	$ (4,498,565)	$ 64,728	$ -

Cash-Flow Calculation – Storm Drainage Services (Residential)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		Debt Repayment from Fire	SDE per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)							
2019	$ 2,664,446	$ (1,038,659)	$ (1,038,659)	54,347	310.8	$ 1,504.69	$ 521,941	$ (516,718)	$ 72,183	$ 2,219,911
2020	$ 2,219,911	$ (536,542)	$ (552,639)	54,347	310.8	$ 1,549.83	$ 535,968	$ (16,670)	$ 66,347	$ 2,269,588
2021	$ 2,269,588	$ (1,855,776)	$ (1,968,793)	54,347	310.8	$ 1,596.33	$ 550,417	$ (1,418,376)	$ 46,812	$ 898,024
2022	$ 898,024	$ (2,052,656)	$ (2,242,992)	54,347	310.8	$ 1,644.22	$ 565,299	$ (1,677,693)	$ (7,971)	$ (787,640)
2023	$ (787,640)	$ (964,741)	$ (1,085,824)	54,347	310.8	$ 1,693.54	$ 580,628	$ (505,196)	$ (57,213)	$ (1,350,049)
2024	$ (1,350,049)	$ (601,140)	$ (696,886)	54,347	310.8	$ 1,744.35	$ 596,416	$ (100,470)	$ (77,016)	$ (1,527,535)
2025	$ (1,527,535)	$ (666,500)	$ (795,836)	54,347	310.8	$ 1,796.68	$ 612,678	$ (183,158)	$ (89,051)	$ (1,799,744)
2026	$ (1,799,744)	$ (65,360)	$ (80,385)	54,347	310.8	$ 1,850.58	$ 629,428	$ 549,044	$ (83,887)	$ (1,334,587)
2027	$ (1,334,587)	$ (54,200)	$ (68,659)	54,347	310.8	$ 1,906.10	$ 646,681	$ 578,022	$ (57,507)	$ (814,072)
2028	$ (814,072)	$ (207,607)	$ (270,880)	54,347	310.8	$ 1,963.28	$ 664,451	$ 393,571	$ (33,951)	$ (454,452)
2029	$ (454,452)	$ (119,482)	$ (160,574)		165.4	$ 2,022.18	$ 334,567	$ 173,993	$ (20,210)	$ (300,669)
2030	$ (300,669)	$ (216,000)	$ (298,995)		165.4	$ 2,082.85	$ 344,604	$ 45,610	$ (15,283)	$ (270,342)
2031	$ (270,342)	$ (54,200)	$ (77,276)		165.4	$ 2,145.33	$ 354,942	$ 277,666	$ (7,325)	$ (0)

Cash-Flow Calculation – Storm Drainage Services (Non-Residential)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		Debt Repayment from Fire	GFA per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)							
2019	$ 1,328,838	$ (200,259)	$ (200,259)	61,285	34,060.1	$ 5.66	$ 254,174	$ 53,915	$ 40,674	$ 1,423,426
2020	$ 1,423,426	$ (173,511)	$ (178,716)	61,285	34,060.1	$ 5.83	$ 259,960	$ 81,244	$ 43,921	$ 1,548,592
2021	$ 1,548,592	$ (531,319)	$ (563,676)	61,285	34,060.1	$ 6.01	$ 265,920	$ (297,756)	$ 41,991	$ 1,292,828
2022	$ 1,292,828	$ (642,403)	$ (701,971)	61,285	34,060.1	$ 6.19	$ 272,060	$ (429,912)	$ 32,336	$ 895,252
2023	$ 895,252	$ (413,030)	$ (464,869)	61,285	34,060.1	$ 6.37	$ 278,383	$ (186,486)	$ 24,060	$ 732,826
2024	$ 732,826	$ (232,546)	$ (269,585)	61,285	34,060.1	$ 6.57	$ 284,896	$ 15,311	$ 22,214	$ 770,352
2025	$ 770,352	$ (463,500)	$ (553,443)	61,285	34,060.1	$ 6.76	$ 291,604	$ (261,839)	$ 19,183	$ 527,695
2026	$ 527,695	$ (183,022)	$ (225,094)	61,285	34,060.1	$ 6.97	$ 298,514	$ 73,420	$ 16,932	$ 618,047
2027	$ 618,047	$ (502,800)	$ (636,932)	61,285	34,060.1	$ 7.17	$ 305,631	$ (331,301)	$ 13,572	$ 300,318
2028	$ 300,318	$ (270,315)	$ (352,699)	61,285	34,060.1	$ 7.39	$ 312,961	$ (39,738)	$ 8,413	$ 268,993
2029	$ 268,993	$ (106,212)	$ (142,741)		23,061.6	$ 7.61	$ 175,519	$ 32,778	$ 8,561	$ 310,332
2030	$ 310,332	$ (434,000)	$ (600,757)		23,061.6	$ 7.84	$ 180,784	$ (419,973)	$ 1,640	$ (108,001)
2031	$ (108,001)	$ (52,800)	$ (75,280)		23,061.6	$ 8.07	$ 186,208	$ 110,928	$ (2,926)	$ 0

