

Consolidated Report

Prepared by Hemson for the City of Kitchener



Development Charges Background Study

July 22, 2022



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List of Acronyms

ASDC Area Specific Development Charge

AMP Asset Management Plan

BTE Benefit to Existing

CBC Community Benefits Charge

COG Cost of Growth

DCA Development Charges Act

DC Development Charges

GFA Gross Floor Area

LSG Local Service Guidelines

PPB Post-Period Benefit

PPU Persons Per Unit

Executive Summary

A. Purpose of 2022 Development Charges Background Study

i. Legislative Context

The City of Kitchener 2022 Development Charges (DC) Background Study is presented as part of the process to lead to the approval of a new DC by-law in compliance with the Development Charges Act, 1997 (DCA). The study is prepared in accordance with the DCA and associated Regulations, including the amendments that came into force on September 18, 2020.

ii. Key Steps in Determining Future Development-Related Projects

In accordance with the DCA and associated regulation, several key steps are required to calculate development charges. This includes preparing a development forecast, establishing historical service levels, determining the increase in need for services arising from development and appropriate shares of costs, attribution to development types (i.e. residential and non-residential) and the final adjustment to the calculated rate of a cash flow analysis.

iii. DC Eligible and Ineligible Costs

Development charges are intended to pay for the initial round of capital costs needed to service new development over an identified planning period. This is based on the overlaying principle that “growth pays for growth”. However, the DCA and associated regulation include several statutory adjustments and deductions that prevent these costs from fully being recovered by growth. Such adjustments include, but are not limited to; ineligible costs, including operating and maintenance costs; ineligible services, including, tourism facilities, parkland acquisition, etc.; deductions

for costs that exceed historical service level caps; and statutory exemptions for specific uses (i.e. industrial expansions).

iv. The Development-Related Capital Forecast is Subject to Change

It is recommended that Council adopt the development-related capital forecast developed for the purposes of the 2022 DC Background Study. However, it is recognized that the DC Study is a point-in-time analysis and there may be changes to project timing, scope and costs through the City's normal annual budget process.

B. Development Forecast

v. Residential and Non-Residential

The table below provides a summary of the anticipated residential and non-residential growth over the 2022-2031 and 2022-2036 planning periods. The development forecast is further discussed in Appendix A.

Development Forecast	2021 Estimate	General Services		Engineered Services	
		Growth 2022 - 2031	Total at 2031	Growth 2022 - 2036	Total at 2036
Residential					
Total Occupied Dwellings	100,604	20,040	120,644	30,030	130,634
<i>Suburban Area</i>		12,195		17,736	
<i>Central Neighbourhood</i>		7,845		12,294	
Total Population					
Census*	250,247	37,851	288,098	58,873	309,120
<i>Population In New Dwellings</i>		50,796		74,619	
<i>Suburban Area</i>		34,983		49,957	
<i>Central Neighbourhood</i>		15,813		24,662	
Non-Residential					
Employment	99,662	15,323	114,985	24,163	123,825
<i>Suburban Area</i>		11,058		17,438	
<i>Central Neighbourhood</i>		4,265		6,726	
Non-Residential Building Space (sq.m.)		695,127		1,086,068	
<i>Suburban Area</i>		518,347		805,552	
<i>Central Neighbourhood</i>		176,783		280,517	

C. Calculated Development Charges

The table below provides the development charges for residential and non-residential development based on the aforementioned forecasts.

	Residential Charge by Unit Type				Non-Residential Charge per m2
	Singles & Semis	Townhouses	Multiples & Duplexes	Lodging Houses	
Total Suburban	\$24,733	\$17,370	\$12,505	\$7,027	\$75.75
Total Suburban Partial Services - No Sanitary Sewer	\$20,403	\$14,329	\$10,316	\$5,797	\$48.55
No Sanitary Sewer or Water Services	\$19,977	\$14,030	\$10,100	\$5,676	\$45.87
Total Central Neighbourhood	\$16,612	\$11,667	\$8,399	\$4,719	\$25.08

D. Long-Term Capital and Operating Costs

On overview of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the DC by-law is provided in the study. This examination is required as one of the provisions of the DCA. Additional details on the long-term capital and operating impact analysis is found in Appendix F. By 2031 the City's net operating costs are estimated to increase by about \$8.65 million. The services included in the analysis are Library, Fire Protection, Indoor Recreation, Outdoor Recreation, Public Works, and Roads and Related. For the services not included in the analysis, the net operating costs are either funded from other revenue sources (i.e. wastewater and water rates) or the capital costs do not have a net operating cost impact.

E. Asset Management Plan

A key function of the Asset Management Plan is to demonstrate that all assets proposed to be funded under the development charges by-law are financially sustainable over their full life cycle.

By 2032, the City will need to fund an additional \$7.29 million per annum in order to properly fund the full life cycle costs of general services' new

assets supported under the 2022 Development Charges By-Law. By 2037, the City will need to fund an additional \$2.83 million for engineered services.

F. Development Charges Administration & Policy Considerations

i. City-wide vs Area-Specific DCs

As required by the DCA, consideration was given to the use of area rating. The infrastructure identified for the general services and Services Related to a Highway of Public Works has been calculated on a City-wide basis. Sanitary Servicing, Services Related to a Highway of Roads and Related, Watermains, Engineering Studies and Storm/Watercourse capital costs are charged only to the area defined as “Suburban” while the Intensification Allowance is only charged on development in the “Central Neighbourhood” area.

ii. 2022 DC By-law

By-law 2022-071 was enacted on May 30th, 2022 and is available on the City’s website as well as in Appendix H.

1. Introduction

The Development Charges Act, 1997 (DCA), and its associated Ontario Regulation 82/98 (O. Reg. 82/98), allow municipalities in Ontario to recover development-related capital costs from new development. This City of Kitchener 2022 Development Charges Background Study is presented as part of a process to establish development charge by-laws that comply with this legislation.

The City of Kitchener is growing and is also an attractive location for a variety of residential and non-residential development. The anticipated development in the City will increase the demand on municipal services. The City wishes to implement development charges to fund capital projects related to development in the City so that development continues to be serviced in a fiscally responsible manner.

The DCA and O. Reg. 82/98 require that a development charges background study be prepared in which development charges are determined with reference to:

- A forecast of the amount, type and location of development anticipated in the City;
- The average capital service levels provided in the City over the ten-year period immediately preceding the preparation of the background study;
- A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the City or its local boards to provide for the anticipated development, including the determination of the development-related and non-development-related components of the capital projects; and

- An examination of the long-term capital and operating costs for the capital infrastructure required for each service to which the development charges by-laws would relate.

This study identifies the development-related net capital costs which are attributable to development that is forecast to occur in the City. The costs are apportioned to types of development (residential and non-residential) in a manner that reflects the increase in the need for each service attributable to each type of development. The study therefore calculates development charges for each type of development.

The DCA provides for a period of public review and comment regarding the proposed development charges. This process includes considering and responding to comments received by members of the public about the calculated charges. Following completion of this process, and in accordance with the DCA and Council's review of this study, it is intended that Council will pass a new development charge by-law.

The remainder of this study sets out the information and analysis upon which the calculated development charges are based.

2. City-wide and Area-Specific Approach to Align Development-Related Costs and Benefits

Several key steps are required when calculating any development charge. However, specific circumstances arise in each municipality which must be reflected in the calculation. In this study, therefore, we have tailored our approach to the City of Kitchener's unique circumstances. The approach to the proposed development charges is focused on providing a reasonable alignment of development-related costs with the development that necessitates them. This study uses an average cost approach for all services which the City provides.

A. Development Charges are based on Three Benefiting Areas

The City provides a range of services to the community it serves and has a sizeable inventory of facilities, land, infrastructure, vehicles and equipment. The DCA provides the City with flexibility when defining services that will be included in the development charge by-laws, provided that the other provisions of the Act and regulations are met. The DCA also permits the City to designate, in its by-laws, the areas within which the development charges shall be imposed. The charges may apply to all lands in the City or to other designated development areas as specified in the by-laws.

For some of the development charge eligible services that the City provides, the full range of capital facilities, land, equipment and infrastructure is available throughout the City. All City residents therefore have access to all facilities. A widely accepted method for sharing the development-related capital costs for such services is to apportion them over all new

development anticipated in the City. Many of the general services - Library, Fire Protection, Indoor and Outdoor Recreation, Development-Related Studies, and Public Works - considered in this study are treated as City-wide services.

Development charges for the engineered services are based on development in the Suburban Area as the development-related infrastructure associated with these services is required to service development in these areas. Charges for these services are based on forecasts of development in the Suburban Area only. Charges for the intensification allowance service are based on development forecasts for the City's existing built-up Central Neighbourhood.

The following services are included in the development charge calculation:

- Library
- Fire Protection
- Indoor Recreation
- Outdoor Recreation
- Development-Related Studies
- Sanitary Servicing
- Services Related to a Highway:
 - Public Works
 - Roads & Related
- Watermains
- Engineering Studies
- Storm/Watercourse
- Intensification Allowance

These services form a reasonable basis on which to plan and administer the City's development charges. It is noted that the analysis of each of these services examines the individual capital facilities and equipment that make

them up. For example, the Fire Protection service includes the fire stations and associated land, vehicles, furniture and equipment.

The resulting development charges for each of the above services would be imposed only against new development in the service area to which the service relates.

B. Key Steps when Determining Development Charges for Future Development-Related Projects

Several key steps are required when calculating development charges for future development-related projects. They are summarized below.

i. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the ten-year period, 2022 to 2031, and long range period from 2022 to 2036, for each service area. The forecast of future residential and non-residential development used in this study was prepared in conjunction with the City's planning staff.

For the residential portion of the forecast, a projection of both the net population growth as well as the population growth in new housing units is required. The net population growth is equivalent to the population in new housing units less the change in population in existing units. The net population growth determines the need for additional facilities and provides the foundation for the development-related capital program.

When calculating the development charge, however, the development-related net capital costs are spread over the total additional population that will result from the addition of new housing units. This population in new units represents the population from which development charges will be collected.

The non-residential portion of the forecast estimates the amount of building space to be developed in the City over the planning periods. Factors for floor space per worker by employment category are used to convert the floorspace forecast into employment for the purposes of allocating development-related capital costs.

ii. Service Categories and Historical Service Levels

The DCA states that the increase in the need for service attributable to anticipated development:

... must not include an increase that would result in the level of service exceeding the average level of that service provided in the municipality over the 10-year period immediately preceding the preparation of the background study...(s. 5. (1) 4.)

Historical ten-year average service levels thus form the basis for the development charge calculation. A review of the City's capital service levels for buildings, land, vehicles, equipment and so on has therefore been prepared as a reference for the calculation so that the portion of future capital projects that may be included in the development charge can be determined. The historical service levels used in this study have been calculated based on the period 2012 to 2021.

Historical service levels have not been calculated for the engineered services of Sanitary Servicing, Watermains, Engineering Studies, Intensification Allowance and Storm/Watercourse as new infrastructure for these services is required to meet engineering standards.

iii. Development-Related Capital Forecast and Analysis of Net Capital Costs to be included in the Development Charges

A development-related capital forecast has been prepared by the City's departments as part of the study. The forecast identifies development-related projects and their gross and net costs, after allowing for capital

grants, subsidies or other contributions as required by the DCA s.5.(2). The capital forecast provides another cornerstone upon which development charges are based. The DCA requires that the increase in the need for service attributable to the anticipated development may include an increase:

... only if the council of the municipality has indicated that it intends to ensure that such an increase in need will be met. (s. 5. (1) 3.)

In conjunction with the DCA, s. 5. (1) 4. referenced above, these sections have the effect of requiring that the development charge be calculated on the lesser of the historical ten-year average service levels or the service levels embodied in future plans of the City. The development-related capital forecast prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, O. Reg 82/98, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

For some projects in the development-related capital forecast, a portion of the project may confer benefits to existing residents. As required by the DCA, s. 5. (1) 6., these portions of projects and their associated net costs are the funding responsibility of the City from non-development charge sources. The amount of financing for such non-growth shares of projects is

also identified as part of the preparation of the development-related capital forecast.

There is also a requirement in the DCA to reduce the applicable development charge by the amount of any uncommitted excess capacity that is available for a service. Such capacity is available to partially meet the future servicing requirements. Adjustments are made in the analysis to meet this requirement of the Act.

iv. Attribution to Types of Development

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and the non-residential sectors. In the City of Kitchener, the allocation is based on the consideration of such factors as projected changes in population and employment over the planning periods and the anticipated demand for services.

The residential component of the development charge is applied to different housing types based on average occupancy factors. The non-residential component is applied on the basis of gross building space in square metres.

v. Final Adjustment

The final determination of the development charge results from adjustments made to development-related net capital costs for each service and sector resulting from a cashflow analysis that takes account of the timing of projects and receipt of development charges. Interest earnings or borrowing costs are accounted for in the calculation as allowed under the DCA.

3. Development Forecast

The following section provides a summary of the development forecasts that have been used as inputs to the development charges calculation for the City. A more detailed summary of the forecasts, including tables illustrating historical trends and forecast results, is provided in Appendix A.

The development forecasts were prepared in conjunction with the City's planning staff. Development charges for the general services of Library, Indoor Recreation, Outdoor Recreation, Development-Related Studies, and Services Related to a Highway of Public Works are based on City-wide forecasts. Charges for the engineered services of Sanitary Servicing, Services Related to a Highway of Roads and Related, Watermains, Engineering Studies and Storm/Watercourse, are based on forecasts of development in the City's Suburban Area. Charges for Intensification Allowance are based on development forecasts for the City's Central Neighbourhood.

A. Residential Forecast

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of both the population growth as well as the population in new housing units is required.

- The population growth determines the need for additional facilities and provides the foundation for the development-related capital program.
- When calculating the development charge, however, the development-related net capital costs are spread over the total additional population that occupy new housing units. Population in new units represents the population from which development charges will be collected.

The total ten-year population in new units is forecast at 50,796 for the City, 34,983 for Suburban Area, and 15,813 for the Central Neighbourhood. The total long-range population in new units to 2036 is forecast at 74,619 for the City, 49,957 for the Suburban Area, and 24,662 for the Central Neighbourhood.

B. Non-Residential Forecast

Development charges are levied on non-residential development as a charge per unit of gross floor area (GFA). As with the residential forecast, the non-residential forecast requires both a projection of employment growth as well as a projection of the employment growth associated with new floorspace in the City.

In order to estimate the number of employees in new floorspace, an assumed floorspace per worker (FSW) for each employment category is then applied to the new floorspace forecast. The following FSW assumptions have been used:

Population-Related	40 m ² per employee
Institutional	50 m ² per employee
Major Office	27 m ² per employee
Employment Land	85 m ² per employee

The City’s employment growth is estimated at 15,323 jobs over the ten-year period to 2031 and 24,163 jobs over the long-range period to 2036. The total ten-year GFA growth is forecast at 695,127 square metres for the City, 518,347 square metres for Suburban Area and 176,783 square metres for Central Neighbourhood. The total long range GFA growth to 2036 is forecast at 1,086,068 square metres for the City, 805,552 square metres for Suburban Areas and 280,517 square metres for Central Neighbourhood.

Table 1 summarizes the development charge development forecast for the City.

TABLE 1

**CITY OF KITCHENER
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL
DEVELOPMENT FORECAST**

Development Forecast	2021 Estimate	General Services		Engineered Services	
		Growth 2022 - 2031	Total at 2031	Growth 2022 - 2036	Total at 2036
Residential					
Total Occupied Dwellings	100,604	20,040	120,644	30,030	130,634
<i>Surburban Area</i>		12,195		17,736	
<i>Central Neighbourhood</i>		7,845		12,294	
Total Population					
Census*	250,247	37,851	288,098	58,873	309,120
<i>Population In New Dwellings</i>		50,796		74,619	
<i>Surburban Area</i>		34,983		49,957	
<i>Central Neighbourhood</i>		15,813		24,662	
Non-Residential					
Employment	99,662	15,323	114,985	24,163	123,825
<i>Surburban Area</i>		11,058		17,438	
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Non-Residential Building Space (sq.m.)		695,127		1,086,068	
<i>Surburban Area</i>		518,347		805,552	
<i>Central Neighbourhood</i>		176,783		280,517	

*Does not include undercount of approx 4%; 2036 with undercount is 322,000

4. Historical Capital Service Levels

The DCA and O. Reg. 82/98 require that the development charges be set at a level no higher than the average service level provided in the City over the ten-year period immediately preceding the preparation of the background study, on a service by service basis.

For non-engineered services (library, fire protection, etc.) the legislative requirement is met by documenting service levels for the preceding ten years: in this case, for the period 2012 to 2021. Typically, service levels for non-engineered services are measured as a ratio of inputs per population or inputs per population and employment. With engineered services such as watermains, engineering and environmental/regulatory standards are used in lieu of inputs per capita.

O. Reg. 82/98 requires that when defining and determining historical service levels both the *quantity* and *quality* of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by the consideration of the replacement monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of dollars per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the development-related capital facilities that are to be charged to new development reflect not only the quantity (number and size) but also the quality (value or cost) of service provided by the City in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by City staff. This information is generally based on historical records and the City and surrounding municipalities' experience with costs to acquire or construct similar facilities, equipment and infrastructure.

Table 2 summarizes service levels for all services included in the development charge calculation. Appendix B provides detailed historical inventory data upon which the calculation of service levels is based for the general services. Appendix C.2 and C.3 provide historical inventory data for services related to a highway.

TABLE 2

**CITY OF KITCHENER
SUMMARY OF AVERAGE HISTORICAL SERVICE LEVELS
2012 - 2021**

Service	Historical Average Service Level
1.0 LIBRARY	\$525.96 per capita
Buildings	\$435.06 per capita
Land	\$6.56 per capita
Materials	\$78.27 per capita
Furniture And Equipment	\$6.07 per capita
2.0 FIRE PROTECTION	\$230.66 per pop. & emp.
Buildings	\$106.69 per pop. & emp.
Land	\$42.35 per pop. & emp.
Vehicles	\$54.70 per pop. & emp.
Equipment And Gear	\$26.92 per pop. & emp.
3.0 INDOOR RECREATION	\$2,791.49 per capita
Buildings	\$2,260.80 per capita
Land	\$296.87 per capita
Furniture And Equipment	\$158.18 per capita
Parking Lots	\$75.64 per capita
4.0 OUTDOOR RECREATION	\$1,536.12 per capita
Parkland	\$934.43 per capita
Park Facilities	\$435.69 per capita
Park Buildings and Fleet	\$166.00 per capita
5.0 PUBLIC WORKS	\$495.21 per pop. & emp.
Buildings	\$321.43 per pop. & emp.
Land	\$57.70 per pop. & emp.
Vehicles & Equipment	\$116.08 per pop. & emp.
6.0 ROADS AND RELATED WORKS	\$9,228.84 per pop. & emp.
Roads	\$8,340.42 per pop. & emp.
Bridges & Culverts	\$888.42 per pop. & emp.