Cash-Flow Calculation – Fire, Transit, Parks and Recreation, Library, and Administration Studies Services (Residential)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		Debt Carrying Costs (P&I) 3.54%; 10 Yr Term	SDE per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Internal Loan (from SW RF)	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)								
2018									$ 451,071		
2019	$ 1,963,813	$ (1,594,991)	$ (1,594,991)	(54,347)	310.8	$ 2,532.51	$ 786,996	$ (862,342)		$ 45,979	$ 1,147,450
2020	$ 1,147,450	$ (1,172,042)	$ (1,207,204)	(54,347)	310.8	$ 2,608.49	$ 810,606	$ (450,945)		$ 27,659	$ 724,164
2021	$ 724,164	$ (1,850,387)	$ (1,963,075)	(54,347)	310.8	$ 2,686.74	$ 834,924	$ (1,182,498)		$ (1,742)	$ (460,075)
2022	$ (460,075)	$ (1,203,469)	$ (1,315,063)	(54,347)	310.8	$ 2,767.34	$ 859,972	$ (509,438)		$ (39,314)	$ (1,008,827)
2023	$ (1,008,827)	$ (1,192,285)	$ (1,341,927)	(54,347)	310.8	$ 2,850.36	$ 885,771	$ (510,503)		$ (69,524)	$ (1,588,854)
2024	$ (1,588,854)	$ (951,275)	$ (1,102,789)	(54,347)	310.8	$ 2,935.88	$ 912,344	$ (244,792)		$ (94,119)	$ (1,927,765)
2025	$ (1,927,765)	$ (339,255)	$ (405,088)	(54,347)	310.8	$ 3,023.95	$ 939,714	$ 480,279		$ (92,819)	$ (1,540,305)
2026	$ (1,540,305)	$ (305,053)	$ (375,176)	(54,347)	310.8	$ 3,114.67	$ 967,906	$ 538,383		$ (69,911)	$ (1,071,834)
2027	$ (1,071,834)	$ (305,053)	$ (386,432)	(54,347)	310.8	$ 3,208.11	$ 996,943	$ 556,164		$ (43,656)	$ (559,326)
2028	$ (559,326)	$ (305,053)	$ (398,025)	(54,347)	310.8	$ 3,304.35	$ 1,026,851	$ 574,480		$ (15,154)	$ -

Cash-Flow Calculation – Fire, Transit, Parks and Recreation, Library, and Administration Studies Services (Non-Residential)

Year	Reserve Fund Opening Balance	Dev't Related Expenditures		Debt Carrying Costs (P&I) 3.54%; 10 Yr Term	GFA per Year	DC Rates w. Inflation (3%/Yr)	Anticipated Revenues	Revenues minus Expenditures	Internal Loan (from SW RF)	Interest Earnings (3.0%) / Costs (5.5%)	Reserve Fund Closing Balance after Financing
		Nominal	Inflated (3%/Yr)								
2018									$ 508,655		
2019	$ 848,239	$ (341,664)	$ (341,664)	(61,285)	34,060.1	$ 4.62	$ 157,389	$ (245,560)		$ 21,764	$ 624,442
2020	$ 624,442	$ (189,049)	$ (194,721)	(61,285)	34,060.1	$ 4.76	$ 162,111	$ (93,895)		$ 17,325	$ 547,872
2021	$ 547,872	$ (181,211)	$ (192,246)	(61,285)	34,060.1	$ 4.90	$ 166,974	$ (86,557)		$ 15,138	$ 476,453
2022	$ 476,453	$ (337,129)	$ (368,390)	(61,285)	34,060.1	$ 5.05	$ 171,983	$ (257,691)		$ 10,428	$ 229,190
2023	$ 229,190	$ (322,264)	$ (362,711)	(61,285)	34,060.1	$ 5.20	$ 177,143	$ (246,853)		$ 2,952	$ (14,712)
2024	$ (14,712)	$ (123,694)	$ (143,395)	(61,285)	34,060.1	$ 5.36	$ 182,457	$ (22,223)		$ (1,420)	$ (38,355)
2025	$ (38,355)	$ (128,251)	$ (153,138)	(61,285)	34,060.1	$ 5.52	$ 187,931	$ (26,492)		$ (2,838)	$ (67,685)
2026	$ (67,685)	$ (89,682)	$ (110,297)	(61,285)	34,060.1	$ 5.68	$ 193,568	$ 21,986		$ (3,118)	$ (48,817)
2027	$ (48,817)	$ (89,682)	$ (113,606)	(61,285)	34,060.1	$ 5.85	$ 199,375	$ 24,484		$ (2,012)	$ (26,344)
2028	$ (26,344)	$ (89,682)	$ (117,015)	(61,285)	34,060.1	$ 6.03	$ 205,357	$ 27,057		$ (714)	$ (0)

Appendix D
Long-Term Capital and Operating Cost Examination

Appendix D: Long-Term Capital and Operating Cost Examination

As a requirement of the D.C.A., 1997 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 savings attributable to economies of scale or cost sharing where applicable, and prorate the cost on a per unit basis (i.e. sq.ft. of building space, per vehicle, etc.). This was undertaken through a review of the City's 2017 Financial Information Return.

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as lifecycle cost. By definition, lifecycle costs are all the costs which are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The method selected for lifecycle costing is the sinking fund method which provides that money will be contributed annually and invested, so that those funds will grow over time to equal the amount required for future replacement.

Table D-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 municipal 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 D-1
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Transportation Services	2,592,694	37,366	2,630,060
2. Storm Drainage Services	319,151	19,673	338,824
3. Fire Services	-	-	-
4. Transit Services	74,195	26,762	100,956
5. Parks and Recreation Services	529,193	23,769	552,962
6. Library Services	55,990	344	56,334
7. Development-Related Studies	-	-	-
Total	**3,571,222**	**107,914**	**3,679,136**

Appendix E
Local Service Policy

Appendix E: Local Service Policy

This Appendix sets out the City's General Policy Guidelines on Development Charges (D.C.) and local service funding for Transportation Services, Storm Drainage, Water Services, Wastewater Services, and Parkland Development. The guidelines outline, in general terms, the size and nature of engineered infrastructure that is included in the study as a D.C. project, versus infrastructure that is considered as a local service, to be emplaced separately by landowners, pursuant to a development agreement.