5. Development-Related Capital Forecast

The DCA requires the Council of a municipality to express its intent to provide future capital facilities at the level incorporated in the development charges calculation. As noted above in Section 2, O. Reg. 82/98, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

A. A Development-Related Capital Forecast is provided for Council's Approval

Based on the development forecasts summarized in Section 3 and detailed in Appendix A, City staff in collaboration with the consultant, have developed a development-related capital forecast which sets out projects that are required to service anticipated development. For all general services and Services Related to a Highway of Public Works, the capital plan covers the ten-year period from 2022 to 2031. For engineering services the capital plan covers the long range period from 2022 to 2036.

It is recommended that Council adopt the development-related capital forecast developed for the purposes of the development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the capital projects presented here as they will be needed to service the anticipated development in the City. It is however acknowledged that changes to the forecast presented here may occur through the City's normal capital budget process.

B. Development-Related Capital Forecast for General Services

A summary of the ten-year development-related capital program for General Services is presented in Table 3. The table shows that the gross cost of the City's capital forecast is estimated to be \$365.66 million. Grants or subsidies in the amount of \$19.79 million have been identified. Thus, the net cost of the development-related capital program is \$345.87 million.

Of the \$345.87 million net capital cost, approximately \$141.94 million (41 per cent) is related to capital works for the Indoor Recreation Service. The cost of adding new Outdoor Recreation infrastructure totals \$79.15 million (23 per cent).

Another \$56.72 million (16 per cent) is required to fund Public Works infrastructure.

Library services makes up \$41.34 million (12 per cent) of the total net municipal cost. That portion of the City's forecast which relates to the provision of Fire Protection infrastructure totals \$18.85 million (5 per cent). Finally, Development-Related Studies capital costs amounts to \$7.86 million, or 2 per cent of the total.

TABLE 3

CITY OF KITCHENER
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM
GENERAL SERVICES 2022 - 2031
(in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost
1.0 LIBRARY	\$41,375.0	\$37.5	\$41,337.5
1.1 Buildings, Land & Furnishings	\$37,175.0	\$37.5	\$37,137.5
1.2 Material, Furniture & Equipment Acquisitions	\$580.0	\$0.0	\$580.0
1.3 Other Capital	\$3,620.0	\$0.0	\$3,620.0
2.0 FIRE PROTECTION	\$18,850.4	\$0.0	\$18,850.4
2.1 Buildings, Land & Furnishings	\$14,616.0	\$0.0	\$14,616.0
2.2 Vehicles	\$2,459.5	\$0.0	\$2,459.5
2.3 Equipment & Other	\$1,774.9	\$0.0	\$1,774.9
3.0 INDOOR RECREATION	\$159,891.6	\$17,950.6	\$141,941.0
3.2 Indoor Pools	\$55,946.4	\$17,950.6	\$37,995.8
3.3 Indoor Turf Facility	\$37,855.9	\$0.0	\$37,855.9
3.1 Community Centres	\$65,549.3	\$0.0	\$65,549.3
3.4 Studies	\$540.0	\$0.0	\$540.0
4.0 OUTDOOR RECREATION	\$79,151.7	\$0.0	\$79,151.7
4.1 Park Development	\$64,873.6	\$0.0	\$64,873.6
4.2 Trail Development	\$13,583.2	\$0.0	\$13,583.2
4.3 Outdoor Recreation Studies	\$694.9	\$0.0	\$694.9
5.0 DEVELOPMENT-RELATED STUDIES	\$7,860.0	\$0.0	\$7,860.0
5.1 Development-Related Studies	\$7,860.0	\$0.0	\$7,860.0
2.0 PUBLIC WORKS*	\$58,527.1	\$1,801.2	\$56,725.9
2.1 Buildings and Land	\$45,527.1	\$1,801.2	\$43,725.9
2.2 Equipment and Fleet	\$13,000.0	\$0.0	\$13,000.0
TOTAL - 10 YEAR GENERAL SERVICES	\$365,655.7	\$19,789.3	\$345,866.5

* Note this service is an engineered service related to a highway but is a 10-yr capital program so it included in Table 3.

This capital program incorporates those projects identified to be related to development anticipated in the next ten years. It is not implied that all of these costs are to be recovered from new development by way of development charges (see the following Section 6 for the method and determination of net capital costs attributable to development). Portions of this capital program may relate to replacement of existing capital facilities, shares of projects that benefit the existing community, or development anticipated to occur beyond the 2022-2031 planning period.

After these reductions, the remaining development-related capital costs are brought forward to the development charge calculation. Further details on the capital plans for each individual general service category are available in Appendix B and C.2 for Services Related to a Highway: Public Works.

C. Development-Related Capital Forecast for Engineering Services

Table 4 presents a summary of the development-related capital forecast for engineering infrastructure over the period 2022 to 2036. The table shows that the gross cost of the City engineered service capital forecast is estimated to be \$196.10 million. No grants or subsidies have been identified and therefore the full gross cost is used in the calculation of development charges.

Further details on the development charges calculations for the engineering services are available in Appendix C. Details on individual projects in the development-related capital forecast are provided in Appendix D.

TABLE 4

CITY OF KITCHENER

SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM

ENGINEERED SERVICES 2022 - 2036

(in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost
SANITARY SERVICING	\$79,731.4	\$0.0	\$79,731.4
1.1 Sanitary Sewage Works	\$62,914.3	\$0.0	\$62,914.3
1.2 DC Credits/Refunds	\$16,817.1	\$0.0	\$16,817.1
ROADS AND RELATED	\$63,170.4	\$0.0	\$63,170.4
3.1 Road Construction	\$59,661.8	\$0.0	\$59,661.8
3.2 Intersection Improvements	\$639.0	\$0.0	\$639.0
3.3 DC Credits/Refunds	\$2,869.6	\$0.0	\$2,869.6
WATERMAINS	\$12,998.8	\$0.0	\$12,998.8
4.1 Watermain Projects	\$12,998.8	\$0.0	\$12,998.8
ENGINEERING STUDIES	\$5,418.0	\$0.0	\$5,418.0
5.1 Engineering Studies	\$5,418.0	\$0.0	\$5,418.0
STORM/WATERCOURSE	\$20,282.9	\$0.0	\$20,282.9
6.1 Storm/Watercourse Projects	\$14,403.9	\$0.0	\$14,403.9
6.2 Schneider Creek Watercourse	\$5,879.0	\$0.0	\$5,879.0
INTENSIFICATION ALLOWANCE	\$14,500.0	\$0.0	\$14,500.0
7.1 Intensification Allowance	\$4,500.0	\$0.0	\$4,500.0
7.2 Active Transportation Improvements	\$10,000.0	\$0.0	\$10,000.0
TOTAL	\$196,101.4	\$0.0	\$196,101.4

6. Proposed Development Charges are Calculated in Accordance with the DCA

This section summarizes the calculation of development charges for each service category and the resulting total development charge by type of development. For all services, the calculation of the unadjusted per capita (residential) and per square metre (non-residential) charges is reviewed. Adjustments to these amounts resulting from a cashflow analysis that accounts for interest earnings and borrowing costs are also discussed.

For residential development, an adjusted total per capita amount is applied to different housing types on the basis of average occupancy factors. For non-residential development the proposed development charge rates are based on gross floor area (GFA) of building space.

It is noted that the calculation of the development charges does not include any provision for exemptions required under the DCA, for example, the exemption for enlargements of up to fifty per cent on existing industrial buildings. Such legislated exemptions, or other exemptions which Council may choose to provide, will result in a loss of development charge revenue for the affected types of development. Any such revenue loss may not be offset, however, by increasing other portions of the calculated charge.

A. Development Charge Calculation

i. Unadjusted Residential and Non-Residential Development Charge Rates

A summary of the unadjusted residential and non-residential development charges for the general services is presented in Table 5. Further details of the calculation for each individual general service category are available in Appendix B and C.2.

The capital forecast for the general services incorporates those projects identified to be related to development anticipated in the next ten years. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 5 shows that \$54.56 million of the capital forecast relates to replacement of existing capital facilities or for shares of projects that provide benefit to the existing community. Another share of the forecast, \$20.48 million, is either attributable to development beyond the 2031 period (and can therefore only be recovered under future development charge studies) or represents a service level increase in the City. In addition, \$19.33 million has been committed to projects in the capital forecast from existing development charge reserve funds. The amount of \$251.50 million is deemed to be eligible for recovery through DCs in the 2022 to 2031 period.

The total net development related capital costs eligible for recovery for the general services results in unadjusted development charges for each service expressed as a per capita charge for residential development and a charge per square metre of new gross floor area (GFA) for non-residential development. These unadjusted development charges are displayed at the right of Table 5.

Table 6 presents the unadjusted residential and non-residential development charges for the engineering infrastructure. It shows that of the total net cost of the capital program, estimated to be \$196.10 million, and \$22.76 million is considered to replace existing infrastructure or to benefit the existing community. There is \$6.00 million committed DC reserves. There are no costs related to development beyond 2036. The remaining \$167.34 million is carried forward to the development charge calculation. Of this cost, \$124.06 million has been allocated to new residential development and \$43.28 million has been allocated to new non-residential development.

TABLE 5

CITY OF KITCHENER
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
10-YEAR CAPITAL PROGRAM FOR GENERAL SERVICES

10-Year Growth in Population in New Units 50,796
 10-Year Growth in Square Metres 695,127

Service	Development-Related Capital Program (2022 - 2031)								
	Total Net Cost (\$000)	Replacement & Benefit to Existing (\$000)	Committed DC Reserves (\$000)	Other Dev. Related* (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential		Non-Residential	
						Share		Share	
						%	(\$000)	%	(\$000)
LIBRARY	\$41,337.5	\$11,115.8	\$9,847.6	\$3,077.0	\$17,297.1	100%	\$17,297.1	0%	\$0.00
Unadjusted Development Charge Per Capita							\$340.52		
Unadjusted Development Charge Per Sq.M									\$0.00
FIRE PROTECTION	\$18,850.4	\$868.1	\$0.0	\$3,526.2	\$14,456.1	77%	\$11,105.9	23%	\$3,350.19
Unadjusted Development Charge Per Capita							\$218.64		
Unadjusted Development Charge Per Sq.M									\$4.82
INDOOR RECREATION	\$141,941.0	\$156.9	\$0.0	\$11,837.0	\$129,947.1	100%	\$129,947.1	0%	\$0.00
Unadjusted Development Charge Per Capita							\$2,558.22		
Unadjusted Development Charge Per Sq.M									\$0.00
OUTDOOR RECREATION	\$79,151.7	\$20,552.0	\$0.0	\$0.0	\$58,599.7	100%	\$58,599.7	0%	\$0.00
Unadjusted Development Charge Per Capita							\$1,153.63		
Unadjusted Development Charge Per Sq.M									\$0.00
DEVELOPMENT-RELATED STUDIES	\$7,860.0	\$0.0	\$0.0	\$0.0	\$7,860.0	77%	\$6,038.5	23%	\$1,821.55
Unadjusted Development Charge Per Capita							\$118.88		
Unadjusted Development Charge Per Sq.M									\$2.62
PUBLIC WORKS**	\$56,725.9	\$21,863.0	\$9,481.5	\$2,041.7	\$23,339.8	77%	\$17,930.8	23%	\$5,408.97
Unadjusted Development Charge Per Capita							\$353.00		
Unadjusted Development Charge Per Sq.M									\$7.78
TOTAL 10-YEAR GENERAL SERVICES	\$345,866.5	\$54,555.7	\$19,329.2	\$20,481.8	\$251,499.8		\$240,919.1		\$10,580.7
Unadjusted Development Charge Per Capita							\$4,742.89		
Unadjusted Development Charge Per Sq.M									\$15.22

*Development related costs to be considered for funding from other tools and/or future DC Studies.

** Note this service is an engineered service related to a highway but is a 10-yr capital program so it included in Table 3.

TABLE 6

CITY OF KITCHENER
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
CAPITAL PROGRAM FOR ENGINEERED SERVICES TO 2036

Population Growth in New Units to 2036

Growth in Square Metres to 2036

Suburban Areas

49,957

Suburban Areas

805,552

Central Neighbourhoods

24,662

Central Neighbourhoods

280,517

Service	Development-Related Capital Program (2022 - 2036)								
	Total Net Cost (\$000)	Replacement & Benefit to Existing (\$000)	Committed DC Reserves (\$000)	Post-2036 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	Residential Share		Non-Residential Share	
						%	(\$000)	%	(\$000)
SANITARY SERVICING	\$79,731.4	\$3,544.6	\$6,000.0	\$0.0	\$70,186.7	74%	\$52,026.6	26%	\$18,160.1
Unadjusted Development Charge Per Capita							\$1,041.44		
Unadjusted Development Charge Per Sq.M									\$22.54
ROADS AND RELATED	\$63,170.4	\$0.0	\$0.0	\$0.0	\$63,170.4	74%	\$46,825.7	26%	\$16,344.73
Unadjusted Development Charge Per Capita							\$937.33		
Unadjusted Development Charge Per Sq.M									\$20.29
WATERMAINS	\$12,998.8	\$2,552.6	\$0.0	\$0.0	\$10,446.2	74%	\$7,743.4	26%	\$2,702.85
Unadjusted Development Charge Per Capita							\$155.00		
Unadjusted Development Charge Per Sq.M									\$3.36
ENGINEERING STUDIES	\$5,418.0	\$0.0	\$0.0	\$0.0	\$5,418.0	74%	\$4,016.1	26%	\$1,401.85
Unadjusted Development Charge Per Capita							\$80.39		
Unadjusted Development Charge Per Sq.M									\$1.74
STORM/WATERCOURSE	\$20,282.9	\$11,833.4	\$0.0	\$0.0	\$8,449.5	69%	\$5,848.0	31%	\$2,601.5
Unadjusted Development Charge Per Capita							\$117.06		
Unadjusted Development Charge Per Sq.M									\$3.23
INTENSIFICATION ALLOWANCE	\$14,500.0	\$4,833.3	\$0.0	\$0.0	\$9,666.7	79%	\$7,595.3	21%	\$2,071.4
Unadjusted Development Charge Per Capita							\$307.97		
Unadjusted Development Charge Per Sq.M									\$7.38
TOTAL ENGINEERED SERVICES TO 2036	\$196,101.4	\$22,763.9	\$6,000.0	\$0.0	\$167,337.5		\$124,055.2		\$43,282.4
Suburban Area							\$2,331.22		
Unadjusted Development Charge Per Capita									\$51.16
Unadjusted Development Charge Per Sq.M									
Central Neighbourhood							\$307.97		
Unadjusted Development Charge Per Capita									\$7.38
Unadjusted Development Charge Per Sq.M									

The allocation of engineering service costs yields unadjusted charges for each service expressed as a per capita charge for residential development and a charge per square metre for new non-residential development. Further details of the calculations for the engineered services are available in Appendix C. Additional details about specific projects in the capital program are provided in Appendix D.

ii. Adjusted Residential and Non-Residential Development Charge Rates

Final adjustments to the unadjusted development charge rates are made through a cashflow analysis. The analysis, details of which are included in Appendices B and C, considers the borrowing cost and interest earnings associated with the timing of expenditures and development charge receipts for each service category. Table 7 provides the calculated rates by residential unit with the total charge per unit ranging from a high of \$24,733 per unit for single and semi-detached units in the Suburban Area to a low of \$4,719 per unit for lodging units in the Central Neighbourhood.

The calculated unadjusted and adjusted non-residential development charge rates are presented in Table 8. The calculated adjusted rate for new non-residential development is \$75.75 per m² in the Suburban Area and \$25.08 per m² in the Central Neighbourhood, which represents an increase of \$9.37 per m² and \$2.48 per m² from the unadjusted rates of \$66.38 per m² and \$22.61 per m², respectively.

TABLE 7

CITY OF KITCHENER
2022 DEVELOPMENT CHARGES BACKGROUND STUDY
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

Service	Residential Charge By Unit Type (1)							
	Singles & Semis		Townhouses		Multiples & Duplexes		Lodging Houses	
	Central	Suburbs	Central	Suburbs	Central	Suburbs	Central	Suburbs
Library	\$1,394	\$1,394	\$979	\$979	\$705	\$705	\$396	\$396
Fire Protection	\$686	\$686	\$482	\$482	\$347	\$347	\$195	\$195
Indoor Recreation	\$7,326	\$7,326	\$5,145	\$5,145	\$3,704	\$3,704	\$2,082	\$2,082
Outdoor Recreation	\$4,016	\$4,016	\$2,821	\$2,821	\$2,031	\$2,031	\$1,141	\$1,141
Parking	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cemeteries	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Development-Related Studies	\$526	\$526	\$369	\$369	\$266	\$266	\$149	\$149
Subtotal General Services	\$13,948	\$13,948	\$9,796	\$9,796	\$7,053	\$7,053	\$3,963	\$3,963
Sanitary Servicing	\$0	\$4,330	\$0	\$3,041	\$0	\$2,189	\$0	\$1,230
Public Works	\$1,431	\$1,431	\$1,005	\$1,005	\$723	\$723	\$406	\$406
Roads And Related	\$0	\$4,057	\$0	\$2,849	\$0	\$2,051	\$0	\$1,153
Watermains	\$0	\$426	\$0	\$299	\$0	\$216	\$0	\$121
Engineering Studies	\$0	\$355	\$0	\$249	\$0	\$179	\$0	\$101
Storm/Watercourse	\$0	\$186	\$0	\$131	\$0	\$94	\$0	\$53
Intensification Allowance	\$1,233	\$0	\$866	\$0	\$623	\$0	\$350	\$0
Subtotal Engineered Services	\$2,664	\$10,785	\$1,871	\$7,574	\$1,346	\$5,452	\$756	\$3,064
TOTAL CHARGE PER UNIT	\$16,612	\$24,733	\$11,667	\$17,370	\$8,399	\$12,505	\$4,719	\$7,027
(1) Based on Persons Per Unit Of:	3.52	3.52	2.47	2.47	1.78	1.78	1.00	1.00

TABLE 8

CITY OF KITCHENER
2022 DEVELOPMENT CHARGES BACKGROUND STUDY
NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE

Service	Non-Residential Charge per Sq.M.			
	Unadjusted Charge	Adjusted Charge	Unadjusted Charge	Adjusted Charge
	Central	Central	Suburbs	Suburbs
Library	\$0.00	\$0.00	\$0.00	\$0.00
Fire Protection	\$4.82	\$4.31	\$4.82	\$4.31
Indoor Recreation	\$0.00	\$0.00	\$0.00	\$0.00
Outdoor Recreation	\$0.00	\$0.00	\$0.00	\$0.00
Parking	\$0.00	\$0.00	\$0.00	\$0.00
Cemeteries	\$0.00	\$0.00	\$0.00	\$0.00
Development-Related Studies	\$2.62	\$3.32	\$2.62	\$3.32
Subtotal General Services	\$7.44	\$7.63	\$7.44	\$7.63
Sanitary Servicing	\$0.00	\$0.00	\$22.54	\$27.21
Public Works	\$7.78	\$9.02	\$7.78	\$9.02
Roads And Related	\$0.00	\$0.00	\$20.29	\$25.49
Watermains	\$0.00	\$0.00	\$3.36	\$2.67
Engineering Studies	\$0.00	\$0.00	\$1.74	\$2.23
Storm/Watercourse	\$0.00	\$0.00	\$3.23	\$1.51
Intensification Allowance	\$7.38	\$8.44	\$0.00	\$0.00
Subtotal Engineered Services	\$15.17	\$17.45	\$58.94	\$68.13
TOTAL CHARGE PER SQUARE METRE	\$22.61	\$25.08	\$66.38	\$75.75

B. Comparison of 2022 Newly Calculated Development Charges with Charges Currently in Force in City of Kitchener

Table 9 presents a comparison of the newly calculated residential and non-residential development charges with currently imposed development charge rates. It demonstrates that the newly calculated residential development charge rates are increasing by 18 per cent in the Suburban Area and Central Neighbourhood.

Parking and Cemetery services are included in the tables as the rates will be levied against development as permitted under the legislation.

As seen in Table 10, the newly calculated development charge rates for non-residential development increases by \$11.30 per square metre, or 18 per cent, in the Suburban Area and increases by \$1.84 per square metre, or 8 per cent, in the Central Neighbourhood.

TABLE 9

**CITY OF KITCHENER
COMPARISON OF CURRENT AND CALCULATED
RESIDENTIAL DEVELOPMENT CHARGES**

Service	Current Residential Charge / SDU	Current Residential Charge / SDU	Calculated Residential Charge / SDU	Calculated Residential Charge / SDU	Difference in Charge		Difference in Charge	
	Central	Suburbs	Central	Suburbs	Central		Suburbs	
Library	\$1,268	\$1,268	\$1,394	\$1,394	\$126	10%	\$126	10%
Fire Protection	\$587	\$587	\$686	\$686	\$99	17%	\$99	17%
Indoor Recreation	\$5,517	\$5,517	\$7,326	\$7,326	\$1,809	33%	\$1,809	33%
Outdoor Recreation	\$3,476	\$3,476	\$4,016	\$4,016	\$540	16%	\$540	16%
Parking	\$1,336	\$1,336	\$0	\$0	(\$1,336)	-100%	(\$1,336)	-100%
Cemeteries	\$65	\$65	\$0	\$0	(\$65)	-100%	(\$65)	-100%
Development-Related Studies	\$365	\$365	\$526	\$526	\$161	44%	\$161	44%
Subtotal General Services	\$12,614	\$12,614	\$13,948	\$13,948	\$1,334	11%	\$1,334	11%
Sanitary Servicing	\$0	\$2,552	\$0	\$4,330	\$0	N/A	\$1,778	70%
Public Works	\$0	\$1,855	\$1,431	\$1,431	\$1,431	N/A	(\$424)	-23%
Roads And Related	\$0	\$3,253	\$0	\$4,057	\$0	N/A	\$804	25%
Watermains	\$0	\$189	\$0	\$426	\$0	N/A	\$237	125%
Engineering Studies	\$0	\$482	\$0	\$355	\$0	N/A	(\$127)	-26%
Storm/Watercourse	\$0	\$0	\$0	\$186	\$0	N/A	\$186	N/A
Intensification Allowance	\$1,419	\$0	\$1,233	\$0	(\$186)	-13%	\$0	N/A
Subtotal Engineered Services	\$1,419	\$8,331	\$2,664	\$10,785	\$1,245	88%	\$2,454	29%
TOTAL CHARGE PER UNIT	\$14,033	\$20,945	\$16,612	\$24,733	\$2,579	18%	\$3,788	18%

TABLE 10

CITY OF KITCHENER
COMPARISON OF CURRENT AND CALCULATED
NON-RESIDENTIAL DEVELOPMENT CHARGES

Service	Current Non-Residential Charge	Current Non-Residential Charge	Calculated Non-Residential Charge	Calculated Non-Residential Charge	Difference in Charge		Difference in Charge	
	Central	Suburbs	Central	Suburbs	Central		Suburbs	
Library	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	\$0.00	N/A
Fire Protection	\$3.57	\$3.57	\$4.31	\$4.31	\$0.74	21%	\$0.74	21%
Indoor Recreation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	\$0.00	N/A
Outdoor Recreation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	\$0.00	N/A
Parking	\$8.14	\$8.15	\$0.00	\$0.00	(\$8.14)	-100%	(\$8.15)	-100%
Cemeteries	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	\$0.00	N/A
Development-Related Studies	\$2.22	\$2.22	\$3.32	\$3.32	\$1.09	49%	\$1.09	49%
Subtotal General Services	\$13.94	\$24.95	\$7.63	\$7.63	(\$6.31)	-45%	(\$17.32)	-69%
Sanitary Servicing	\$0.00	\$15.57	\$0.00	\$27.21	\$0.00	N/A	\$11.64	75%
Public Works	\$0.00	\$11.01	\$9.02	\$9.02	\$9.02	N/A	(\$1.99)	-18%
Roads And Related	\$0.00	\$19.84	\$0.00	\$25.49	\$0.00	N/A	\$5.64	28%
Watermains	\$0.00	\$1.15	\$0.00	\$2.67	\$0.00	N/A	\$1.52	132%
Engineering Studies	\$0.00	\$2.94	\$0.00	\$2.23	\$0.00	N/A	(\$0.71)	-24%
Storm/Watercourse	\$0.00	\$0.00	\$0.00	\$1.51	\$0.00	N/A	\$1.51	N/A
Intensification Allowance	\$9.30	\$0.00	\$8.44	\$0.00	(\$0.87)	-9%	\$0.00	N/A
Subtotal Engineered Services	\$9.30	\$39.50	\$17.45	\$68.13	\$8.15	88%	\$28.62	72%
TOTAL CHARGE PER SQUARE METRE	\$23.24	\$64.45	\$25.08	\$75.75	\$1.84	8%	\$11.30	18%

7. Cost of Growth Analysis

This section provides a brief examination of the long-term capital and operating costs as well as the asset management-related annual provisions for the capital facilities and infrastructure to be included in the DC by-law. This examination is required as one of the provisions of the DCA. Additional details on the cost of growth analysis, including asset management analysis is included in Appendix F.

A. Asset Management Plan

Tables 11 and 12 provide the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2022-2031 and 2022-2036 DC recoverable portions. The year 2032 and 2037 have been included to calculate the annual contribution for the 2022-2031 and 2022-2036 periods as the expenditures in 2031 and 2036 will not trigger asset management contributions until 2032 and 2037, respectively. As shown in Table 11, by 2032 the City should fund an additional \$7.29 million per annum in order to fund the full life cycle costs of the new assets related to the General and Protection Services supported under the development charges by-law.

Table 12 provides a separate analysis of the annual provisions required for the Engineered Services capital program as the program extends to 2036. As shown in Table 12, the annual provision in 2037 amounts to \$2.83 million.

Table 11: Calculated Annual Provision by 2032 for General Services

General Services	2022-2031 Capital Program		Calculated AMP Annual Provision by 2032	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Library	\$27,145,000	\$14,230,000	\$322,000	\$382,000
Fire Protection	\$14,456,000	\$4,394,000	\$151,000	\$204,000
Indoor Recreation	\$129,947,000	\$29,944,000	\$2,787,000	\$655,000
Outdoor Recreation	\$58,600,000	\$20,552,000	\$3,108,000	\$1,117,000
Public Works*	\$32,821,000	\$25,706,000	\$920,000	\$171,000
Development-Related Studies	\$7,860,000	\$0	\$0	\$0
Total	\$270,829,000	\$94,826,000	\$7,288,000	\$2,529,000

* Note this service is an engineered service related to a highway but has a 10-yr capital program so is included in Table 11.

Table 12: Calculated Annual Provision by 2037 for Engineered Services

Engineered Services	2022-2036 Capital Program		Calculated AMP Annual Provision by 2037	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Sanitary Servicing	\$76,187,000	\$3,545,000	\$954,000	\$107,000
Roads And Related	\$63,170,000	\$0	\$1,259,000	\$0
Watermains	\$10,446,000	\$2,553,000	\$124,000	\$30,000
Engineering Studies	\$5,418,000	\$0	\$0	\$0
Intensification Allowance	\$9,667,000	\$4,833,000	\$398,000	\$199,000
Storm/Watercourse	\$8,449,000	\$11,833,000	\$98,000	\$143,000
Total	\$173,337,000	\$22,764,000	\$2,833,000	\$479,000

B. Long-Term Capital and Operating Costs

Appendix F summarizes the estimated increase in net operating costs that the City will experience for additions associated with the planned capital forecast. These estimates are generally based on the City's 2022 Operating Budget and data from City staff.

By 2031, the City's net operating costs are estimated to increase by \$8.65 million. The most significant portion of this increase relates to operating costs arising from increased Indoor Recreation, Library, and Fire Protection services.

Appendix F also summarizes the components of the development-related capital program that will require funding from non-development charge sources. Of the \$541.97 million in the 2022-2031 and 2022-2036 net capital programs, about \$77.32 million will need to be financed from non-development charge sources over the next ten and fifteen years. This includes shares of projects related to capital replacement and for non-growth shares of projects that provide benefit to the existing community. This is largely related to the general services development-related capital programs which have large non-growth or benefit to existing shares.

Council is made aware of these factors so that they understand the financial implications of the quantum and timing of the projects included in the development-related capital forecast in this study.

C. The Program is deemed to be Financially Sustainable

In summary, the asset management plan and long-term capital and operating analysis contained in Appendix F demonstrates that the City can afford to invest and operate the identified general and engineered services infrastructure over the ten-year and long-term planning period.

Importantly, the City's annual budget review allows staff to continue to monitor and implement mitigating measures should the program become less sustainable.

8. Development Charges Policy and Administration

A. Consideration of Area Rating

In accordance with the DCA, Council must give consideration to the use of area rating, also known as area-specific development charges, as part of the DC Background Study. As part of the City's 2022 DC Background Study, the appropriateness of implementing area-specific development charges for the various City services was examined.

Consistent with the 2019 DC Background Study, Engineered Services benefitting development in the Suburban Area of the City pays for the capital costs related to Sanitary Servicing, Roads and Related, Watermains, Engineering Studies and Storm/Watercourse services. The development in the Central Neighbourhood pays for the capital costs related to the Intensification Allowance.

B. Local Service Guidelines

As permitted under subsection 59 (2) of the DCA, the City of Kitchener has local service guidelines contained in Appendix G. These may be updated outside of the 2022 DC Study if needed.

C. 2022 DC By-Law included in Appendix H

The in-force 2022 DC by-law is available on the City's website as well as in Appendix H.

Appendix A

Development Forecast

Development Forecast

This appendix provides the details of the development forecast used to prepare the 2022 Development Charges Background Study for the City of Kitchener. The forecast method and key assumptions are discussed. The results of the forecasts are presented in the following tables:

Historical Development

Table A-1	Population, Occupied Dwellings & Employment Summary
Table A-2	Annual Housing Completions (CMHC)
Table A-3	Annual Residential Building Permits
Table A-4	Occupied Dwellings by Period of Construction Showing Unit Size
Table A-5	Place of Work Employment

Forecast Development

Table A-6	Population, Occupied Dwellings & Employment Forecast Summary
Table A-7	Housing Growth by Unit Type
Table A-8	Population Growth in New Housing by Unit Type
Table A-9	Suburban Area Housing and Population in New Dwellings
Table A-10	Central Neighbourhood Housing and Population in New Dwellings
Table A-11	City-wide Place of Work Employment
Table A-12	City-wide Non-Residential Floorspace
Table A-13	Sub-Municipal Employment
Table A-14	Suburban Area Non-Residential Floorspace
Table A-15	Central Neighbourhood Non-Residential Floorspace

A. Forecast and Key Assumptions

The *Development Charges Act* (DCA) requires the City to estimate “the anticipated amount, type and location of development” for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough with regards to quantum, type, location and timing of development to allow the City to prepare a reasonable development-related capital program. A ten-year development forecast, from 2022 to 2031, has been used for all the development charge eligible general services in the City. For engineered services, a long-term forecast from 2022 to 2036 has been prepared.

The development forecast is based on estimates of development occurring within the City’s approved development areas. This is consistent with Provincial regulations that require development charges forecasts be based on areas approved for development in a municipality’s official plan.

The forecasts used in this Background Study are consistent with the “Moderate Growth Scenario” adopted by the Region for its development charge calculations, master plans, and business plans. This growth scenario delays achieving the population and employment targets established for the Region by the Provincial *Growth Plan for the Greater Golden Horseshoe* from 2031 to 2041.¹ Under this scenario, the City would achieve a population of 322,000 and employment of 132,500 by 2041.² During the process of

¹ The initial Growth Plan released in 2006 had the population growing to 729,000 by 2031 (“2031A” forecast) in the Region. An amendment to the Growth Plan increased the 2031 projection to 742,000 (“2031B” forecast) and extended the forecast to 2041. In response to lower than anticipated growth in recent years, the Region has developed a moderate growth scenario based on achieving the “2031B” forecast in 2041.

² It is noted that the Regional Official Plan includes a population target of 319,500 and an employment target of 132,500 for 2031 (see Regional Official Plan, 2015, Table 1, p.11). This population target includes a census undercount estimate of 4%. The equivalent “census” population is 306,720.

completing this 2022 DC Study, the Region has been undertaking further work based on the updated Growth Plan but at the time of completing the study those were not available.

In consultation with City staff, it is felt that for development charge purposes these population and employment targets will be achieved by 2036. This approach reflects recent and near-term growth prospects in the City and is consistent with the City's current capital development plans.

Development charges for the General Services of Library, Fire Protection, Indoor Recreation, Outdoor Recreation, and Growth-Related Studies, are based on the City-wide forecasts shown below.

Charges for the Engineered Services of Sanitary Servicing, Services related to a Highway of Public Works and Roads and Related, Watermains, Engineering Studies, and Storm/Watercourse, are based on forecasts of development in the City's Suburban Area. Charges for the Intensification Allowance are based on development forecasts for the City's Central Neighbourhood.

B. Historical Development in the City

The City has experienced steady and sustained population, household and employment growth over the last ten years. The growth was fuelled by the City's role as the largest urban area in a Region that has both a strong local economy and has experienced high levels of net in-migration.

Historical growth and development figures presented here are based on Statistics Canada census and building permit data and CMHC housing market information. A "Census-based" definition of population is used for the purposes of the development charges study. This definition does not include the Census net undercoverage which is typically included in the definition of "total" population used by the City in its *Growth Management*

Plan and by the Region in its Official Plan. For development charges purposes, a ten-year historical period of 2012 to 2021 is used for calculating service levels. Since the 2016 Census data is the latest published in full prior to the calculation of the DC rates³, figures for 2017 to 2022 are estimated.

Table A-1 shows that population growth across the City remained steady over the historical period to 2021. The number of occupied dwelling units in the City increased at slightly higher rate than population over the same period. This difference is the result of a decline in the average number of persons residing in dwelling units.

Employment numbers used in Table A-1 are based on Statistics Canada place of work data. Place of work employment figures record where people work rather than their place of residence. It includes all employment with a regular or no fixed place of work. However, work at home employment is excluded for development charge purposes, this type of employment does not require building floorspace for its activities. Table A-1 shows that the City's employment grew over the last decade, from about 90,355 jobs in 2011 to about 99,662 jobs in 2021. The City's activity rate (the ratio of employment to population) has decreased in recent years as a result of the rate of population growth being higher than that of employment growth.

Details on housing completions in the City since 2012 are provided in Table A-2. The overall market share of single-detached, semi-detached, row and other types of ground-oriented units has been gradually shifting the majority of the units completed to higher density unit types. Similar trends may be seen in the building permit data show in Table A-3.

Table A-4 provides details on historical occupancy patterns in the City. The overall average occupancy level in the City is 2.49 persons per housing unit (PPU). Occupancy levels for recently constructed units (2006-2016) are

³ At the time of completing the study, 2021 population Census figures were made available however the full data would not be released until after the By-law is anticipated to be passed.

typically higher than the overall average and are used in the development charges calculation since they better reflect the number of people that will be residing in new development for single and semi detached dwelling units. The average PPU of single and semi detached units built in the City in the period 2006 to 2016 is 3.52. Average PPUs for recently constructed row housing and apartments are 2.47 and 1.78 respectively.

Table A-5 provides details on the historical place of work in the City since 2012 (estimates have been made for the years 2017 to 2021). Employment grew by 9,332 over the period 2012-2021, excluding work at home associated jobs.

C. Forecast Method and Results

This section describes the method used to establish the development forecast for the periods 2022 to 2031 and 2022 to 2036.

Development charges are levied on residential development as a charge per capita in new units. Therefore, for the residential forecast, a projection of both the *population growth*⁴ as well as the *population in new housing* is required.

- The *population growth* determines the need for additional facilities and provides the foundation for the development-related capital program.
- When calculating the development charge, however, the development-related net capital costs are spread over the total additional population that occupies new housing units. This *population in new units* represents the population from which development charges will be collected.

⁴ Commonly referred to as “net population growth” in the context of development charges.

i. Residential Forecast

The residential forecast for the City is anchored on the population target of 322,000 (including undercount) established by the Region of Waterloo Official Plan for 2031 and assumed to be achieved in 2036 (see above).

The residential development charges calculation is based on a forecast of overall population growth and population growth in new occupied dwelling units for the City and in each of the areas to which the charges apply: the Central Neighbourhood and the Suburban Area. The allocation of population and housing to each area has been made with reference to the supply of land for different housing types in each area, known development proposals, and the pattern of housing planned for through City and Regional policies aimed at promoting intensification.

Table A-6 summarizes the population and occupied dwelling unit development forecast for the City between 2022 and 2036. The City is forecast to grow by about 58,900 persons and 30,030 households over the period.

A breakdown of the housing unit forecast for the City is shown in Tables A-7 and A-8. Population growth in the new units is estimated by applying the following PPUs to the housing unit forecast: 3.52 for single and semi-detached units; 2.47 for rows and other multiples; and 1.78 for apartments. The PPU estimates are based upon the historical time series of population growth in housing by period of construction provided in Table A-4. The total population growth in new units in the City is forecast at 50,796 for the period 2022 to 2031 and at 74,619 for the period 2022 to 2036.

Tables A-9 and A-10 summarize the housing forecast for the Suburban Area and Central Neighbourhood between 2022 and 2036. Overall, the Suburban Area is forecast to grow by 12,195 units between 2022 and 2031 and by about 17,736 units between 2022 and 2036. Population growth in new units

in the Suburban Area is forecast at 34,983 between 2022 and 2031 and at 45,957 between 2022 and 2036.

The vast majority of housing unit growth in the Central Neighbourhood is forecast to be in the form of row units and apartments. Overall, the Central Neighbourhood is forecast to grow by 7,845 units between 2022 and 2031 and by 12,294 units between 2022 and 2036. Population growth in new units in the Central Neighbourhood is forecast at 15,813 between 2022 and 2031 and at 24,662 between 2022 and 2036.

ii. Non-Residential Forecast

The non-residential forecast for the City is anchored on the employment target of 132,500 (including work at home employment) in 2036 established by the Region of Waterloo (see above). Table A-11 shows that total Census employment by place of work (excluding work at home) is forecast to grow by about 24,163 over the forecast period to 2036.