The following policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered, in the context of these policy guidelines as subsection 59(2) of *the Development Charges Act, 1997*, as amended (D.C.A.) on its own merits having regard to, among other factors, the nature, type and location of the development and any existing and proposed development in the surrounding area, as well as the location and type of services required and their relationship to the proposed development and to existing and proposed development in the area.

A. Transportation Services

1. Local and Collector Roads

a) All Local and Collector Roads Internal to Development (including road surface, streetlighting, storm sewers, bridges, culverts, sidewalks, bike lanes, bike paths, bus landing pads, noise walls, utilities, etc.) – Direct developer responsibility under s.59 of the D.C.A. (as a local service).
b) Local and Collector Roads External to Development – If local service within the area to which the plan relates, direct developer responsibility under s.59 of the D.C.A.; otherwise, include the DC calculation to the extern permitted under s.5(1) of the D.C.A. (dependent on local circumstances).

2. Traffic Signals and Intersection Improvements

a) Local Street / Private Entrances (including signals, turn lanes, islands, sidewalk and utility relocates) to Specific Developments – Direct developer responsibility under s.59 of the D.C.A. (as a local service).

3. **Streetlights**

    a) New Streetlights on Regional Roads or Area Municipality Arterial Roads – Include in Regional or Area Municipal DC (based on ten-year standards as per s.5(1) of the D.C.A.), or, in exceptional circumstances, may be direct developer responsibility through local service provisions (s.59 of the D.C.A.).

4. **Sidewalks/Multi-Use Paths**

    a) Sidewalks/Multi-Use Paths on Regional or Area Municipality Arterial Roads – Include in Area Municipal D.C. (based on ten-year standards as per s.5(1) of the DCA), or in exceptional circumstances, may be direct developer responsibility through local service provisions (s.59 of the D.C.A.).
    b) Other Sidewalks External to Development (which are local service within the area to which the plan relates) – Direct developer responsibility as a local service provision (under s.59 of the D.C.A.).

5. **Noise Abatement Measures**

    a) Internal to Development – Direct developer responsibility through local service provisions (s.59 of the D.C.A.).

6. **Land Acquisition for Road Allowances**

    a) Land Acquisition for Arterial Roads – Dedication under the planning Act subdivision provision (s.51) through development lands; in areas with limited or no development, include in City D.C. to the extent eligible.
    b) Land Acquisition for Major Intersections and Grade Separates (beyond dedication requirements) – Include in City D.C. to the extent eligible.

B. Storm Drainage

The following guidelines set out, in general terms, the type of storm water management works that constitutes a local service project and, therefore, are the responsibility of the developer:

1. The conveyance system within creeks internal to a development whereby local benefit is apparent or re-alignment is necessary for the development of adjacent lands (for example: creek erosion and bank stabilization).

2. A share of the cost of culverts based on the local benefits derived.

3. All storm water management facilities, outfalls and localized creek or channel improvements related to a secondary plan will be cost shared among all landowners within the secondary planning area through Developer Cost Sharing Agreements unless over-control is required due to downstream constraints.

4. Any storm water quality control measures required to mitigate impacts of development.

C. Parks and Recreation

The following guidelines set out, in general terms, the type of parks works that constitutes a local service project and, therefore, are the responsibility of the developer:

1. Prepare a detailed drainage and grading plan for the park.

2. Undertake the soil stripping and grading in accordance with the plan.

3. Undertake temporary restoration, including the provision of 150mm of topsoil and seeding for the entire park.

4. Provide an “as built” topographical survey of the park as graded.

5. Perimeter fencing as required by the subdivision agreement, and in the case of a local park a minimum of one storm drainage catch basin and connection, and in the case of a district park a minimum of two storm drainage catch basins and connections, as well as a connection for sanitary sewer and water within the park boundary.

6. Three phase hydro to within the park boundary.

7. Meter and water chamber installed within the park block.

Appendix F
Proposed D.C. By-Law

THE CORPORATION OF THE CITY OF BURLINGTON

BY-LAW NUMBER **-2019

Development Charges By-law for the City of Burlington

WHEREAS subsection 2(1) of the *Development Charges Act, 1997* (the "Act"), S.O. 1997, c.27, as amended, 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 arising from development of the area to which the By-law applies;

AND WHEREAS a development charge background study, entitled "City of Burlington 2019 Development Charges Background Study" (the "Study") prepared by Watson & Associates Economists Ltd. ("Watson") and dated March 28, 2019 has been completed in support of the imposition of the development charges;

AND WHEREAS the Study and the proposed development charges by-law were made available to the public, the Council of the Corporation of the City of Burlington (the "Council") gave notice to the public and held a public meeting through its Committee of the Whole on May 13, 2019 pursuant to section 12 of the Act and the regulations thereto, and Council and the Committee of the Whole received written submissions and heard comments and representations from all persons who asked to be heard;

AND WHEREAS on May 27, 2019, Council approved Finance Report F-13-19 thereby indicating that it intends that the increase in the need for services attributable to the anticipated development will be met;

AND WHEREAS at the meeting held on May 27, 2019, Council expressed its intention that development-related post 2041 mid-year capacity identified in the Study shall be paid for by development charges or other similar charges;

AND WHEREAS at the meeting held on May 27, 2019, Council approved the Study, as amended, and determined that no further public meetings were required under the Act.

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE CITY OF BURLINGTON HEREBY ENACTS AS FOLLOWS:

Definitions

1. In this By-law,

    (a) "accessory dwelling" means a self-contained dwelling unit that is subordinate in purpose to another residential dwelling unit upon the same lot;

(b) “agricultural use” means a bona fide farming operation, including greenhouses which are not connected to Regional water services or wastewater services, sod farms and farms for the breeding and boarding of horses, and includes, but is not limited to, barns, silos and other ancillary buildings to such agricultural use but excluding in all circumstances any portion thereof used for a residential use, a retail use, a non-retail use, marijuana production facility or the breeding, grooming or boarding of household pets;

(c) “air supported structure” means a structure consisting of a pliable membrane which achieves and maintains its shape and support by internal air pressure;

(d) “apartment dwelling” means a building containing more than four dwelling units where the units are connected by an interior corridor. Apartment dwelling also means those stacked townhouse dwellings or back-to-back townhouse dwellings that are development on a block approved for development at a minimum density of sixty (60) units per hectare, excluding the site area used or intended to be used as common outdoor amenity space, pursuant to an executed agreement entered into under section 41 of the *Planning Act*, R.S.O. 1990, c. P.13 or successor legislation;

(e) “back-to-back townhouse dwelling” means a building containing four (4) or more dwelling units separated vertically by a common wall, including a rear common wall, that does not have a rear yard with amenity area;

(f) “bedroom” means a habitable room of at least seven (7) square metres, including a den, loft, study, or other similar area, but does not include a kitchen, bathroom, living room, family room, or dining room;

(g) “building or structure” means a permanent enclosed area greater than ten (10) square metres but does not include that portion of a temporary or seasonal air-supported structure or seasonal sports bubble, but does include above grade storage tanks;

(h) “canopy” means a canopy as defined O.Reg. 332/12 under the *Building Code Act, 1992*, S.O. c. 23, and includes a roof-like structure over a gas bar or service station;

(i) “charitable dwelling” means a residential building or part of a mixed-use building licensed as a charitable home under the *Charitable Institutions Act,* R.S.O. 1990, c. C.9;

(j) “development” means the construction, erection or placing of one (1) or more building or structures on land or the making of an addition or alteration to a building or structure that has the effect of increasing the size or usability thereof, and includes redevelopment;

(k) “development charge” means a charge or charges imposed pursuant to this By-law;

(l) “dwelling unit” means either (1) a room or suite of rooms comprising a single housekeeping unit, used, 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 as defined in this By-law, a room or suite of rooms comprising a single housekeeping unit, used, designed or intended for use by, one person with or without exclusive sanitary and/or culinary facilities or more than one person if sanitary facilities are directly connected and exclusively accessible to more than one room or suite of rooms;

(m) “enclosed” means an area of a building or structure delineated by one or more walls or part walls, and covered by a roof or roof-like structure;

(n) “grade” means the average level of finished ground adjoining a building or structure at all exterior walls;

(o) “group home” means a residential building or the residential portion of a mixed-use building containing a single housekeeping unit which may or not be supervised on a 24-hour a day basis on site by agency staff on a shift rotation basis, funded wholly or in part by any government and licensed, approved or supervised by the Province of Ontario under a general or special Act as may be amended and any successor legislation for the accommodation of residents, exclusive of staff;

(p) “hospice” means means a building or structure used to provide not-for-profit palliative care to the terminally ill;

(q) “hospital” means land, building or structures used and occupied by a public hospital that receives provincial aid under the *Public Hospitals Act,* R.S.O. 1990, c. P. 40, and excluding any portion of the land occupied by a tenant of the hospital;

(r) “hotel” means an establishment offering temporary lodging on a daily or weekly rate of compensation to the public, and where all rooms, suites, apartments or similar forms of accommodation are owned by a single owner or entity;

(s) “industrial use” means non-retail uses where the land or buildings, or portions thereof are intended or designed for manufacturing, producing, processing, storing or distribution of something, and the retail sale by a manufacturer, producer or processor of something that they have manufactured, produced

or processed, if the retails sales are at the site where the manufacturing, production or processing takes place, as well as office space that is ancillary to the producing, storing or distribution of something at the site, but shall not include self-storage facilities or retail warehouses;

(t) "local board" means a municipal service board, municipal business corporation, transportation commission, public library board, board of health, policy service board, planning board, or any other board, commission, committee, body or local authority established or exercising any power under any act with respect to the affairs or purposes of one or more local municipalities or the Region, excluding a conservation authority, any municipal business corporation not deemed to be a local board under O.Reg. 599/06 under the *Municipal Act, 2001*, S.O. c. 25, and any corporation created under the *Electricity Act, 1998*, S.O. 1998, c. 15, Sched. A or successor legislation;

(u) "marijuana production facilities" means a building or structure connected to Regional water services or wastewater services that is used, designed or intended for growing, producing, testing, destroying, storing or distribution, excluding retail sales, of marijuana or cannabis authorized by a license issued by the federal Minister of Health pursuant to section 25 of the Marihuana for Medical Purposes Regulations, SOR/2013-119, under the *Controlled Drugs and Substances Act*, S.C. 1996, c.19.