Non-residential development charges are calculated on a per unit of gross floor area (GFA) basis. Therefore, as required by the DCA, a forecast of future non-residential building space has been developed. As with the residential forecast, the GFA forecast covers the ten-year period from 2022 to 2031 for general services and the long-term period from 2022 to 2036 for the engineered services.

The floorspace forecast for industrial, commercial and institutional uses is based on historical floorspace trends and averages. The forecast also accounts for known or expected developments in the near- to medium-term as well as the long-term outlook for employment envisioned by the Regional Official Plan.

An assumed floorspace per worker (FSW) for each employment category is then applied to the new floorspace forecast in order to estimate the number of associated employees. The following FSW assumptions have been used:

Population-Related	40 m2 per employee
Institutional	50 m2 per employee
Major Office	27 m2 per employee
Industrial	85 m2 per employee

The employment and floorspace forecasts for the City are summarized in Table A-12. The total floorspace growth is forecast at 1,086,068 m2 over the long-term to 2036, of which the largest component relates to employment land (industrial) at 487,881 m2 or 45%, followed by major office at 304,505 m2 or 28%, then population-related at 254,391 m2 or 23%, and institutional development at 39,292 m2 or 4%.

Table A-13 summarizes the employment and floorspace forecasts for the Suburban Area and Central Neighbourhood. The breakdown of forecast floorspace by employment type for each sub-municipal area are shown in Tables A-14 and A-15. Based on the distribution of land dedicated for employment uses, the Suburban Area is forecast to accommodate all employment land (industrial) floorspace growth. Growth in other non-residential buildings will be evenly split between the Suburban Area and the Central Neighbourhood.

APPENDIX A - TABLE A-1

CITY OF KITCHENER HISTORICAL POPULATION, OCCUPIED DWELLINGS & EMPLOYMENT SUMMARY

Mid-Year	Census Population	Annual Growth	Occupied Households	Annual Growth	Av. Household Size (PPU)	Place of Work Employment	Annual Growth	Activity Rate
<i>2006</i>	<i>204,670</i>	<i>2,951</i>	<i>79,100</i>	<i>1,377</i>	<i>2.59</i>	<i>90,598</i>	<i>464</i>	<i>44.3%</i>
2007	207,487	2,817	80,505	1,405	2.58	90,550	-48	43.6%
2008	210,343	2,856	81,935	1,430	2.57	90,501	-49	43.0%
2009	213,238	2,895	83,391	1,456	2.56	90,452	-49	42.4%
2010	216,173	2,935	84,872	1,481	2.55	90,403	-49	41.8%
<i>2011</i>	<i>219,150</i>	<i>2,977</i>	<i>86,380</i>	<i>1,508</i>	<i>2.54</i>	<i>90,355</i>	<i>-48</i>	<i>41.2%</i>
2012	221,896	2,746	87,518	1,138	2.54	90,874	519	41.0%
2013	224,677	2,781	88,671	1,153	2.53	91,396	522	40.7%
2014	227,493	2,816	89,839	1,168	2.53	91,921	525	40.4%
2015	230,344	2,851	91,022	1,183	2.53	92,449	528	40.1%
2016	233,230	2,886	92,220	1,198	2.53	92,982	533	39.9%
2017	236,538	3,308	93,777	1,557	2.52	94,302	1,320	39.9%
2018	239,893	3,355	95,220	1,443	2.52	95,605	1,303	39.9%
2019	243,296	3,403	96,134	914	2.53	96,932	1,327	39.8%
2020	246,747	3,451	97,915	1,781	2.52	98,284	1,352	39.8%
2021	250,247	3,500	100,604	2,689	2.49	99,662	1,378	39.8%
<i>Growth 2012 - 2021</i>		31,097		14,224			9,307	

Source: Statistics Canada, Census of Canada, Hemson estimates

APPENDIX A - TABLE A-2

CITY OF KITCHENER
HISTORICAL ANNUAL HOUSING COMPLETIONS (CMHC)

Year	CMHC Annual Housing Completions - Units				Completions - Shares By Unit Type			
	Singles/Semis	Rows	Apts./ Multiples/ Duplexes	Total	Singles/Semis	Rows	Apts./ Multiples/ Duplexes	Total
2012	540	165	136	841	64%	20%	16%	100%
2013	312	209	446	967	32%	22%	46%	100%
2014	438	302	225	965	45%	31%	23%	100%
2015	519	254	744	1,517	34%	17%	49%	100%
2016	633	395	1,098	2,126	30%	19%	52%	100%
2017	665	334	558	1,557	43%	21%	36%	100%
2018	273	283	887	1,443	19%	20%	61%	100%
2019	310	233	371	914	34%	25%	41%	100%
2020	530	382	869	1,781	30%	21%	49%	100%
2021	582	465	1,642	2,689	22%	17%	61%	100%
<i>Average Growth 2012 - 2021</i>	<i>480</i>	<i>302</i>	<i>698</i>	<i>1,480</i>	<i>35%</i>	<i>21%</i>	<i>43%</i>	<i>100%</i>

Source: Canada Mortgage and Housing Corporation (CMHC), Housing Market Information

APPENDIX A - TABLE A-3

CITY OF KITCHENER
HISTORICAL ANNUAL RESIDENTIAL BUILDING PERMITS

Year	Annual Building Permits				Building Permits - Shares By Unit Type			
	Singles/Semis	Rows	Apts./ Multiples/ Duplexes	Total	Singles/Semis	Rows	Apts./ Multiples/ Duplexes	Total
2012	619	130	705	1,454	43%	9%	48%	100%
2013	410	349	417	1,176	35%	30%	35%	100%
2014	304	288	330	922	33%	31%	36%	100%
2015	522	464	1,005	1,991	26%	23%	50%	100%
2016	628	518	526	1,672	38%	31%	31%	100%
2017	867	761	713	2,341	37%	33%	30%	100%
2018	329	398	554	1,281	26%	31%	43%	100%
2019	379	643	2,654	3,676	10%	17%	72%	100%
2020	604	532	2,017	3,153	19%	17%	64%	100%
2021	606	840	1,626	3,072	20%	27%	53%	100%
Growth 2012 - 2021	5,268	4,923	10,547	20,738	25%	24%	51%	100%
<i>Avg Last 10 Years</i>	<i>527</i>	<i>492</i>	<i>1,055</i>	<i>2,074</i>				
<i>Avg Last 5 Years</i>	<i>557</i>	<i>635</i>	<i>1,513</i>	<i>2,705</i>				

Source: Statistics Canada Building Permit Data

APPENDIX A - TABLE A-4

CITY OF KITCHENER
HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

Dwelling Unit Type	Period of Construction										Period of Construction Summaries		
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	Pre 2006	2006-2016	Total
<i>Singles and Semis</i>													
Household Population	11,940	18,475	17,280	21,200	19,370	7,220	9,885	15,790	14,960	9,255	121,160	24,215	145,375
Households	4,730	7,700	6,765	7,485	6,750	2,365	3,105	4,570	4,270	2,610	43,470	6,880	50,350
Household Size	2.52	2.40	2.55	2.83	2.87	3.05	3.18	3.46	3.50	3.55	2.79	3.52	2.89
<i>Rows</i>													
Household Population	530	815	2,385	6,190	4,895	1,910	1,940	3,520	4,270	3,380	22,185	7,650	29,835
Households	160	265	885	2,400	1,820	695	720	1,345	1,720	1,375	8,290	3,095	11,385
Household Size	3.31	3.08	2.69	2.58	2.69	2.75	2.69	2.62	2.48	2.46	2.68	2.47	2.62
<i>Apartments (Incl. Duplexes)</i>													
Household Population	4,925	6,400	9,690	11,260	7,660	3,435	2,760	2,700	2,650	3,240	48,830	5,890	54,720
Households	2,965	3,830	5,565	6,155	4,080	1,780	1,400	1,400	1,410	1,900	27,175	3,310	30,485
Household Size	1.66	1.67	1.74	1.83	1.88	1.93	1.97	1.93	1.88	1.71	1.80	1.78	1.79
<i>All Units</i>													
Household Population	17,395	25,690	29,355	38,650	31,925	12,565	14,585	22,010	21,880	15,875	192,175	37,755	229,930
Households	7,855	11,795	13,215	16,040	12,650	4,840	5,225	7,315	7,400	5,885	78,935	13,285	92,220
Household Size	2.21	2.18	2.22	2.41	2.52	2.60	2.79	3.01	2.96	2.70	2.43	2.84	2.49

Source: Statistics Canada, 2016 National Household Survey Special Run.

APPENDIX A - TABLE A-5

CITY OF KITCHENER
HISTORICAL PLACE OF WORK EMPLOYMENT

Mid-Year	Non-Industrial						Industrial		Total For DC Study	Annual Growth	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
	Population- Related	Annual Growth	Institutional	Annual Growth	Major Office Employment	Annual Growth	Emp. Land (Industrial)	Annual Growth						
2012	17,729	(90)	15,370	141	19,553	344	38,191	118	90,843	513	5,298	273	96,141	786
2013	17,640	(89)	15,512	142	19,903	350	38,310	119	91,365	522	5,586	288	96,951	810
2014	17,551	(89)	15,656	144	20,259	356	38,429	119	91,895	530	5,889	303	97,784	833
2015	17,463	(88)	15,801	145	20,622	363	38,548	119	92,434	539	6,209	320	98,643	859
2016	17,376	(87)	15,947	146	20,991	369	38,668	120	92,982	548	6,545	336	99,527	884
2017	17,712	336	15,998	51	21,548	557	39,044	376	94,302	1,320	6,638	93	100,940	1,413
2018	18,054	342	16,049	51	22,111	563	39,391	347	95,605	1,303	6,732	94	102,337	1,397
2019	18,403	349	16,100	51	22,688	577	39,741	350	96,932	1,327	6,827	95	103,759	1,422
2020	18,759	356	16,151	51	23,280	592	40,094	353	98,284	1,352	6,924	97	105,208	1,449
2021	19,122	363	16,202	51	23,888	608	40,450	356	99,662	1,378	7,023	99	106,685	1,477
Growth 2012 - 2021		1,303		973		4,679		2,377		9,332		1,998		11,330

Note: Employment Values Include No Fixed Place of Work Employment

Source: Statistics Canada, Census of Canada

APPENDIX A - TABLE A-6

CITY OF KITCHENER
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY

Mid-Year	Census Population	Census Pop'n Growth	Occupied Dwellings	Occupied Household Growth	Household Size	Employment by POW	Employment by POW Growth	Activity Rate	Work at Home	Annual Growth	Total w/ Work At Home	Annual Growth
2016	233,230		92,220	1,198	2.53	92,955		39.9%	6,545		99,500	
2017	236,538	3,308	93,777	1,557	2.52	94,302	1,347	39.9%	6,638	93	100,940	1,440
2018	239,893	3,355	95,220	1,443	2.52	95,605	1,303	39.9%	6,732	94	102,337	1,397
2019	243,296	3,403	96,134	914	2.53	96,932	1,327	39.8%	6,827	95	103,759	1,422
2020	246,747	3,451	97,915	1,781	2.52	98,284	1,352	39.8%	6,924	97	105,208	1,449
2021	250,247	3,500	100,604	2,689	2.49	99,662	1,378	39.8%	7,023	99	106,685	1,477
2022	253,797	3,550	102,614	2,010	2.47	101,066	1,404	39.8%	7,122	99	108,188	1,503
2023	257,397	3,600	104,634	2,020	2.46	102,497	1,431	39.8%	7,223	101	109,720	1,532
2024	261,048	3,651	106,644	2,010	2.45	103,956	1,459	39.8%	7,325	102	111,281	1,561
2025	264,751	3,703	108,644	2,000	2.44	105,442	1,486	39.8%	7,429	104	112,871	1,590
2026	268,506	3,755	110,644	2,000	2.43	106,957	1,515	39.8%	7,535	106	114,492	1,621
2027	272,315	3,809	112,644	2,000	2.42	108,502	1,545	39.8%	7,642	107	116,144	1,652
2028	276,178	3,863	114,644	2,000	2.41	110,076	1,574	39.9%	7,750	108	117,826	1,682
2029	280,096	3,918	116,644	2,000	2.40	111,680	1,604	39.9%	7,860	110	119,540	1,714
2030	284,069	3,973	118,644	2,000	2.39	113,317	1,637	39.9%	7,971	111	121,288	1,748
2031	288,098	4,029	120,644	2,000	2.39	114,985	1,668	39.9%	8,085	114	123,070	1,782
2032	292,185	4,087	122,644	2,000	2.38	116,686	1,701	39.9%	8,199	114	124,885	1,815
2033	296,330	4,145	124,644	2,000	2.38	118,419	1,733	40.0%	8,315	116	126,734	1,849
2034	300,533	4,203	126,644	2,000	2.37	120,187	1,768	40.0%	8,433	118	128,620	1,886
2035	304,796	4,263	128,644	2,000	2.37	121,989	1,802	40.0%	8,553	120	130,542	1,922
2036	309,120	4,324	130,634	1,990	2.37	123,825	1,836	40.1%	8,675	122	132,500	1,958
2022 - 2031		37,851		20,040			15,323			1,062		16,385
2022 - 2036		58,873		30,030			24,163			1,652		25,815

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-7

CITY OF KITCHENER
FORECAST OF OCCUPIED HOUSEHOLDS BY UNIT TYPE

Mid-Year	Annual Growth in Total Occupied Households				Shares By Unit Type			
	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total New Households	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total
2022	792	456	762	2,010	39%	23%	38%	100%
2023	766	460	793	2,020	38%	23%	39%	100%
2024	733	460	817	2,010	36%	23%	41%	100%
2025	700	460	840	2,000	35%	23%	42%	100%
2026	700	460	840	2,000	35%	23%	42%	100%
2027	675	465	860	2,000	34%	23%	43%	100%
2028	650	470	880	2,000	33%	24%	44%	100%
2029	625	475	900	2,000	31%	24%	45%	100%
2030	600	480	920	2,000	30%	24%	46%	100%
2031	600	480	920	2,000	30%	24%	46%	100%
2032	571	482	947	2,000	29%	24%	47%	100%
2033	541	484	974	2,000	27%	24%	49%	100%
2034	512	487	1,002	2,000	26%	24%	50%	100%
2035	482	489	1,029	2,000	24%	24%	51%	100%
2036	398	498	1,095	1,990	20%	25%	55%	100%
2022 - 2031	6,842	4,666	8,533	20,040	34%	23%	43%	100%
2022 - 2036	9,345	7,106	13,579	30,030	31%	24%	45%	100%

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-8

CITY OF KITCHENER
FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE*

Mid-Year	Assumed Average Occupancies (PPU)				Forecast Population in New Households			
	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total
2016	3.52	2.47	1.78	2.51	1,350	732	922	3,004
2017	3.52	2.47	1.78	2.54	1,876	930	1,152	3,959
2018	3.52	2.47	1.78	2.58	1,851	843	1,025	3,719
2019	3.52	2.47	1.78	2.61	1,244	522	622	2,388
2020	3.52	2.47	1.78	2.65	2,563	993	1,159	4,714
2021	3.52	2.47	1.78	2.65	3,869	1,499	1,749	7,118
2022	3.52	2.47	1.78	2.62	2,788	1,126	1,356	5,271
2023	3.52	2.47	1.78	2.60	2,698	1,137	1,412	5,247
2024	3.52	2.47	1.78	2.57	2,580	1,137	1,454	5,171
2025	3.52	2.47	1.78	2.55	2,464	1,137	1,495	5,095
2026	3.52	2.47	1.78	2.55	2,464	1,137	1,495	5,095
2027	3.52	2.47	1.78	2.53	2,376	1,149	1,530	5,055
2028	3.52	2.47	1.78	2.51	2,288	1,162	1,566	5,015
2029	3.52	2.47	1.78	2.49	2,200	1,174	1,602	4,975
2030	3.52	2.47	1.78	2.47	2,112	1,186	1,637	4,935
2031	3.52	2.47	1.78	2.47	2,112	1,186	1,637	4,935
2032	3.52	2.47	1.78	2.44	2,008	1,192	1,685	4,886
2033	3.52	2.47	1.78	2.42	1,905	1,197	1,734	4,836
2034	3.52	2.47	1.78	2.39	1,801	1,203	1,782	4,786
2035	3.52	2.47	1.78	2.37	1,698	1,208	1,831	4,737
2036	3.52	2.47	1.78	2.30	1,401	1,230	1,948	4,578
2022 - 2031					24,080	11,532	15,183	50,796
2022 - 2036					32,893	17,563	24,163	74,619

* Based on PPUs of: 3.52 2.47 1.78

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-9

CITY OF KITCHENER
SUBURBAN AREAS
FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE

Mid-Year	Suburban Areas				
	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total New Households	Population in New Housing*
2016	376	148	192	716	2,030
2017	522	188	240	950	2,730
2018	515	171	213	899	2,615
2019	346	106	129	581	1,710
2020	714	201	241	1,155	3,437
2021	1,077	303	364	1,744	5,189
2022	776	228	282	1,286	3,797
2023	751	230	294	1,275	3,735
2024	718	230	302	1,251	3,635
2025	686	230	311	1,227	3,536
2026	686	230	311	1,227	3,536
2027	662	233	318	1,212	3,469
2028	637	235	326	1,198	3,402
2029	613	238	333	1,183	3,335
2030	588	240	340	1,168	3,268
2031	588	240	340	1,168	3,268
2032	559	241	350	1,151	3,188
2033	530	242	361	1,133	3,107
2034	501	243	371	1,115	3,026
2035	473	244	381	1,098	2,945
2036	390	249	405	1,044	2,708
2022 - 2031	6,705	2,333	3,157	12,195	34,983
2022 - 2036	9,159	3,553	5,024	17,736	49,957

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-10

CITY OF KITCHENER
CENTRAL NEIGHBORHOODS
FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE

Mid-Year	Central Neighborhoods				
	Singles & Semis	Rows	Apts./ Multiples/ Duplexes	Total New Households	Population in New Housing*
2016	8	148	327	482	974
2017	11	188	408	607	1,229
2018	11	171	363	544	1,104
2019	7	106	220	333	678
2020	15	201	410	626	1,278
2021	22	303	619	945	1,929
2022	16	228	480	724	1,473
2023	15	230	500	745	1,512
2024	15	230	515	759	1,536
2025	14	230	529	773	1,559
2026	14	230	529	773	1,559
2027	14	233	542	788	1,586
2028	13	235	554	802	1,613
2029	13	238	567	817	1,640
2030	12	240	580	832	1,667
2031	12	240	580	832	1,667
2032	11	241	597	849	1,698
2033	11	242	614	867	1,729
2034	10	243	631	885	1,760
2035	10	244	648	902	1,792
2036	8	249	690	946	1,870
2022 - 2031	137	2,333	5,376	7,845	15,813
2022 - 2036	187	3,553	8,555	12,294	24,662