(v) "mixed-use" means land, buildings or structures used or designed or intended for a combination of non-residential use and residential use;

(w) "motel" means an establishment offering temporary lodging on a daily or weekly rate of compensation to the public, and where all rooms, suites, apartments or similar forms of accommodation are owned by a single owner or entity;

(x) "multiple dwelling" means all dwellings other than single detached dwellings, semi-detached dwellings, apartment dwellings, special care/special need dwellings, and accessory dwellings;

(y) "non-residential use" means land, building or structures or portions thereof intended or used for a use other than for a residential use;

(z) "non-retail use" means any land, building or structures or portions thereof intended or used for a use other than a retail use;

(aa) "nursing home" means a residential building or the residential portion of a mixed-use building licensed as a nursing home under the *Nursing Homes Act,* R.S.O. 1990, c. N.8;

(bb) "place of worship" means any building or part thereof that is exempt from taxation as a place of worship pursuant to paragraph 3 of section 3 of the *Assessment Act*, R.S.O. 1990, c. A.31;

(cc) "redevelopment" means the construction, erection or placing of one or more buildings or structures on land where all or part of a building or structure has previously been demolished on such land, or changing the use of a building or structure from residential to non-residential, or from non-residential to residential, or from one form of residential to another form of residential, or from one form of non-residential to another form of non-residential;

(dd) "residential mobile home" means a trailer, including park model trailers as defined in the Ontario Building Code and Canadian Standards Association, or a transportable prefabricated structure that is situated in one particular place and used for, or intended to be used for, permanent year-round residential occupancy;

(ee) "residential use" means lands, buildings or structures or portions thereof used, or designed or intended for use as a home or residence of one or more individuals, and shall include a single-detached dwelling, a semi-detached dwelling, a multiple dwelling, an apartment dwelling, a special care/special need dwelling, an accessory dwelling and the residential portion of a mixed-use building or structure;

(ff) "retail use" means lands, buildings, structures or any portions thereof, used, designed or intended to be used for the sale, lease, or rental or offer for sale, lease or rental of any manner of goods, commodities, services or entertainment to the public, for consumption or use, whether directly or through membership, but shall exclude commercial, industrial, hotels/motels, as well as offices not located within or as part of a retail development, and self storage facilities;

(gg) "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 unit 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;

(hh) "seasonal air-supported structure" means an air-supported structure that is raised and/or erected for a maximum of six months in any given year to allow for the use of an outdoor sports field or portion thereof during the winter for sports-related activities and includes a seasonal bubble;

(ii) "seasonal structure" means a building or structure placed on land and used, designed or intended for use for: (i) a non-residential purpose during a single season of the year where such building or structure is designed to be easily demolished or removed from the land at the end of the season; or (ii) residential mobile homes that are not able to be occupied year-round due to municipal or provincial land use regulation;

(jj) "semi-detached dwelling" means a building divided vertically into 2 dwelling units each of which has a separate entrance and access to grade;

(kk) "services" means services designated in section 5 of this By-law or in an agreement under section 44 of the Act;

(ll) "single-detached dwelling" means a completely detached building containing only one dwelling unit and includes a residential mobile home;

(mm) "special care/special needs dwelling" means a building:

(i) containing two or more dwelling units which units have a common entrance from street level;

(ii) where the occupants have the right to use in common, halls, stairs, yards, common rooms, and accessory buildings; which may or may not have exclusive sanitary and/or culinary facilities;

(iii) that is designed to accommodate persons with specific needs, including independent permanent living arrangements,

(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 homes and lodges, nursing homes, charitable dwellings, accessory dwellings and group homes;

(nn) "stacked townhouse dwelling" means a building containing two or more dwelling units, each dwelling separates horizontally and/or vertically from another dwelling unit by a common wall;

(oo) "temporary building or structure" means a non-residential building or structure constructed or placed upon lands which is demolished or removed from the lands within three (3) years of building permit issuance, and includes but is not limited to, sales trailers, temporary office trailers and industrial tents provided that such buildings meet the aforementioned criteria but excludes a mobile home;

(pp) "temporary venue" means a building that is placed or constructed on land and is used, designed or intended for use for a particular event where the event has a duration of one (1) week or less and the building is erected immediately before the beginning of the event and is demolished or removed from the land immediately following the end of the event;

(qq) "total floor area" means the sum total of the total areas of the floors whether above or below grade, measured between the exterior faces of the exterior walls, including part walls, of the building or from the centre line of a common wall separating two uses and;

(i) includes the area of a mezzanine as defined in the Ontario Building Code;

(ii) excludes those areas used exclusively for parking garages or structures; and

(iii) includes those areas covered by roofs or roof-like structures, but does not include a canopy or covered patios associated with a restaurant.

2. In this By-law where reference is made to a statute or a section of a statute such reference is deemed to be a reference to any amendments or successor legislation.

DESIGNATION OF SERVICES

3. That it is hereby declared by Council that all development of land within the area to which this By-law applies will increase the need for services as set out in Section 5.

4. The development charge applicable to a development as determined under this By-law shall apply without regard to the services required or used by a particular development.

5. Development Charges shall be imposed for the following categories of services to pay for the increased capital costs required because of increased needs for services arising from development:

(a) transportation
(b) storm drainage
(c) studies
(d) parks and recreation

(e) library
(f) transit
(g) fire

APPLICATION OF BY-LAW - RULES

6. For the purpose of complying with section 6 of the Act:

(a) the area to which this By-law applies shall be in the area described in section 7 of this By-law;

(b) the rules developed under paragraph 9 of subsection 5(1) of the Act for determining if development charges are payable under this By-law in any particular case;

(c) and for determining the amount of the charges shall be as set forth in sections 5 through 42, inclusive of this By-law;

(d) the rules for exemptions, relief and adjustments shall be as set forth in section 18 through section 30 inclusive; the indexing of charges shall be in accordance with section 38 of this By-law and there shall be no phasing in as provided in section 31 of this By-law; and

(e) the rules with respect to the redevelopment of lands shall be in accordance with the rules set forth in sections 29 and 30 of this By-law.