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-11

CITY OF KITCHENER
FORECAST PLACE OF WORK EMPLOYMENT
NET EMPLOYMENT

Mid-Year	Non-Industrial						Industrial							
	Population Related	Annual Growth	Institutional	Annual Growth	Major Office Employment	Annual Growth	Emp. Land (Industrial)	Annual Growth	Total for DC Study	Annual Growth	Work at Home Total Emp	Annual Growth	Total with Work at Home	Annual Growth
2016	17,376		15,947		21,000		38,700		93,023		6,545		99,568	
2017	17,712	336	15,998	51	21,548	548	39,044	344	94,302	1,279	6,638	93	100,940	1,372
2018	18,054	342	16,049	51	22,111	563	39,391	347	95,605	1,303	6,732	94	102,337	1,397
2019	18,403	349	16,100	51	22,688	577	39,741	350	96,932	1,327	6,827	95	103,759	1,422
2020	18,759	356	16,151	51	23,280	592	40,094	353	98,284	1,352	6,924	97	105,208	1,449
2021	19,122	363	16,202	51	23,888	608	40,450	356	99,662	1,378	7,023	99	106,685	1,477
2022	19,492	370	16,253	51	24,512	624	40,809	359	101,066	1,404	7,122	99	108,188	1,503
2023	19,869	377	16,304	51	25,152	640	41,172	363	102,497	1,431	7,223	101	109,720	1,532
2024	20,253	384	16,356	52	25,809	657	41,538	366	103,956	1,459	7,325	102	111,281	1,561
2025	20,644	391	16,408	52	26,483	674	41,907	369	105,442	1,486	7,429	104	112,871	1,590
2026	21,043	399	16,460	52	27,175	692	42,279	372	106,957	1,515	7,535	106	114,492	1,621
2027	21,450	407	16,512	52	27,885	710	42,655	376	108,502	1,545	7,642	107	116,144	1,652
2028	21,865	415	16,564	52	28,613	728	43,034	379	110,076	1,574	7,750	108	117,826	1,682
2029	22,288	423	16,616	52	29,360	747	43,416	382	111,680	1,604	7,860	110	119,540	1,714
2030	22,719	431	16,669	53	30,127	767	43,802	386	113,317	1,637	7,971	111	121,288	1,748
2031	23,158	439	16,722	53	30,914	787	44,191	389	114,985	1,668	8,085	114	123,070	1,782
2032	23,606	448	16,775	53	31,721	807	44,584	393	116,686	1,701	8,199	114	124,885	1,815
2033	24,062	456	16,828	53	32,549	828	44,980	396	118,419	1,733	8,315	116	126,734	1,849
2034	24,527	465	16,881	53	33,399	850	45,380	400	120,187	1,768	8,433	118	128,620	1,886
2035	25,001	474	16,934	53	34,271	872	45,783	403	121,989	1,802	8,553	120	130,542	1,922
2036	25,482	481	16,988	54	35,166	895	46,190	407	123,825	1,836	8,675	122	132,500	1,958
Growth 2022 - 2031		4,036		520		7,026		3,741		15,323		1,062		16,385
Growth 2022 - 2036		6,360		786		11,278		5,740		24,163		1,652		25,815

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-12

CITY OF KITCHENER FORECAST NON-RESIDENTIAL SPACE (SQUARE METRES OF GROSS FLOOR AREA)

Employment Density Assumptions	
Population Related	40.0 m ² per employee
Institutional	50.0 m ² per employee
Major Office	27.0 m ² per employee
Employment Land	85.0 m ² per employee

Mid-Year	Population Related	Institutional	Major Office	Employment Land (Industrial)	Total for DC Study
2017	13,448	2,540	14,796	29,240	60,024
2018	13,680	2,550	15,201	29,495	60,926
2019	13,960	2,550	15,579	29,750	61,839
2020	14,240	2,550	15,984	30,005	62,779
2021	14,520	2,550	16,416	30,260	63,746
2022	14,800	2,550	16,848	30,515	64,713
2023	15,080	2,550	17,280	30,855	65,765
2024	15,360	2,600	17,739	31,110	66,809
2025	15,640	2,600	18,198	31,365	67,803
2026	15,960	2,600	18,684	31,620	68,864
2027	16,280	2,600	19,170	31,960	70,010
2028	16,600	2,600	19,656	32,215	71,071
2029	16,920	2,600	20,169	32,470	72,159
2030	17,240	2,650	20,709	32,810	73,409
2031	17,560	2,650	21,249	33,065	74,524
2032	17,920	2,650	21,789	33,405	75,764
2033	18,240	2,650	22,356	33,660	76,906
2034	18,600	2,650	22,950	34,000	78,200
2035	18,960	2,650	23,544	34,255	79,409
2036	19,231	2,692	24,164	34,576	80,662
2022 - 2031	161,440	26,000	189,702	317,985	695,127
2022 - 2036	254,391	39,292	304,505	487,881	1,086,068

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-13

CITY OF KITCHENER
EMPLOYMENT GROWTH FORECAST SUMMARY

Mid-Year	Suburban Area		Central Neighbourhoods		City-wide	
	Total Employment	Employment Growth	Total Employment	Employment Growth	Total Employment	Employment Growth
2016	67,130		25,893		93,023	
2017	68,053	923	26,249	356	94,302	1,279
2018	68,994	940	26,611	363	95,605	1,303
2019	69,951	958	26,981	369	96,932	1,327
2020	70,927	976	27,357	376	98,284	1,352
2021	71,921	994	27,741	384	99,662	1,378
2022	72,935	1,013	28,131	391	101,066	1,404
2023	73,967	1,033	28,530	398	102,497	1,431
2024	75,020	1,053	28,936	406	103,956	1,459
2025	76,093	1,072	29,349	414	105,442	1,486
2026	77,186	1,093	29,771	422	106,957	1,515
2027	78,301	1,115	30,201	430	108,502	1,545
2028	79,437	1,136	30,639	438	110,076	1,574
2029	80,594	1,158	31,086	446	111,680	1,604
2030	81,776	1,181	31,541	456	113,317	1,637
2031	82,979	1,204	32,006	464	114,985	1,668
2032	84,207	1,228	32,479	473	116,686	1,701
2033	85,458	1,251	32,961	482	118,419	1,733
2034	86,733	1,276	33,454	492	120,187	1,768
2035	88,034	1,300	33,955	502	121,989	1,802
2036	89,359	1,325	34,466	511	123,825	1,836
2022 - 2031		11,058		4,265		15,323
2022 - 2036		17,438		6,726		24,163

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-14

**CITY OF KITCHENER
SUBURBAN AREAS
FORECAST NON-RESIDENTIAL SPACE (SQUARE METRES OF GROSS FLOOR AREA)**

Year	Suburban Areas				
	Population Related	Institutional	Major Office	Employment Land	Total for DC Study
2017	7,706	1,270	7,398	29,240	45,614
2018	7,839	1,275	7,601	29,495	46,210
2019	7,999	1,275	7,790	29,750	46,814
2020	8,160	1,275	7,992	30,005	47,432
2021	8,320	1,275	8,208	30,260	48,063
2022	8,481	1,275	8,424	30,515	48,695
2023	8,641	1,275	8,640	30,855	49,411
2024	8,802	1,300	8,870	31,110	50,082
2025	8,962	1,300	9,099	31,365	50,726
2026	9,146	1,300	9,342	31,620	51,408
2027	9,329	1,300	9,585	31,960	52,174
2028	9,512	1,300	9,828	32,214	52,854
2029	9,696	1,300	10,085	32,470	53,551
2030	9,879	1,325	10,355	32,810	54,369
2031	10,062	1,325	10,625	33,065	55,077
2032	10,269	1,325	10,895	33,405	55,894
2033	10,452	1,325	11,178	33,660	56,615
2034	10,658	1,325	11,475	34,000	57,458
2035	10,865	1,325	11,772	34,254	58,216
2036	11,019	1,346	12,082	34,575	59,022
2022 - 2031	92,510	13,000	94,853	317,984	518,347
2022 - 2036	145,773	19,646	152,255	487,878	805,552

Source: Hemson Consulting Ltd., 2021

APPENDIX A - TABLE A-15

CITY OF KITCHENER
CENTRAL NEIGHBORHOODS
FORECAST NON-RESIDENTIAL SPACE (SQUARE METRES OF GROSS FLOOR AREA)

Year	Central Neighborhoods				
	Population Related	Institutional	Major Office	Employment Land	Total for DC Study
2017	5,742	1,270	7,398	0	14,410
2018	5,841	1,275	7,601	0	14,717
2019	5,961	1,275	7,790	0	15,026
2020	6,080	1,275	7,992	0	15,347
2021	6,200	1,275	8,208	0	15,683
2022	6,319	1,275	8,424	0	16,018
2023	6,439	1,275	8,640	0	16,354
2024	6,558	1,300	8,870	0	16,728
2025	6,678	1,300	9,099	0	17,077
2026	6,814	1,300	9,342	0	17,456
2027	6,951	1,300	9,585	0	17,836
2028	7,088	1,300	9,828	0	18,216
2029	7,224	1,300	10,085	0	18,609
2030	7,361	1,325	10,355	0	19,041
2031	7,498	1,325	10,625	0	19,448
2032	7,651	1,325	10,895	0	19,871
2033	7,788	1,325	11,178	0	20,291
2034	7,942	1,325	11,475	0	20,742
2035	8,095	1,325	11,772	0	21,192
2036	8,211	1,346	12,081	0	21,638
2022 - 2031	68,930	13,000	94,853	0	176,783
2022 - 2036	108,617	19,646	152,254	0	280,517

Source: Hemson Consulting Ltd., 2021

Appendix B

General Services

Technical Appendix

Introduction and Overview

This appendix provides the detailed analysis undertaken to establish the development charge rates for each of the general services in the City of Kitchener.

The appendix is divided into five sub-sections, with one section for each of the general services:

- B.1 Library
- B.2 Fire Protection
- B.3 Indoor Recreation
- B.4 Outdoor Recreation
- B.5 Development-Related Studies

Every sub-section, with the exception of Development-Related Studies, contains a set of three tables. The tables provide the background data and analysis undertaken to arrive at the calculated development charge rates for that particular service. An overview of the content and purpose of each of the tables is given below.

Table 1 Historical Service Levels

Table 1 presents the data used to determine the ten-year historical service level. The *Development Charges Act* (DCA) and Ontario Regulation 82/98 (O. Reg. 82/98) require that development charges be set at a level no higher than the average service level provided in the City over the ten-year period immediately preceding the preparation of the background study, on a service by service basis. For the purpose of this study, the historical inventory period has been defined as 2012 to 2021.

O. Reg. 82/98 requires that when defining and determining historical service levels both the quantity and quality of service be taken into consideration. In

most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by considering the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of dollars per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the capital facilities that are to be charged to new development reflect not only the quantity (number and size) but also the quality (value or cost) of service provided by the City in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by City staff. This information is generally based on historical records and experience with costs to acquire or construct similar facilities, equipment and infrastructure.

The final page of Table 1 shows the calculation of the “maximum allowable funding envelope”, net of uncommitted excess capacity. The maximum allowable is defined as the ten-year historical service level (expressed as either \$/capita or \$/population and employment) multiplied by the forecast increase in net population or net population and employment over the planning period. The resulting figure is the value of capital infrastructure that must be constructed for that particular service so that the ten-year historical service level is maintained.

There is also a requirement in the DCA to consider “excess capacity” within the City’s existing infrastructure that may be available to partially meet future servicing requirements. If Council has expressed its intent, before or at the time the capacity was created, to recoup the cost of providing the capacity from new development, it is considered “committed excess capacity” under the DCA and the associated capital cost is eligible for recovery. Should uncommitted excess capacity exist it will be determined whether or not this capacity will be available to service new development and, if so, appropriate adjustments will be made to the calculations.

Historical service levels are calculated based on the best available information at the time. As a result of better data sets and asset management practices, the service levels presented in this DC Background Study are higher than those contained in the 2019 DC Background Study. There has been a significant effort by City staff to ensure the funding envelope calculations are based on the most accurate information.

**Table 2 2022 – 2031 Development-Related Capital Program
& Calculation of Unadjusted Development Charge**

The DCA requires that Council express its intent to provide future capital facilities to support future development. Based on the development forecasts presented in Appendix A, a development-related capital program which sets out the projects required to service anticipated development for the ten-year period from 2022 to 2031 has been developed. The development-related capital program for each service is shown as Table 2 of each sub-section.

The gross costs of projects shown in the capital programs are based on costs shown in the City’s ten-year capital program, adjusted downwards to current (2022) dollars where applicable. In some cases, based on the direction of staff, changes have been made to the amount and timing of development charge related costs.

Council directed Hemson Consulting and staff to prepare the DC Background Study and seek public consultation based on the maximum calculated rates permissible under the DCA.

To determine the share of the program that is eligible for recovery through development charges, the gross project costs are reduced by any anticipated grants or subsidies, and “benefit to existing” shares.

A benefit to existing share represents that portion of a capital project that will benefit the existing community. It could, for example, represent a portion of a new facility that, at least in part, replaces a facility that is demolished, redeployed or will otherwise not be available to serve its former function (a “replacement” share). The benefit to existing share of the capital program is not deemed to be development-related and is therefore removed from the development charge calculation. The capital cost for benefit to existing shares will require funding from non-development charge sources, typically property taxes or user fees.

The capital program, less any benefit to existing shares and grants and subsidies, yields the development-related costs. Although deemed development-related, not all of the net development-related capital program may be recoverable from development charges in the period from 2022 to 2031. For previously built facilities—such as the Central Library and Kitchener Operations Facility,—that were oversized to provide services to development within the ten-year period, development charge monies have already funded a portion of development-related capital costs (“committed DC reserve funds”).

Additionally, for some services, a portion of the capital program will service development that will not occur until after 2031. This portion of the capital program is either deemed “pre-built” service capacity to be considered as committed excess capacity to be recovered under future development or represents a future service level increase that is ineligible for development charge recovery.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge calculation. In all cases, this amount is equal to or less than the maximum allowable funding envelope that is calculated on the final page of Table 1, adjusted downwards by an amount equivalent to any current reserve fund deficit (see below). The result is the discounted development-related net

capital cost that is eligible for recovery through development charges over the period from 2022 to 2031.

Calculation of the Unadjusted Development Charge Rates

The section below the capital program displays the calculation of the “unadjusted” development charge rates. The term “unadjusted” development charge is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 3.

The first step when determining the unadjusted development charge rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For all City-wide general services except Library, Indoor Recreation and Outdoor Recreation, the development-related costs have been allocated 77 per cent residential and 23 per cent non-residential. This ratio is based on forecast changes in population in new housing units and employment in new non-residential floor space over the planning period.

The development-related costs associated with the Library, Indoor Recreation and Outdoor Recreation, have been allocated 100 per cent to residential development because the need for these services is driven entirely by the residential sector.

The residential share of the 2022-2031 development charge eligible costs are then divided by the forecast population growth in new units. This gives the unadjusted residential development charge per capita. The non-residential development-related net capital costs are divided by the forecast increase in non-residential gross floor area (GFA). This yields a charge per square foot of new non-residential GFA.

Table 3 Cash Flow Analysis

A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs are accounted for in the calculation as allowed under the DCA. Based on the development forecast, the analysis calculates the development charges rate required to finance the net development-related capital spending plan, including provisions for any borrowing costs or interest earnings on the reserve funds. The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible.

Opening cash balances in the cash flow analysis reflect the reserve fund balances that are available to fund development-related capital works as at December 31, 2021. Where a current reserve fund is in a deficit, the maximum allowable funding envelope has been reduced by an amount equivalent to the deficit (see above). A summary of the reserve fund balances, as well as projected reserve fund balances over the ten-year planning period for each service, is shown in Appendix E.

In order to determine appropriate development charges rates reflecting borrowing and earnings necessary to support the net development-related funding requirement, assumptions are used for the inflation rate and interest rate. An inflation rate of 2.0% is used for the funding requirements, and interest rates of 5.5% (negative balance) and 3.5% (positive balance) are used for borrowing/earnings on the funds.

Table 3 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square foot (of GFA) non-residential development charges.

Appendix B.1

Library

Library

The Kitchener Public Library provides library services in the Central Library facility and four branch libraries (Forest Heights, Pioneer Park, Grand River Stanley Park, and Country Hills). The benefits of Library are deemed to be City-wide for the purpose of calculating the development charge.

Table B.1-1 2012 – 2021 Historical Service Levels

Table B.1-1 displays Library’s ten-year historical inventory for buildings, land, materials, and furniture and equipment (excluding personal computers). The current building area totals 155,756 square feet and has a current replacement value of \$111.47 million. The land associated with the buildings totals 1.58 hectares and is valued at \$1.54 million. The buildings contain resource materials valued at \$18.81 million and equipment (including cataloguing and self check-out systems) valued at \$1.81 million.

The 2021 full replacement value of the inventory of capital assets for Library is \$133.63 million and the ten-year historical average service level is \$525.97 per capita. The historical service level, multiplied by the ten-year growth in net population in the City, results in a maximum allowable funding envelope of \$19.91 million. No uncommitted excess capacity has been identified for Library.

Table B.1-2 2022 – 2031 Development-Related Capital Program & Calculation of Unadjusted Development Charge

The development-related capital program for Library totals \$41.38 million and includes two facility-related capital costs. The first is the recovery of the cost associated with the recently completed renovation to the Central

Library facility at a total cost of \$24.1 million. The second is the construction of a new Southwest Community Library from 2022 to 2023 at a total cost of \$1.1 million. Given that at the time of construction, Council expressed its intent to pay for part of the facility through development charges, the development-related capital costs are eligible for development charge funding as “committed excess capacity” under the DCA. A substantial portion of the Central Library cost, \$7.9 million, is related to the renovation of the existing facility and is removed from development charge consideration as a benefit to existing share. The final provision is for Additional Library Space in 2029, which totals \$12.00 million.

The City is also anticipating adding \$580,000 worth of additional library materials and \$3.62 million in other capital over the 2022-2031 planning period. The majority of the other capital investment, \$3.14 million, represents either a replacement of existing equipment and technology or a benefit to existing share.

Of the Library development-related capital costs, \$30.22 million represents the development-related net capital cost, which is carried forward to the development charge calculation. Of the \$30.22 million, \$9.85 million has already been funded from development charge reserve funds and there are currently no projects that represent a portion of the development-related costs that exceed the maximum allowable and is either a post-2031 share or a future service level increase. The remaining \$17.30 million is carried forward to the development charges calculation.

As shown at the base of Table B.1-2, the entire development-related net capital cost for Library is allocated entirely against residential development in the City. This results in an unadjusted development charge of \$340.52 per capita.

Table B.1-3 Cash Flow and Reserve Fund Analysis

The cash flow analysis is displayed in Table B.1-3. It considers the timing of the projects as well as the timing of the development charge revenues to adjust the calculated rates. A negative reserve fund balance in the Library development charges reserve fund of \$2.61 million is also eligible for development charge recovery and is treated as committed excess capacity. After cash flow, this contributes to increasing the Library charge to \$396.07 per capita.

The following table summarizes the calculation of the Library development charge:

LIBRARY SUMMARY						
10-year Hist.	2022 - 2031		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$525.97	\$41,375,000	\$17,297,125	\$340.52	\$0.00	\$396.07	\$0.00

APPENDIX B.1
TABLE B.1-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
LIBRARY

BUILDINGS Branch Name	# of Square Feet										UNIT COST (\$/sq. ft.) ³
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Main	61,850	40,000	110,625	110,625	110,625	110,625	110,625	110,625	110,625	110,625	\$730
<i>Excess Capacity</i>	-	-	541	541	541	541	541	541	541	541	\$730
Temporary storage for collections - 335 Gage Ave	-	500	-	-	-	-	-	-	-	-	\$330
Temporary storage for furniture and equipment - 703 Guelph St	-	1,100	-	-	-	-	-	-	-	-	\$330
Forest Heights	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	\$680
Pioneer Park	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	\$680
Grand River Stanley Park ¹	13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500	\$680
Country Hills ²	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	\$680
Total (sq.ft.)	106,440	86,190	155,756	155,756	155,756	155,756	155,756	155,756	155,756	155,756	
Total (\$000)	\$75,471.7	\$60,049.2	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	

1. Space shown represents Library portion of building shared with Waterloo Region District School Board since 2002.

2. Space shown represents Library portion of building shared with Waterloo Region District School Board since 2004.

3. Includes furniture and equipment costs.

LAND Branch Name	# of Hectares										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Main	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	\$0
Temporary storage for collections - 335 Gage Ave	-	0.005	-	-	-	-	-	-	-	-	\$1,452,000
Temporary storage for furniture and equipment - 703 Guelph St	-	0.01	-	-	-	-	-	-	-	-	\$278,000
Forest Heights	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	\$1,750,000
Pioneer Park	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	\$1,359,500
Grand River Stanley Park	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	\$1,750,000
Country Hills	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	\$1,750,000
Total (ha)	1.58	1.60	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	
Total (\$000)	\$1,544.3	\$1,553.9	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	

APPENDIX B.1
TABLE B.1-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
LIBRARY

MATERIALS Type of Collection	# of Collection Materials										UNIT COST
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	(\$/item)
Books	366,687	350,720	353,286	359,673	355,512	347,543	347,882	343,665	346,836	346,836	\$31
Periodicals	6,695	6,610	6,948	7,190	7,190	5,989	6,063	5,787	5,845	5,845	\$278
Newspapers	34	35	35	27	23	22	21	15	15	15	\$550
Browsing Paperbacks	59,837	73,481	53,977	55,977	56,465	57,455	57,707	59,717	60,925	60,925	\$10
Audiocassettes	17	6	2	-	-	-	-	-	-	-	\$5
Compact Discs	28,304	28,291	28,189	32,315	28,654	34,391	29,158	27,524	20,912	20,912	\$48
Videocassettes	297	284	200	115	107	108	108	101	101	101	\$10
DVDs	32,605	32,987	40,554	45,715	45,002	47,010	44,696	45,070	45,826	45,826	\$31
Talking Books/Daisy	415	311	439	568	696	793	902	976	1,084	1,084	\$45
CD-ROM Software	647	369	74	71	-	-	-	-	-	-	\$31
Toys	224	244	258	289	299	277	257	268	252	252	\$20
Maps	1,000	1,000	240	230	230	225	223	223	223	223	\$10
Microfilms	2	2	2	2	2	2	2	-	-	-	\$3,645
Book and Tape Kits	2,540	2,567	3,250	3,890	3,994	3,982	3,465	2,152	2,019	2,019	\$15
Comics	1,325	1,562	1,548	1,084	874	977	769	1,549	1,603	1,603	\$5
E-audio	8,539	9,729	7,925	8,908	9,536	11,904	13,259	16,294	20,082	20,082	\$60
E-books - general	5,724	7,558	21,802	25,689	27,346	35,240	38,045	40,674	50,805	50,805	\$24
E-books - reference	586	586	622	560	499	534	526	481	436	436	\$500
E-video	776	922	946	1,019	1,058	1,072	1,091	1,110	1,287	1,287	\$20
Databases	87	66	53	56	47	29	30	28	21	21	\$7,500
Bike Locks	-	-	-	-	17	22	19	19	18	18	\$75
Laptops-MacBooks	-	-	-	-	-	-	50	50	25	25	\$2,200
Tablets-iPads, ChromeBooks	-	-	8	30	42	82	51	153	176	176	\$700
Instruments	-	-	-	-	-	195	267	268	268	268	\$110
Video games	-	-	586	724	983	1,230	1,296	1,455	1,655	1,655	\$57
Hotspots	-	-	-	20	44	66	65	66	81	81	\$200
Playaway Views	-	-	287	328	306	262	233	542	670	670	\$50
Sports Equipment	-	-	-	-	-	-	-	-	40	40	\$50
Processing Materials (e.g. book covers, bar codes, binding) (\$)	\$68,000	\$62,000	\$19,000	\$16,000	\$15,000	\$119,927	\$113,738	\$113,015	\$113,544	\$113,600	
Total (#)	516,341	517,330	521,231	544,480	538,926	549,410	546,185	548,187	561,205	561,205	
Total (\$000)	\$18,001.9	\$17,574.9	\$17,946.6	\$18,769.7	\$18,457.1	\$18,612.7	\$18,563.0	\$18,589.5	\$18,808.2	\$18,808.2	

APPENDIX B.1
TABLE B.1-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
LIBRARY

FURNITURE AND EQUIPMENT Branch Name	Total Value of Furniture and Equipment (\$)									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Furniture and Equipment - included in building unit costs										
Cataloging System (replacement cost for system)	\$595,000	\$598,000	\$598,000	\$598,000	\$598,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Public Access Terminals	\$192,600	\$192,600	\$378,000	\$378,000	\$378,000	\$378,000	\$378,000	\$178,000	\$186,900	\$186,900
Public Access Terminals - iPads, ChromeBooks	\$0	\$0	\$50,050	\$50,050	\$50,050	\$50,050	\$50,050	\$280,000	\$294,000	\$294,000
Staff Computers - Administrative use (ineligible under DC Act)										
Terminals - Public Service Use	\$64,500	\$64,500	\$106,200	\$106,200	\$106,200	\$106,200	\$106,200	\$102,000	\$107,100	\$107,100
RFID	\$72,920	\$178,945	\$250,562	\$255,533	\$255,533	\$375,000	\$377,000	\$650,000	\$650,000	\$650,000
3D Printer	\$0	\$0	\$0	\$0	\$0	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000
Studio Recording Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,000	\$40,000	\$40,000
Total (\$000)	\$925.0	\$1,034.0	\$1,382.8	\$1,387.8	\$1,387.8	\$1,437.3	\$1,439.3	\$1,778.0	\$1,806.0	\$1,806.0

**APPENDIX B.1
TABLE B.1-1**

**CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
LIBRARY**

**APPENDIX B.1
TABLE B.1-1**

**CITY OF KITCHENER
CALCULATION OF SERVICE LEVELS
LIBRARY**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historical Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247

INVENTORY SUMMARY (\$000)

Buildings	\$75,471.7	\$60,049.2	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4	\$111,472.4
Land	\$1,544.3	\$1,553.9	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6	\$1,541.6
Materials	\$18,001.9	\$17,574.9	\$17,946.6	\$18,769.7	\$18,457.1	\$18,612.7	\$18,563.0	\$18,589.5	\$18,808.2	\$18,808.2
Furniture And Equipment	\$925.0	\$1,034.0	\$1,382.8	\$1,387.8	\$1,387.8	\$1,437.3	\$1,439.3	\$1,778.0	\$1,806.0	\$1,806.0
Total (\$000)	\$95,943.0	\$80,212.0	\$132,343.4	\$133,171.4	\$132,858.9	\$133,063.9	\$133,016.2	\$133,381.4	\$133,628.1	\$133,628.2

SERVICE LEVEL (\$/capita)

**Average
Service
Level**

Buildings	\$340.12	\$267.27	\$490.00	\$483.94	\$477.95	\$471.27	\$464.68	\$458.18	\$451.77	\$445.45	\$435.06
Land	\$6.96	\$6.92	\$6.78	\$6.69	\$6.61	\$6.52	\$6.43	\$6.34	\$6.25	\$6.16	\$6.56
Materials	\$81.13	\$78.22	\$78.89	\$81.49	\$79.14	\$78.69	\$77.38	\$76.41	\$76.22	\$75.16	\$78.27
Furniture And Equipment	\$4.17	\$4.60	\$6.08	\$6.02	\$5.95	\$6.08	\$6.00	\$7.31	\$7.32	\$7.22	\$6.07
Total (\$/capita)	\$432.38	\$357.01	\$581.75	\$578.14	\$569.65	\$562.55	\$554.48	\$548.23	\$541.56	\$533.99	\$525.97

**CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
LIBRARY**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2012 - 2021	\$525.97
Net Population Growth 2022 - 2031	37,851
Maximum Allowable Funding Envelope	\$19,908,490

APPENDIX B.1

TABLE B.1-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
LIBRARY

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves ²	2022-2031	Other Dev. Related ³
1.0 LIBRARY										
1.1 Buildings, Land & Furnishings										
1.1.1 Recovery of Central Library	Various	\$ 24,100,000	\$ -	\$ 24,100,000	33%	\$ 7,911,366	\$ 16,188,634	\$ 9,847,650	\$ 6,340,984	\$ -
1.1.2 Southwest Community Library	2022	\$ 1,000,000	\$ -	\$ 1,000,000	0%	\$ -	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -
1.1.3 Southwest Community Library (Greenhouse)	2023	\$ 75,000	\$ 37,500	\$ 37,500	0%	\$ -	\$ 37,500	\$ -	\$ 37,500	\$ -
1.1.4 Provision for Additional Library Space	2029	\$ 12,000,000	\$ -	\$ 12,000,000	0%	\$ -	\$ 12,000,000	\$ -	\$ 8,923,037	\$ 3,076,963
Subtotal Buildings, Land & Furnishings		\$ 37,175,000	\$ 37,500	\$ 37,137,500		\$ 7,911,366	\$ 29,226,134	\$ 9,847,650	\$ 16,301,521	\$ 3,076,963
1.2 Material, Furniture & Equipment Acquisitions¹										
1.2.1 Library Materials, Furniture & Equipment	Various	\$ 580,000	\$ -	\$ 580,000	0%	\$ 60,000	\$ 520,000	\$ -	\$ 520,000	\$ -
Subtotal Material, Furniture & Equipment Acquisitions		\$ 580,000	\$ -	\$ 580,000		\$ 60,000	\$ 520,000	\$ -	\$ 520,000	\$ -
1.3 Other Capital										
1.3.1 Customer Needs Survey	2022	\$ 60,000	\$ -	\$ 60,000	87%	\$ 52,117	\$ 7,883	\$ -	\$ 7,883	\$ -
1.3.2 Customer Needs Survey	2026	\$ 60,000	\$ -	\$ 60,000	87%	\$ 52,117	\$ 7,883	\$ -	\$ 7,883	\$ -
1.3.3 Technology Upgrade	Various	\$ 3,500,000	\$ -	\$ 3,500,000	87%	\$ 3,040,162	\$ 459,838	\$ -	\$ 459,838	\$ -
Subtotal Other Capital		\$ 3,620,000	\$ -	\$ 3,620,000		\$ 3,144,396	\$ 475,604	\$ -	\$ 475,604	\$ -
TOTAL LIBRARY		\$ 41,375,000	\$ 37,500	\$ 41,337,500		\$ 11,115,762	\$ 30,221,738	\$ 9,847,650	\$ 17,297,125	\$ 3,076,963

1. Does not include furniture and equipment associated with new South End Community Library.
2. Committed DC Reserves accounts for DC funds already spent on projects.
3. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2031 DC Eligible Costs	100%	\$17,297,125
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$340.52
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2031 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$0.00

2022 - 2031 Net Funding Envelope	\$ 19,908,490
Reserve Fund Balance as at Dec 31, 2021	\$ (2,611,365)
Adjusted 2022 - 2031 Net Funding Envelope	\$ 17,297,125

**APPENDIX B.1
TABLE B.1-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
LIBRARY
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

LIBRARY	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$2,611.4)	(\$2,401.3)	(\$1,175.4)	\$153.1	\$1,547.1	\$3,009.1	\$4,541.4	\$6,137.6	(\$2,717.4)	(\$1,409.2)	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Library: Non Inflated	\$1,740.0	\$769.6	\$732.1	\$732.1	\$740.0	\$732.1	\$732.1	\$9,655.1	\$732.1	\$732.1	\$17,297.1
- Library: Inflated	\$1,740.0	\$785.0	\$761.7	\$776.9	\$801.0	\$808.3	\$824.4	\$11,090.7	\$857.8	\$874.9	\$19,320.5
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$2,087.6	\$2,119.6	\$2,130.8	\$2,141.7	\$2,184.5	\$2,210.7	\$2,237.1	\$2,263.6	\$2,290.3	\$2,336.1	\$22,002.0
INTEREST											
- Interest on Opening Balance	(\$143.6)	(\$132.1)	(\$64.6)	\$5.4	\$54.1	\$105.3	\$158.9	\$214.8	(\$149.5)	(\$77.5)	(\$28.7)
- Interest on In-year Transactions	\$6.1	\$23.4	\$24.0	\$23.9	\$24.2	\$24.5	\$24.7	(\$242.7)	\$25.1	\$25.6	(\$41.3)
TOTAL REVENUE	\$1,950.0	\$2,010.9	\$2,090.1	\$2,170.9	\$2,262.9	\$2,340.6	\$2,420.7	\$2,235.7	\$2,165.9	\$2,284.1	\$21,931.9
CLOSING CASH BALANCE	(\$2,401.3)	(\$1,175.4)	\$153.1	\$1,547.1	\$3,009.1	\$4,541.4	\$6,137.6	(\$2,717.4)	(\$1,409.2)	\$0.0	

2022 Adjusted Charge Per Capita \$396.07

Allocation of Capital Program

Residential Sector	100.0%
Non-Residential Sector	0.00%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.2

Fire Protection

Fire Protection

The Fire Department is responsible for the provision of fire protection services across the entire City. Kitchener Fire Department currently operates out of seven fire stations. The previous 2019 DC Background Study included capital projects that only meet needs in the Suburban Area. However, it has now been determined that the future needs and associated benefits of Fire Protection works will be driven in part by development in the Central Neighbourhood. Therefore, the development charge for Fire is based on City-wide development.

Table B.2-1 2012 – 2021 Historical Service Levels

The Fire ten-year historical inventory of capital assets includes seven fire stations and a Direct Detect Office. The combined area of the buildings is 80,458 sq. ft. and are valued at \$35.22 million. The land area associated with the buildings is 8.01 hectares and is valued at almost \$13.95 million. Fire vehicles add another \$18.05 million to the value of the inventory. Finally, personal fire fighter equipment, office furniture, equipment, software, and specialized equipment add another \$8.35 million to the value of the inventory.

The current replacement value of Fire capital infrastructure is \$75.57 million. It has provided the City with a ten-year average service level of \$230.66 per capita and employment. This service level, when multiplied by the ten-year growth in net population and employment in the City, results in a maximum allowable funding envelope of \$12.27 million that can be considered for recovery through development charges.

No uncommitted excess capacity of service has been identified. Thus the full \$12.27 million can be considered for recovery through development charges.

Table B.2-2 2022 – 2031 Development-Related Capital Program & Calculation of Unadjusted Development Charge

A provision for land acquisition for a new station (Station 8) for this year at \$7.65 million. In order to maintain response time and other service level standards in the City, provision has been made for additional fire hall space, land and furnishings in the later years of the capital program; the cost of these works is \$3.48 million. An additional fire vehicle for Station 8 (\$900,000) and additional apparatus (\$1.56 million) are also included in the capital program. Equipment and other provisions such as a new Fire Master Plan have also been included for a total of \$1.77 million.

The total ten-year capital program for Fire amounts to \$18.85 million, of which \$17.98 million is considered to be the total eligible DC cost after removing replacement and benefit to existing shares. \$3.53 million represent a portion of the development-related costs that exceed the maximum allowable and is either a post-2031 share or a future service level increase. The remaining \$14.46 million is carried forward to the development charges calculation.

The ten-year development-related net capital cost of \$14.46 million is allocated 77 per cent against residential development, or \$11.11 million, and 23 per cent against non-residential development, or \$3.35 million. The allocation is based on the ratio of forecast changes in City-wide population in new housing units and employment over the ten-year planning period. The resulting unadjusted development charge rates are \$218.64 per population in new dwelling units for new residential development and \$4.82 per square metre for new non-residential development.

Table B.2-3 Cash Flow Analysis

The cash flow analysis is displayed in Table B.2-3. It considers the timing of the projects as well as the timing of the development charge revenues to adjust the calculated rates. A positive reserve fund balance in the Fire Protection development charges reserve fund of \$2.19 million is added to 2022-2031 Net Funding Envelope, providing the Net Funding Envelope to increase from \$12.27 million to \$14.46 million. After cash flow, this contributes to decreasing the Fire charges to \$194.96 per capita and decreasing to \$4.31 per square metre.