Area to which By-law Applies

7. Subject to section 8, this By-law applies to all lands in the geographic area of the City.

8. This By-law shall not apply to lands that are owned by and used for the purposes of:

(a) the City or a local board thereof;

(b) a board as defined in subsection (a) of the *Education Act*; R.S.O. 1990, c. E.2;

(c) the Regional Municipality of Halton or any local board thereof.

Approvals for Development

9. Development charges shall be imposed upon all lands, buildings or structures that are developed for residential or non-residential uses if the development requires any 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 50 of the *Condominium Act* or s. 9 of the *Condominium Act, 1998*; or

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

10. No more than one development charge for each service designated in section 5 shall be imposed upon any lands or buildings to which the By-law applies even though two or more of the actions described in section 9 are required before the lands or buildings can be developed.

11. Notwithstanding sections 10, 32 and 33, if

   (a) two or more of the actions described in section 9 occur at different times; or

   (b) a second or subsequent building permit is issued

   resulting in increased, additional or different development, then additional development charges shall be imposed in respect of such increased, additional or different development permitted by that action or permit.

12. Where a development requires an approval described in section 9 after the issuance of a building permit and no development charges have been paid, then the development charge shall be paid prior to the granting of the approval required under section 9 of this By-law.

13. If a development does not require a building permit but does require one or more of the approvals described in section 9, then notwithstanding sections 32 and 33, development charges shall nonetheless be payable.

14. Nothing in this By-law prevents Council from requiring in an agreement under section 51, or as a condition of consent or an agreement respecting same under section 53 of the *Planning Act*, that the owner, at his or her own expense, shall install such local services related to or within a plan of subdivision, as council may require in accordance with the City's applicable local services policies in effect at that time, or that the owner pay for local connections to water mains, sanitary sewers and/or storm drainage facilities installed at the owners' expense, including administrative, processing, or inspection fees.

Calculation of Development Charges

15. The development charge with respect to the development of any land, buildings or structures shall be calculated as follows:

    (a) in the case of residential development, including a dwelling unit accessory to a non-residential use or the residential portion of a mixed-use development, based upon the number and type of dwelling units; or

    (b) in the case of non-residential development, or the non-residential portion of a mixed-use development, based upon the total floor area of such development.

Residential Development Charges

16. Development charges as described in Schedule A, shall be imposed upon residential uses of lands, buildings or structures, including a residential dwelling unit accessory to a non-residential use, and in the case of a mixed-use building or structure upon the residential component of the mixed-use building or structure.

Non-Residential Development Charges

17. Development charges, as described in Schedule B, shall be imposed upon non-residential uses of lands, buildings or structures, and in the case of a mixed-use building, upon the non-residential uses of the mixed-use building or structure.

Rules with Respect to Exemptions from Intensification of Existing Housing

18. (a) This By-law does not apply with respect to approvals related to residential development or redevelopment of land, buildings or structures that would have the affect only,

    (i) of permitting the enlargement of an existing dwelling unit;

    (ii) of creating one or two additional dwelling units in an existing single detached dwelling unit; or

    (iii) of creating one additional dwelling unit in any other existing residential building.

    (b) Notwithstanding subsection 18(a)(ii), development charges shall be imposed in accordance with section 16 if the total floor area of the additional one or two dwelling units in the single detached dwelling exceeds the total floor area of the dwelling unit already in the building.

    (c) Notwithstanding subsection 18(a)(iii), development charges shall be imposed in accordance with subsection 16 if the additional dwelling unit has a total floor area greater than:

    (i) in the case of a semi-detached or row dwelling, the total floor area of the dwelling unit already in the building; and

    (ii) in the case of any other residential building, the total floor area of the smallest dwelling unit already in the building.

Rules with respect to Industrial Expansion Exemption

19. That if development includes the enlargement of the total floor area of an existing industrial building, the amount of the development charges that is payable is the following:

    (a) if the total floor area is enlarged by fifty percent (50%) or less, the amount of the development charges in respect of the enlargement is zero; or

    (b) if the total floor area is enlarged by more than fifty percent (50%), development charges are payable on the amount by which the enlargement exceeds fifty percent (50%) of the total floor area before the enlargement.

20. For the purpose of section 19, the term "existing industrial building" shall have the same meaning as the term has in O. Reg. 82/98 made under the Act.

21. That for the purpose of interpreting the definition of "existing industrial building" contained in O.Reg. 82/98 made under the Act and as referenced in section 20, regard shall be had for the classification of the lands in question pursuant to the *Assessment Act*, R.S.O. 1990, c. A.31, and in particular:

    (a) whether the lands fall within a tax class such that taxes on the lands are payable at the industrial tax rate; and

    (b) whether more than fifty percent (50%) of the total floor area of the building has an industrial property code for assessment purposes.

22. Despite section 21, distribution centers, warehouses, buildings used for the bulk storage of goods and truck terminals shall be considered industrial buildings. For the purposes of this by-law, self-storage facilities are not considered to be industrial buildings.