The following table summarizes the calculation of the Fire development charge:

FIRE PROTECTION SUMMARY						
10-year Hist. Service Level per pop & emp \$230.66	2022 - 2031		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
	\$18,850,390	\$14,456,137	\$218.64	\$4.82	\$194.96	\$4.31

APPENDIX B.2
TABLE B.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

BUILDINGS Station Name	# of Square Feet										UNIT COST (\$/sq. ft.)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Station 1 - Strasburg Road	35,572	35,572	35,572	35,572	35,572	35,572	35,572	35,572	35,572	35,572	\$440
Station 2 - Lancaster Road	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	\$440
Station 3 - Ottawa Street	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	\$440
Station 4 - Fairway Road	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	\$440
Station 5 - Queens Boulevard	9,376	9,376	9,376	9,376	9,376	9,376	9,376	9,376	9,376	9,376	\$440
Station 6 - Pioneer Drive	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	\$440
Station 7 - Huron Road	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	6,974	\$440
Direct Detect Office (detached building at HQ)	-	-	-	-	-	-	-	640	640	640	\$150
Total (sq.ft.)	79,818	79,818	79,818	79,818	79,818	79,818	79,818	80,458	80,458	80,458	
Total (\$000)	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,215.9	\$35,215.9	\$35,215.9	

LAND Station Name	# of Hectares										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Station 1 - Strasburg Road	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	\$1,452,000
Station 2 - Lancaster Road	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	\$278,000
Station 3 - Ottawa Street	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	\$2,900,000
Station 4 - Fairway Road	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	\$2,224,000
Station 5 - Queens Boulevard	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	\$2,718,000
Station 6 - Pioneer Drive	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	\$1,359,500
Station 7 - Huron Road	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	\$345,000
Total (ha)	8.01	8.01	8.01	8.01	8.01	8.01	8.01	8.01	8.01	8.01	
Total (\$000)	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	

APPENDIX B.2
TABLE B.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

VEHICLES Vehicle Type	# of Vehicles										UNIT COST (\$/vehicle)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Pumpers	8	8	8	8	8	8	8	8	8	8	\$1,060,736
Aerials	2	2	2	2	2	2	2	2	2	2	\$1,559,510
Rescue	2	2	2	2	2	2	2	2	2	2	\$1,141,120
Tanker	1	1	1	1	1	1	1	1	1	1	\$1,301,120
Pumper/Tower	1	1	1	1	1	1	1	1	1	1	\$1,559,510
Special Operations (HazMat)	1	1	1	1	1	1	1	1	1	1	\$991,800
Truck ID 4497 (Trench Trailer)	1	1	1	1	1	1	1	1	1	1	\$100,000
Truck ID 4495 (Kitchen Fire Trailer)	1	1	1	1	1	1	1	1	1	1	\$60,000
Truck ID 4494 (Smoke House/Fire Education Trailer/Safety House)	1	1	1	1	1	1	1	1	1	1	\$100,000
Truck ID 4498 (Fire extinguisher training trailer)	-	-	1	1	1	1	1	1	1	1	\$10,000
Truck ID 4492 (Inflatable trailer)	-	-	-	-	-	1	1	1	1	1	\$2,000
Truck ID 4682 Special Ops UTV (includes trailer)	-	-	-	-	-	-	1	1	1	1	\$35,000
Total (#)	18	18	19	19	19	20	21	21	21	21	
Total (\$000)	\$17,999.6	\$17,999.6	\$18,009.6	\$18,009.6	\$18,009.6	\$18,011.6	\$18,046.6	\$18,046.6	\$18,046.6	\$18,046.6	

APPENDIX B.2
TABLE B.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION

EQUIPMENT AND GEAR Description	# of Pieces of Equipment and Gear										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Opticom Traffic Controller	174	174	174	174	-	-	-	-	-	-	\$10,600
Self Contained Breathing Apparatus	90	90	90	95	95	95	95	95	95	95	\$9,500
Personal Fire Fighter Protective Equipment	188	188	188	188	186	188	188	188	188	188	\$4,744
Thermal Imaging Camera	8	8	8	8	8	8	8	8	8	8	\$10,000
Defibrillator	10	10	10	10	10	10	10	10	10	10	\$7,400
Air Monitoring Equipment	15	15	15	15	15	15	15	15	15	15	\$3,000
NICE server (telephone and radio audio recording)	1	1	1	2	2	2	2	2	2	2	\$100,000
Portable Radios	58	58	68	68	68	68	68	68	76	76	\$7,000
Regional Training Centre & Equipment	1	1	1	1	1	1	1	1	1	1	\$4,100,000
Air Breathing Compressor	1	1	1	1	1	1	1	1	1	1	\$85,000
Industrial Washer/Dryer	7	7	7	7	7	7	7	7	7	7	\$20,000
Station Furniture	7	7	7	7	7	7	7	7	7	7	\$60,000
Generator	7	7	7	7	7	7	7	7	7	7	\$100,000
NEW Mobile Data Terminals	-	-	-	-	-	-	-	-	14	14	\$5,000
NEW DVRS (Digital Voice Repeating System)	-	-	-	-	-	-	-	-	5	5	\$10,000
NEW EMTRAC (traffic lights controller)	-	-	-	-	-	-	-	18	18	18	\$3,500
Total (#)	567	567	577	583	407	409	409	427	454	454	
Total (\$000)	\$9,741.3	\$9,741.3	\$9,811.3	\$9,958.8	\$8,104.9	\$8,114.4	\$8,114.4	\$8,177.4	\$8,353.4	\$8,353.4	

**APPENDIX B.2
TABLE B.2-1**

**CITY OF KITCHENER
CALCULATION OF SERVICE LEVELS
FIRE PROTECTION**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historical Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247
Historical Employment	<u>90,874</u>	<u>91,396</u>	<u>91,921</u>	<u>92,449</u>	<u>92,982</u>	<u>94,302</u>	<u>95,605</u>	<u>96,932</u>	<u>98,284</u>	<u>99,662</u>
Total Historical Population & Employment	312,770	316,073	319,414	322,793	326,212	330,840	335,498	340,228	345,031	349,909

INVENTORY SUMMARY (\$000)

Buildings	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,119.9	\$35,215.9	\$35,215.9	\$35,215.9
Land	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0	\$13,952.0
Vehicles	\$17,999.6	\$17,999.6	\$18,009.6	\$18,009.6	\$18,009.6	\$18,011.6	\$18,046.6	\$18,046.6	\$18,046.6	\$18,046.6
Equipment And Gear	\$9,741.3	\$9,741.3	\$9,811.3	\$9,958.8	\$8,104.9	\$8,114.4	\$8,114.4	\$8,177.4	\$8,353.4	\$8,353.4
Total (\$000)	\$76,812.8	\$76,812.8	\$76,892.8	\$77,040.3	\$75,186.4	\$75,197.9	\$75,232.9	\$75,391.9	\$75,567.9	\$75,567.9

SERVICE LEVEL (\$/pop & emp)

											Average Service Level
Buildings	\$112.29	\$111.11	\$109.95	\$108.80	\$107.66	\$106.15	\$104.68	\$103.51	\$102.07	\$100.64	\$106.69
Land	\$44.61	\$44.14	\$43.68	\$43.22	\$42.77	\$42.17	\$41.59	\$41.01	\$40.44	\$39.87	\$42.35
Vehicles	\$57.55	\$56.95	\$56.38	\$55.79	\$55.21	\$54.44	\$53.79	\$53.04	\$52.30	\$51.58	\$54.70
Equipment And Gear	\$31.15	\$30.82	\$30.72	\$30.85	\$24.85	\$24.53	\$24.19	\$24.03	\$24.21	\$23.87	\$26.92
Total (\$/pop & emp)	\$245.59	\$243.02	\$240.73	\$238.67	\$230.48	\$227.29	\$224.24	\$221.59	\$219.02	\$215.96	\$230.66

**CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
FIRE PROTECTION**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2012 - 2021	\$230.66
Net Population & Employment Growth 2022 - 2031	53,174
Maximum Allowable Funding Envelope	\$12,265,115

APPENDIX B.2

TABLE B.2-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
FIRE PROTECTION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
2.0 FIRE PROTECTION										
2.1 Buildings, Land & Furnishings										
2.1.1 Land Acquisition (Station 8)	2022	\$ 7,650,000	\$ -	\$ 7,650,000	0%	\$ -	\$ 7,650,000	\$ -	\$ 7,650,000	\$ -
2.1.2 Additional Fire Hall Space & Furnishings	2024	\$ 3,483,000	\$ -	\$ 3,483,000	0%	\$ -	\$ 3,483,000	\$ -	\$ 3,483,000	\$ -
2.1.3 Additional Fire Hall Space & Furnishings	2025	\$ 3,483,000	\$ -	\$ 3,483,000	0%	\$ -	\$ 3,483,000	\$ -	\$ 2,809,535	\$ 673,465
Subtotal Buildings, Land & Furnishings		\$ 14,616,000	\$ -	\$ 14,616,000		\$ -	\$ 14,616,000	\$ -	\$ 13,942,535	\$ 673,465
2.2 Vehicles										
2.2.1 Additional Fire Vehicle (Station 8)	2025	\$ 900,000	\$ -	\$ 900,000	0%	\$ -	\$ 900,000	\$ -	\$ -	\$ 900,000
2.2.2 Additional Apparatus	2028	\$ 1,559,510	\$ -	\$ 1,559,510	0%	\$ -	\$ 1,559,510	\$ -	\$ -	\$ 1,559,510
Subtotal Vehicles		\$ 2,459,510	\$ -	\$ 2,459,510		\$ -	\$ 2,459,510	\$ -	\$ -	\$ 2,459,510
2.3 Equipment & Other										
2.3.1 Fire Master Plan	2023	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
2.3.2 NextGen 911	2022	\$ 200,000	\$ -	\$ 200,000	87%	\$ 173,616	\$ 26,384	\$ -	\$ 26,384	\$ -
2.3.3 NextGen 911	2023	\$ 800,000	\$ -	\$ 800,000	87%	\$ 694,465	\$ 105,535	\$ -	\$ 105,535	\$ -
2.3.4 Response Modeling Study (Station 8)	2022	\$ 75,000	\$ -	\$ 75,000	0%	\$ -	\$ 75,000	\$ -	\$ 75,000	\$ -
2.3.6 Additional Turnout Gear 6 sets + SCBA	2022	\$ 85,464	\$ -	\$ 85,464	0%	\$ -	\$ 85,464	\$ -	\$ 85,464	\$ -
2.3.7 Additional Turnout Gear 5 sets	2023	\$ 71,220	\$ -	\$ 71,220	0%	\$ -	\$ 71,220	\$ -	\$ 71,220	\$ -
2.3.8 Additional Turnout Gear 4 sets	2024	\$ 56,976	\$ -	\$ 56,976	0%	\$ -	\$ 56,976	\$ -	\$ -	\$ 56,976
2.3.9 Additional Turnout Gear 5 sets	2025	\$ 71,220	\$ -	\$ 71,220	0%	\$ -	\$ 71,220	\$ -	\$ -	\$ 71,220
2.3.10 Additional Station 8 Equipment	2025	\$ 265,000	\$ -	\$ 265,000	0%	\$ -	\$ 265,000	\$ -	\$ -	\$ 265,000
Subtotal Equipment & Other		\$ 1,774,880	\$ -	\$ 1,774,880		\$ 868,082	\$ 906,798	\$ -	\$ 513,602	\$ 393,196
TOTAL FIRE PROTECTION		\$ 18,850,390	\$ -	\$ 18,850,390		\$ 868,082	\$ 17,982,308	\$ -	\$ 14,456,137	\$ 3,526,171

Notes:

1. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2031 DC Eligible Costs	77%	\$11,105,944
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$218.64
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2031 DC Eligible Costs	23%	\$3,350,193
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$4.82

2022 - 2031 Net Funding Envelope	\$ 12,265,115
Reserve Fund Balance as at Dec 31, 2021	\$ 2,191,023
Adjusted 2022 - 2031 Net Funding Envelope	\$ 14,456,137

**APPENDIX B.2
TABLE B.2-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE PROTECTION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

FIRE PROTECTION	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	\$1,683.3	(\$3,363.6)	(\$2,686.1)	(\$4,545.6)	(\$5,962.6)	(\$5,085.3)	(\$4,164.2)	(\$3,197.7)	(\$2,184.3)	(\$1,122.1)	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Non Inflated	\$6,020.67	\$251.0	\$2,675.8	\$2,158.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$11,105.9
- Fire Protection: Inflated	\$6,020.7	\$256.1	\$2,783.9	\$2,290.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$11,351.2
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$1,027.6	\$1,043.4	\$1,048.8	\$1,054.2	\$1,075.3	\$1,088.2	\$1,101.2	\$1,114.2	\$1,127.4	\$1,149.9	\$10,830.1
INTEREST											
- Interest on Opening Balance	\$33.7	(\$117.7)	(\$94.0)	(\$159.1)	(\$208.7)	(\$178.0)	(\$145.7)	(\$111.9)	(\$76.5)	(\$39.3)	(\$1,097.2)
- Interest on In-year Transactions	(\$87.4)	\$7.9	(\$30.4)	(\$21.6)	\$10.8	\$10.9	\$11.0	\$11.1	\$11.3	\$11.5	(\$64.9)
TOTAL REVENUE	\$973.9	\$933.5	\$924.5	\$873.5	\$877.4	\$921.1	\$966.4	\$1,013.4	\$1,062.2	\$1,122.1	\$9,667.9
CLOSING CASH BALANCE	(\$3,363.6)	(\$2,686.1)	(\$4,545.6)	(\$5,962.6)	(\$5,085.3)	(\$4,164.2)	(\$3,197.7)	(\$2,184.3)	(\$1,122.1)	\$0.0	

2022 Adjusted Charge Per Capita \$194.96

Allocation of Capital Program	
Residential Sector	76.8%
Non-Residential Sector	23.2%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX B.2
TABLE B.2-3

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE PROTECTION
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

FIRE PROTECTION	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	\$507.8	(\$1,046.2)	(\$868.8)	(\$1,448.9)	(\$1,887.1)	(\$1,628.6)	(\$1,349.1)	(\$1,047.9)	(\$723.7)	(\$374.6)	
2022 - 2031 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection: Non Inflated	\$1,816.18	\$75.7	\$807.2	\$651.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$3,350.2
- Fire Protection: Inflated	\$1,816.2	\$77.2	\$839.8	\$691.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$3,424.2
NEW NON-RESIDENTIAL DEVELOPMENT											
- Non-Residential GFA	64,713	65,765	66,809	67,803	68,864	70,010	71,071	72,159	73,409	74,524	695,127
REVENUE											
- DC Receipts: Inflated	\$278.9	\$289.1	\$299.6	\$310.1	\$321.3	\$333.2	\$345.0	\$357.3	\$370.7	\$383.9	\$3,289.2
INTEREST											
- Interest on Opening Balance	\$10.2	(\$36.6)	(\$30.4)	(\$50.7)	(\$66.0)	(\$57.0)	(\$47.2)	(\$36.7)	(\$25.3)	(\$13.1)	(\$353.0)
- Interest on In-year Transactions	(\$26.9)	\$2.1	(\$9.5)	(\$6.7)	\$3.2	\$3.3	\$3.4	\$3.6	\$3.7	\$3.8	(\$19.8)
TOTAL REVENUE	\$262.2	\$254.6	\$259.7	\$252.8	\$258.5	\$279.5	\$301.2	\$324.2	\$349.1	\$374.6	\$2,916.4
CLOSING CASH BALANCE	(\$1,046.2)	(\$868.8)	(\$1,448.9)	(\$1,887.1)	(\$1,628.6)	(\$1,349.1)	(\$1,047.9)	(\$723.7)	(\$374.6)	\$0.0	

2022 Adjusted Charge Per Sq.M

\$4.31

Allocation of Capital Program

Residential Sector	76.8%
Non-Residential Sector	23.2%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.3

Indoor Recreation

Indoor Recreation

The City provides indoor recreation services to City residents at a number of community centres, studios, arenas, seniors’ centres, and other facilities. All City residents have access to all facilities and the benefits of the Indoor Recreation service are deemed to be City-wide for the purpose of calculating the development charge.

Table B.3-1 2012 – 2021 Historical Service Levels

The combined area of the Indoor Recreation facilities is 1,039,183 sq. ft. and the buildings are valued at \$534.95 million. The land area associated with the buildings is 37.49 hectares and is valued at \$69.79 million. The total furniture and equipment contained in the facilities, based on an average value of \$36 per square foot, amounts to \$37.41 million. There are also 6,358 parking spots associated with all the indoor recreation facilities valued at \$17.78 million.

The current replacement value of Indoor Recreation capital infrastructure is \$659.93 million. It has provided the City with a ten-year average service level of \$2,791.49 per capita. This service level, when multiplied by the ten-year net population growth in the City, results in a maximum allowable funding envelope of \$105.66 million.

**Table B.3-2 2022 – 2031 Development-Related Capital
Program & Calculation of Unadjusted
Development Charge**

The development-related capital program for Indoor Recreation is based on the Leisure Facilities Master Plan and priorities for projects as directed by Council. The capital program includes:

- The Mill Courtland Community Centre Addition, to be constructed in the City in the first few years of the capital program with a total cost at \$4.13 million.
- The Rosenberg Community Centre (Southwest), whose timing is related to the South End Community Library as identified in the Library capital program in Appendix B.1 and whose cost is \$6.06 million.
- The Forest Heights Community Centre Addition, set to occur from 2024-2028 for a cost of \$5.36 million.
- The new aquatic facility to be constructed in the City's south end between 2022 and 2025 at a total cost of \$55.95 million.
- The final project identified is the new indoor turf facility, to be constructed in the City's south end at a cost of \$37.86 million between 2022 and 2025.

The entire cost of the indoor recreation facilities are considered to be development-related.

Two updates to the Leisure Facilities Master Plan valued at \$220,000 each are included in the capital program along with three additional studies. Of these costs, \$156,884 is identified as benefitting existing development in the City.

Altogether, the Indoor Recreation capital program amounts to \$159.89 million. \$17.95 million in grants or subsidies are anticipated to offset the cost of the program. \$11.84 million represent a portion of the development-related costs that exceed the maximum allowable and is either a post-2031 share or a future service level increase. The remaining \$129.95 million is carried forward to the development charges calculation.

The development charge eligible cost of \$129.95 million is allocated 100% against residential development. This yields an unadjusted development charge rate of \$2,558.22 per capita.

Table B.3-3 Cash Flow Analysis

The cash flow analysis is displayed in Table B.3-3. It considers the timing of the projects as well as the timing of the development charge revenues to adjust the calculated rates. A positive reserve fund balance in the Indoor Recreation development charges reserve fund of \$24.29 million contributes to reducing the charge to \$2,081.52 per capita.