23. For greater certainty in applying the exemption set out in sections 19, 20, 21 and 22, the total floor area of an existing industrial building is enlarged where there is a bona fide increase in the size of the existing industrial building, and the enlarged area is attached to the existing industrial building and is used for or in connection with an industrial purpose as set out in subsection 1(1) of O. Reg. 82/98 made under the Act. Without limiting the generality of the foregoing, the exemption in this section shall not apply where the enlarged area is attached to the existing industrial building by means only of a tunnel, bridge, canopy, corridor or other passage-way, or through a shared below-grade connection such as a service tunnel, foundation, footing or a parking facility.

Lot Coverage Relief

24. Where there is a non-residential development, the development charges otherwise payable pursuant to section 17 shall be calculated in accordance with the following:

(a) for the portion of the total floor area of such development that is less than or equal to one (1.0) times the area of the lot or block, the non-residential development charges under this By-law apply; and

(b) for the portion of the total floor area of such development that is greater than one (1.0) times the area of the lot or block, non-residential development charges shall not apply.

Other Exemptions

25. Notwithstanding section 17, development charges shall not apply to lands, buildings or structures used or to be used for the purposes of:

(a) a hospital, excluding any portion of the lands, buildings or structures occupied by a tenant of the hospital;

(b) facilities providing health and wellness services to senior citizens through programs administered by the Region of Halton or its affiliates;

(c) hospices;

(d) a place of worship;

(e) a conservation authority, unless such buildings or structures are used primarily for or in connection with (i) recreational purposes for which the conservation authority charges admission and/or fees, or (ii) any retail purposes;

(f) seasonal structures;

(g) agricultural uses;

(h) temporary venues; and

(i) a memorial home, clubhouse or athletic grounds of an Ontario branch of the Royal Canadian Legion, pursuant to paragraph 3 of section 3 of the Assessment Act, R.S.O. 1990, c. A.31.

Rules with respect to Temporary Buildings

26. Notwithstanding any other provisions of this By-law, a temporary building or structure shall be exempt from the payment of development charges provided that:

(a) prior to the issuance of the building permit for the building, the owner shall provide to the City securities in the form of cash or a letter of credit acceptable to the City's Director of Finance in the full amount of the development charges otherwise payable pursuant to this By-law; and

(b) within three (3) years of building permit issuance, the owner shall provide to the City evidence, to the City's satisfaction, that the temporary building or structure has been demolished or removed from the lands, whereupon the City shall return to the owner the securities provided pursuant to subsection 26(a), without interest.

27. In the event that the owner does not provide satisfactory evidence of the demolition or removal of the temporary building or structure in accordance with subsection 26(b), the building or structure will be deemed not to be a temporary structure and the City shall transfer the amount secured pursuant to subsection 26(a) into the appropriate development charges reserve funds in payment of the development charges applicable to the building without further notification to the owner.

28. The timely provision of satisfactory evidence of the demolition or removal of the temporary building or structure in accordance with subsection 26(b) shall be solely the owner's responsibility.

Rules with respect to the Redevelopment of Land - Demolition

29. That in the case of a demolition of all or part of a building or structure:

(a) a credit shall be allowed against the development charges otherwise payable pursuant to this By-law, provided that where a demolition permit for a residential building or structure has been issued and has not been revoked:

(i) on or after July 1, 2009, a building permit has been issued for the redevelopment within five (5) years from the date the demolition permit was issued for a residential building or structure.

(b) a credit shall be allowed against the development charges otherwise payable pursuant to this By-law, provided that a demolition permit has been issued for a non-residential building or structure and has not been revoked.

(c) the credit shall be calculated based on the portion of the building or structure used for a residential purpose that has been demolished by multiplying the number and type of dwelling units demolished, or in the case of a building used for a non-residential purpose that has been demolished by multiplying the non-residential total floor area demolished, by the relevant development

charges under this By-law in effect on the date when the development charges are payable pursuant to this By-law with respect to the redevelopment;

(d) no credit shall be allowed where the demolished building or structure or part thereof would have been exempt pursuant to this By-law; and

(e) where the amount of any credit pursuant to this section exceeds, in total, the amount of the development charges otherwise payable under this By-law with respect to the redevelopment, the excess credit shall be reduced to zero and shall not be carried forward unless the carrying forward of such excess credit is expressly permitted by a phasing plan for the redevelopment that is acceptable to the Director of Finance or equivalent.

(f) despite subsection 29 (a) above, where the building cannot be demolished until the new building has been erected, the owner shall notify the City in writing and pay the applicable development charges for the new building in full and if the existing building is demolished not later than twelve (12) months from the date a building permit is issued for the new building, the City shall provide a refund calculated in accordance with this section to the owner without interest. If more than twelve (12) months is required to demolish the existing building, the owner shall make a written request to the City and the City's Director of Finance and/or Treasurer or designate may extend the time in which the existing building must be demolished in his or her sole and absolute discretion and upon such terms and conditions as he or she considers necessary or desirable and such decision shall be made prior to the issuance of the first building permit for the new building.

Rules with respect to the Redevelopment of Land - Conversions

30. That in the case of a conversion of all or part of a building or structure:

(a) a credit shall be allowed against the development charges otherwise payable under this By-law;

(b) the credit shall be calculated based on the portion of the building or structure that is being converted by multiplying the number and type of dwelling units being converted or the non-residential total floor area being converted by the relevant development charges under this By-law in effect on the date when the development charges are payable pursuant to this By-law with respect to the redevelopment;

(c) no credit shall be allowed where the building or structure or part thereof prior to conversion would have been exempt pursuant to this By-law; and

(d) where the amount of any credit pursuant to this section exceeds, in total, the amount of the development charges otherwise payable under this By-law with respect to the redevelopment, the excess credit shall be reduced to zero and shall not be carried forward unless the carrying forward of such excess credit is expressly permitted by a phasing plan for the redevelopment that is acceptable to the Director of Finance or equivalent.

PHASE-IN OF DEVELOPMENT CHARGES

31. The development charges imposed pursuant to this By-law are not being phased-in and are payable in full, subject to the exemptions and credits herein, from the effective date of this By-law.

PAYMENT OF DEVELOPMENT CHARGES

32. Development charges, adjusted in accordance with section 38 of this By-law to the date of payment, are payable at the following times:

    (a) Charges imposed under section 16 in relation to residential use are payable on the date that the first building permit approving the construction of a foundation is issued; and

    (b) Charges imposed under section 17 in relation to non-residential use and retail use are payable on the date that the first building permit approving the construction of a foundation is issued.

33. The City may require, and where so required, an owner shall enter into an agreement, including the provision of security for the owner's obligations under agreement pursuant to section 27 of the Act providing for all or part of a development charge to be paid before or after it otherwise would be payable. The terms of such agreement shall then prevail over the provisions of this By-law.

34. In the alternative to payment by means provided in subsection 32(a) or (b), the City may, by an agreement entered into with the owner, accept the provision of services in full or partial satisfaction of the development charge otherwise payable provided that:

    (a) if the City and the owner cannot agree as to the reasonable cost of doing the work under section 33, the dispute shall be referred to Council for decision; and

    (b) if the credit exceeds the amount of the charge for the service to which the work relates:

        (i) the excess amount shall not be credited against the charge for any other service, unless the City has so agreed under section 38 of the Act; and

        (ii) in no event shall the City be required to make a cash payment to the credit holder.

INTEREST

35. The City shall pay interest on a refund under subsection 18(3), 25(2) and section 36 of the *Development Charges Act, 1997* at a rate equal to the Bank of Canada rate on the date the By-law comes into force.

UNPAID DEVELOPMENT CHARGES

36. If development charges, or any part thereof, remain unpaid after the due date, the amount unpaid shall be added to the tax roll and shall be collected as taxes.

37. If any unpaid development charges are collected as taxes in accordance with section 36, the monies so collected shall be credited to the appropriate development charge reserve fund.

INDEXING

38. Development charges imposed pursuant to this By-law, shall be adjusted without amendment to this by-law, commencing on the first day of April in the year following enactment of this by-law and annually thereafter, in accordance with the Statistics Canada Quarterly, Construction Price Statistics (catalogue number 62-007).

SCHEDULES

39. The following schedules to this By-law form an integral part thereof:

Schedule A – Residential Development Charges

Schedule B – Non-residential Development Charges

DATE BY-LAW IN FORCE

40. This By-law shall come into force on July 1, 2019.

DATE BY-LAW EXPIRES

41. This By-law will expire five (5) years from the date it comes into force, unless it is repealed at an earlier date by a subsequent By-law.

REPEAL

42. By-law 46-2014 be and is hereby repealed effective on the date this By-law comes into force.

REGISTRATION

43. A certified copy of this By-law may be registered on title to any land to which this By-law applies.

SEVERABILITY

44. In the event any provisions, or part thereof, of this By-law is found, by a court of competent jurisdiction, to be *ultra vires*, such provisions, or part thereof, shall be deemed to be severed, and the remaining portion of such provision and all other provisions of the By-law shall remain in full force and effect.

HEADINGS

45. The headings inserted in this By-law are for convenience of reference only and shall not affect the construction or interpretation of this By-law.

SHORT TITLE

46. This By-law may be cited as the City of Burlington Development Charges By-law.

READ and PASSED this day of 2019.

_____ MAYOR
Marianne Meed Ward

_____ CITY CLERK
Angela Morgan

SCHEDULE "A"
CITY OF BURLINGTON
SCHEDULE OF RESIDENTIAL DEVELOPMENT CHARGES

Service	RESIDENTIAL					
	Single and Semi-Detached Dwelling	Apartments - 2 or more Bedrooms	Apartments - Bachelor or 1 Bedroom	Multiples - 3 or more Bedrooms	Multiples - 1 or 2 Bedrooms	Special Care/Special Need
Transportation	$ 8,381	$ 4,263	$ 3,141	$ 6,034	$ 4,777	$ 2,695
Storm Drainage	$ 1,505	$ 765	$ 564	$ 1,084	$ 858	$ 484
Fire	$ 163	$ 83	$ 61	$ 117	$ 93	$ 52
Transit	$ 174	$ 89	$ 65	$ 125	$ 99	$ 56
Parks & Recreation	$ 2,031	$ 1,033	$ 761	$ 1,462	$ 1,158	$ 653
Library	$ 151	$ 77	$ 57	$ 109	$ 86	$ 49
Studies	$ 14	$ 7	$ 5	$ 10	$ 8	$ 5
TOTAL	**$ 12,419**	**$ 6,317**	**$ 4,654**	**$ 8,941**	**$ 7,079**	**$ 3,994**

SCHEDULE "B"
CITY OF BURLINGTON
SCHEDULE OF NON-RESIDENTIAL DEVELOPMENT CHARGES

Service	NON-RESIDENTIAL (per m² of GFA)	
	Retail	Non-Retail
Transportation	$ 131.64	$ 67.16
Storm Drainage	$ 5.66	$ 5.66
Fire	$ 1.66	$ 1.66
Transit	$ 1.78	$ 1.78
Parks & Recreation	$ 0.97	$ 0.97
Library	$ 0.07	$ 0.07
Studies	$ 0.14	$ 0.14
TOTAL	**$ 141.92**	**$ 77.44**