The following table summarizes the calculation of the Indoor Recreation development charge:

INDOOR RECREATION SUMMARY						
10-year Hist. Service Level per capita	2022 - 2031		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$2,791.49	\$159,891,557	\$129,947,092	\$2,558.22	\$0.00	\$2,081.52	\$0.00

APPENDIX B.3
TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq. ft.)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Studios											
Homer Watson House/Coach House	750	750	750	750	750	750	750	750	750	750	\$570
Homer Watson House/Garden Studio	180	180	180	180	180	180	180	180	180	180	\$570
Homer Watson House/Classrooms	200	200	200	200	200	200	200	200	200	200	\$500
KOR/79 Joseph Street	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,012	\$500
Seniors Centres											
Rockway Centre	14,805	14,805	14,805	14,805	14,805	14,805	14,805	14,805	14,805	14,805	\$500
Downtown Community Centre	32,560	32,560	32,560	32,560	32,560	32,560	32,560	32,560	32,560	32,560	\$500
Community Centres											
Breithaupt Community Centre - included in Indoor Pools below											
Bridgeport Community Recreation Centre	6,460	6,460	6,460	6,460	6,460	6,460	6,460	6,460	6,460	6,460	\$490
Centreville Chicopee Community Centre	7,329	7,329	7,329	7,329	7,329	7,329	7,329	7,329	7,329	7,329	\$490
Chandler Mowat Community Centre	9,543	9,543	9,543	9,543	9,543	9,543	9,543	9,543	9,543	9,543	\$490
Country Hills Community Centre	15,129	15,129	15,129	15,129	15,129	15,129	15,129	15,129	15,129	15,129	\$490
Doon Pioneer Park Community Centre	14,959	14,959	14,959	14,959	14,959	14,959	14,959	21,945	21,945	21,945	\$490
Forest Heights Community Centre	11,301	11,301	11,301	11,301	11,301	11,301	11,301	11,301	11,301	11,301	\$490
Kingsdale Community Centre (formerly Patrick Doherty Arena)	16,533	16,533	16,533	16,533	16,533	16,533	16,533	16,533	16,533	16,533	\$490
Mill Courtland Community Centre	7,824	7,824	7,824	7,824	7,824	7,824	7,824	7,824	7,824	7,824	\$490
Victoria Hills Community Centre	15,767	15,767	15,767	15,767	15,767	15,767	15,767	15,767	15,767	15,767	\$490
Stanley Park Community Centre	19,760	19,760	19,760	19,760	19,760	19,760	19,760	19,760	19,760	19,760	\$490
Williamsburg Community Centre (leased space)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	\$490

APPENDIX B.3

TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

BUILDINGS (continued) Facility Name	# of Square Feet										UNIT COST (\$/sq. ft.)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Indoor Pools											
Breithaupt Community Pool	34,631	34,631	34,631	34,631	34,631	34,631	34,631	34,631	34,631	34,631	\$580
Cameron Heights	13,900	13,900	13,900	13,900	13,900	13,900	13,900	13,900	13,900	13,900	\$580
Forest Heights Swimming Pool	25,070	25,070	25,070	25,070	25,070	25,070	25,070	25,070	25,070	25,070	\$580
Lyle Hallman Pool	24,446	24,446	24,446	24,446	24,446	24,446	24,446	24,446	24,446	24,446	\$580
Miscellaneous Indoor Facilities											
Budd Park Building	23,630	23,630	23,630	23,630	23,630	23,630	23,630	23,630	23,630	23,630	\$440
Victoria Park Pavilion	13,138	13,138	13,138	13,138	13,138	13,138	13,138	13,138	13,138	13,138	\$440
KW Judo Gymnastics	27,960	27,960	27,690	27,690	27,690	27,690	27,690	27,690	27,690	27,690	\$440
Queensmount Facility	28,450	28,450	28,450	28,450	28,450	28,450	28,450	28,450	28,450	28,450	\$440
Auditoriums											
Kitchener Memorial Auditorium	207,585	207,585	215,581	215,581	215,581	215,581	215,581	215,581	215,581	215,581	\$800
<i>Discount¹</i>	<i>(30,538)</i>	<i>(30,538)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>(32,337)</i>	<i>\$800</i>
Twin Pad Addition	124,870	124,870	124,870	124,870	124,870	124,870	124,870	124,870	124,870	124,870	\$430
Arenas											
Don McLaren Arena	27,557	27,557	27,557	27,557	27,557	27,557	27,557	27,557	27,557	27,557	\$410
Grand River Arena	27,486	27,486	27,486	27,486	27,486	27,486	27,486	27,486	27,486	27,486	\$410
Kitchener Lions Arena	30,859	30,859	30,859	30,859	30,859	30,859	30,859	30,859	30,859	30,859	\$410
Sportsworld	129,120	129,120	129,120	129,120	129,120	129,120	129,120	129,120	129,120	129,120	\$410
Activa Sports Complex	138,994	138,994	138,994	138,994	138,994	138,994	138,994	138,994	138,994	138,994	\$410
Total (sq.ft.)	1,026,270	1,026,270	1,032,197	1,032,197	1,032,197	1,032,197	1,032,197	1,039,183	1,039,183	1,039,183	
Total (\$000)	\$526,689.1	\$526,689.1	\$531,527.6	\$531,527.6	\$531,527.6	\$531,527.6	\$531,527.6	\$534,950.7	\$534,950.7	\$534,950.7	

1. Discount for cultural and entertainment uses based on City of Kitchener facility usage records.

APPENDIX B.3
TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Studios											
Homer Watson House/Coach House	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	\$1,359,500
Homer Watson House/Garden Studio	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	\$1,359,500
Homer Watson House/Classrooms	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	\$1,359,500
Seniors Centres											
Rockway Centre	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	\$6,795,500
Downtown Community Centre	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	\$18,650,000
Community Centres											
Breithaupt Community Centre	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	\$62,000
Bridgeport Community Recreation Centre	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	\$278,000
Centreville Chicopee Community Centre	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	\$1,359,500
Chandler Mowat Community Centre	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	\$278,000
Country Hills Community Centre	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	\$1,750,000
Doon Pioneer Park Community Centre	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	\$1,359,500
Forest Heights Community Centre	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	\$2,718,000
Kingsdale Community Centre (portable to multiple portables)	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	\$62,000
Kingsdale Community Centre (Formerly Patrick Doherty Arena)	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	\$62,000
Mill Courtland Community Centre	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	\$278,000
Victoria Hills Community Centre	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	\$278,000
Stanley Park Community Centre	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	\$278,000

APPENDIX B.3

TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

LAND (continued) Facility Name	# of Hectares										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Indoor Pools											
Breithaupt Community Pool - included in Breithaupt Com Ctr above											
Cameron Heights	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	\$1,750,000
Forest Heights Swimming Pool	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	\$1,750,000
Lyle Hallman Pool	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	\$1,750,000
Miscellaneous Indoor Facilities											
Budd Park Building	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	\$1,452,000
Victoria Park Pavilion	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	\$62,000
KW Judo Gymnastics	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	\$1,750,000
Queensmount Facility	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	\$278,000
Auditoriums											
Kitchener Memorial Auditorium	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	\$1,750,000
<i>Discount (as above)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	<i>(0.13)</i>	\$1,750,000
Twin Pad Addition	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	\$1,750,000
Arenas											
Don McLaren Arena	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	\$8,278,000
Grand River Arena	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$1,750,000
Kitchener Lions Arena	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	\$1,750,000
Sportsworld	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	\$3,459,500
Activa Sports Complex	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	\$1,750,000
Total (ha)	37.49	37.49	37.49	37.49	37.49	37.49	37.49	37.49	37.49	37.49	
Total (\$000)	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	

APPENDIX B.3

TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

FURNITURE AND EQUIPMENT Facility Name	# of Square Feet										UNIT COST (\$/sq. ft.)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Total Building Furniture and Equipment	1,026,270.3	1,026,270.3	1,032,196.9	1,032,196.9	1,032,196.9	1,032,196.9	1,032,196.9	1,039,182.9	1,039,182.9	1,039,182.9	\$36
Total (sq.ft.)	1,026,270	1,026,270	1,032,197	1,032,197	1,032,197	1,032,197	1,032,197	1,039,183	1,039,183	1,039,183	
Total (\$000)	\$36,945.7	\$36,945.7	\$37,159.1	\$37,159.1	\$37,159.1	\$37,159.1	\$37,159.1	\$37,410.6	\$37,410.6	\$37,410.6	

PARKING LOTS Facility Name	# of Spots										UNIT COST (\$/spot)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Activa	390	390	390	390	390	390	390	390	390	390	\$4,100
Lions	186	186	186	186	186	186	186	186	186	186	\$4,100
Grand River	21	21	21	21	21	21	21	21	21	21	\$4,100
Sportsworld	98	98	98	98	98	98	98	98	98	98	\$4,100
Kitchener Memorial Auditorium	1,811	1,811	1,811	1,811	1,811	1,811	1,811	1,811	1,811	1,811	\$4,100
Kiwanis Park	720	720	720	720	720	720	720	720	720	720	\$4,100
Breithaupt Centre / Pool	149	149	149	149	149	149	149	149	149	149	\$4,100
Harry Class	105	105	105	105	105	105	105	105	105	105	\$4,100
Cameron Heights Pool	20	20	20	20	20	20	20	20	20	20	\$4,100
Wilson Pool	10	10	10	10	10	10	10	10	10	10	\$4,100
Idlewood Pool	27	27	27	27	27	27	27	27	27	27	\$4,100

APPENDIX B.3

TABLE B.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
INDOOR RECREATION

PARKING LOTS (continued) Facility Name	# of Spots										UNIT COST (\$/spot)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Lyle Hallman Pool	188	188	188	188	188	188	188	188	188	188	\$4,100
Forest Heights CC	52	52	52	52	52	52	52	52	52	52	\$4,100
Mill Courtland CC	45	45	45	45	45	45	45	45	45	45	\$4,100
Stanley Park CC	29	29	29	29	29	29	29	29	29	29	\$4,100
Downtown CC	59	59	59	59	59	59	59	59	59	59	\$4,100
Bridgeport CC	28	28	28	28	28	28	28	28	28	28	\$4,100
Rockway CC	112	112	112	112	112	112	112	112	112	112	\$4,100
Country Hills CC	63	63	63	63	63	63	63	63	63	63	\$4,100
Centreville CC	28	28	28	28	28	28	28	28	28	28	\$4,100
Chandler Mowat CC	37	37	37	37	37	37	37	37	37	37	\$4,100
Kingsdale CC	69	69	69	69	69	69	69	69	69	69	\$4,100
Victoria Hills CC	90	90	90	90	90	90	90	90	90	90	\$4,100
Total (#)	6,349	6,350	6,351	6,352	6,353	6,354	6,355	6,356	6,357	6,358	
Total (\$000)	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	

**APPENDIX B.3
TABLE B.3-1**

**CITY OF KITCHENER
CALCULATION OF SERVICE LEVELS
INDOOR RECREATION**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historical Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247

INVENTORY SUMMARY (\$000)

Buildings	\$526,689.1	\$526,689.1	\$531,527.6	\$531,527.6	\$531,527.6	\$531,527.6	\$531,527.6	\$534,950.7	\$534,950.7	\$534,950.7
Land	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7	\$69,789.7
Furniture And Equipment	\$36,945.7	\$36,945.7	\$37,159.1	\$37,159.1	\$37,159.1	\$37,159.1	\$37,159.1	\$37,410.6	\$37,410.6	\$37,410.6
Parking Lots	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7	\$17,781.7
Total (\$000)	\$651,206.2	\$651,206.2	\$656,258.0	\$656,258.0	\$656,258.0	\$656,258.0	\$656,258.0	\$659,932.7	\$659,932.7	\$659,932.7

SERVICE LEVEL (\$/capita)											Average Service Level
Buildings	\$2,373.59	\$2,344.21	\$2,336.46	\$2,307.54	\$2,278.98	\$2,247.11	\$2,215.69	\$2,198.76	\$2,168.01	\$2,137.69	\$2,260.8
Land	\$314.52	\$310.62	\$306.78	\$302.98	\$299.23	\$295.05	\$290.92	\$286.85	\$282.84	\$278.88	\$296.9
Furniture And Equipment	\$166.50	\$164.44	\$163.34	\$161.32	\$159.32	\$157.10	\$154.90	\$153.77	\$151.62	\$149.49	\$158.2
Parking Lots	\$80.14	\$79.14	\$78.16	\$77.20	\$76.24	\$75.17	\$74.12	\$73.09	\$72.06	\$71.06	\$75.6
Total (\$/capita)	\$2,934.74	\$2,898.41	\$2,884.74	\$2,849.03	\$2,813.78	\$2,774.43	\$2,735.63	\$2,712.47	\$2,674.53	\$2,637.13	\$2,791.49

**CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
INDOOR RECREATION**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2012-2021	\$2,791.49
Net Population Growth 2022-2031	37,851
Maximum Allowable Funding Envelope	\$105,660,688

APPENDIX B.3

TABLE B.3-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
INDOOR RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
3.0 INDOOR RECREATION										
3.1 Community Centres										
3.1.1 Mill Courtland Community Centre Addition	2022	\$ 2,064,706	\$ -	\$ 2,064,706	0%	\$ -	\$ 2,064,706	\$ -	\$ 2,064,706	\$ -
3.1.2 Mill Courtland Community Centre Addition	2023	\$ 2,064,591	\$ -	\$ 2,064,591	0%	\$ -	\$ 2,064,591	\$ -	\$ 2,064,591	\$ -
3.1.3 Rosenberg Community Centre (Southwest)	2022	\$ 359,804	\$ -	\$ 359,804	0%	\$ -	\$ 359,804	\$ -	\$ 359,804	\$ -
3.1.4 Rosenberg Community Centre (Southwest)	2023	\$ 2,850,827	\$ -	\$ 2,850,827	0%	\$ -	\$ 2,850,827	\$ -	\$ 2,850,827	\$ -
3.1.5 Rosenberg Community Centre (Southwest)	2024	\$ 2,851,467	\$ -	\$ 2,851,467	0%	\$ -	\$ 2,851,467	\$ -	\$ 2,851,467	\$ -
3.1.6 Forest Heights Community Centre Addition	2024	\$ 53,712	\$ -	\$ 53,712	0%	\$ -	\$ 53,712	\$ -	\$ 53,712	\$ -
3.1.7 Forest Heights Community Centre Addition	2025	\$ 265,144	\$ -	\$ 265,144	0%	\$ -	\$ 265,144	\$ -	\$ 265,144	\$ -
3.1.8 Forest Heights Community Centre Addition	2026	\$ 136,765	\$ -	\$ 136,765	0%	\$ -	\$ 136,765	\$ -	\$ 136,765	\$ -
3.1.9 Forest Heights Community Centre Addition	2027	\$ 2,450,801	\$ -	\$ 2,450,801	0%	\$ -	\$ 2,450,801	\$ -	\$ 2,450,801	\$ -
3.1.10 Forest Heights Community Centre Addition	2028	\$ 2,451,497	\$ -	\$ 2,451,497	0%	\$ -	\$ 2,451,497	\$ -	\$ 2,451,497	\$ -
3.1.11 Provision for Indoor Recreation*	2029	\$ 16,666,667	\$ -	\$ 16,666,667	0%	\$ -	\$ 16,666,667	\$ -	\$ 16,666,667	\$ -
3.1.12 Provision for Indoor Recreation*	2030	\$ 16,666,667	\$ -	\$ 16,666,667	0%	\$ -	\$ 16,666,667	\$ -	\$ 16,666,667	\$ -
3.1.13 Provision for Indoor Recreation*	2031	\$ 16,666,667	\$ -	\$ 16,666,667	0%	\$ -	\$ 16,666,667	\$ -	\$ 4,829,670	\$ 11,836,997
Subtotal Community Centres		\$ 65,549,314	\$ -	\$ 65,549,314		\$ -	\$ 65,549,314	\$ -	\$ 53,712,317	\$ 11,836,997

APPENDIX B.3
TABLE B.3-2
CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
INDOOR RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
3.0 INDOOR RECREATION										
3.2 Indoor Pools										
3.2.1 New Aquatic Facility - South End	2022	\$ 284,000	\$ -	\$ 284,000	0%	\$ -	\$ 284,000	\$ -	\$ 284,000	\$ -
3.2.2 New Aquatic Facility - South End	2023	\$ 1,868,950	\$ -	\$ 1,868,950	0%	\$ -	\$ 1,868,950	\$ -	\$ 1,868,950	\$ -
3.2.3 New Aquatic Facility - South End	2024	\$ 26,896,715	\$ 8,975,292	\$ 17,921,423	0%	\$ -	\$ 17,921,423	\$ -	\$ 17,921,423	\$ -
3.2.4 New Aquatic Facility - South End	2025	\$ 26,896,715	\$ 8,975,292	\$ 17,921,423	0%	\$ -	\$ 17,921,423	\$ -	\$ 17,921,423	\$ -
Subtotal Indoor Pools		\$ 55,946,380	\$ 17,950,584	\$ 37,995,796		\$ -	\$ 37,995,796	\$ -	\$ 37,995,796	\$ -
3.3 Indoor Turf Facility										
3.3.1 New Indoor Turf Facility	2022	\$ 385,885	\$ -	\$ 385,885	0%	\$ -	\$ 385,885	\$ -	\$ 385,885	\$ -
3.3.2 New Indoor Turf Facility	2023	\$ 851,600	\$ -	\$ 851,600	0%	\$ -	\$ 851,600	\$ -	\$ 851,600	\$ -
3.3.3 New Indoor Turf Facility	2024	\$ 18,309,189	\$ -	\$ 18,309,189	0%	\$ -	\$ 18,309,189	\$ -	\$ 18,309,189	\$ -
3.3.4 New Indoor Turf Facility	2025	\$ 18,309,189	\$ -	\$ 18,309,189	0%	\$ -	\$ 18,309,189	\$ -	\$ 18,309,189	\$ -
Subtotal Indoor Turf Facility		\$ 37,855,863	\$ -	\$ 37,855,863		\$ -	\$ 37,855,863	\$ -	\$ 37,855,863	\$ -
3.4 Studies										
3.4.1 Leisure Facilities Master Plan	2023	\$ 220,000	\$ -	\$ 220,000	40%	\$ 77,855	\$ 142,145	\$ -	\$ 142,145	\$ -
3.4.2 Leisure Facilities Master Plan	2027	\$ 220,000	\$ -	\$ 220,000	40%	\$ 79,029	\$ 140,971	\$ -	\$ 140,971	\$ -
3.4.3 Provision for Additional Space Studies	2028	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
Subtotal Studies		\$ 540,000	\$ -	\$ 540,000		\$ 156,884	\$ 383,116	\$ -	\$ 383,116	\$ -
TOTAL INDOOR RECREATION		\$ 159,891,557	\$ 17,950,584	\$ 141,940,973		\$ 156,884	\$ 141,784,089	\$ -	\$ 129,947,092	\$ 11,836,997

Notes:

* Provision provides for other capital programs such as a new arena, gymnasium and/or track facility.

1. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation

Residential Share of 2022 - 2031 DC Eligible Costs	100%	\$129,947,092
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$2,558.22

Non-Residential Development Charge Calculation

Non-Residential Share of 2022 - 2031 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$0.00

2022 - 2031 Net Funding Envelope	\$ 105,660,688
Reserve Fund Balance as at Dec 31, 2021	\$ 24,286,404
Adjusted 2022 - 2031 Net Funding Envelope	\$ 129,947,092

APPENDIX B.3
TABLE B.3-3

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
INDOOR RECREATION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

INDOOR RECREATION	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	\$24,286.4	\$33,150.9	\$37,573.2	\$8,557.6	(\$19,372.5)	(\$8,907.1)	(\$487.1)	\$8,524.9	\$1,375.2	(\$6,273.9)	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Indoor Recreation: Non Inflated	\$3,094.39	\$7,778.1	\$39,135.8	\$36,495.8	\$136.8	\$2,591.8	\$2,551.5	\$16,666.7	\$16,666.7	\$4,829.7	\$129,947.1
- Indoor Recreation: Inflated	\$3,094.4	\$7,933.7	\$40,716.9	\$38,729.6	\$148.0	\$2,861.5	\$2,873.4	\$19,144.8	\$19,527.7	\$5,771.9	\$140,801.8
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$10,971.0	\$11,139.6	\$11,198.1	\$11,255.5	\$11,480.6	\$11,618.2	\$11,756.7	\$11,896.1	\$12,036.3	\$12,277.1	\$115,629.1
INTEREST											
- Interest on Opening Balance	\$850.0	\$1,160.3	\$1,315.1	\$299.5	(\$1,065.5)	(\$489.9)	(\$26.8)	\$298.4	\$48.1	(\$345.1)	\$2,044.2
- Interest on In-year Transactions	\$137.8	\$56.1	(\$811.8)	(\$755.5)	\$198.3	\$153.2	\$155.5	(\$199.3)	(\$206.0)	\$113.8	(\$1,157.9)
TOTAL REVENUE	\$11,958.8	\$12,356.0	\$11,701.3	\$10,799.5	\$10,613.4	\$11,281.5	\$11,885.4	\$11,995.1	\$11,878.5	\$12,045.8	\$116,515.4
CLOSING CASH BALANCE	\$33,150.9	\$37,573.2	\$8,557.6	(\$19,372.5)	(\$8,907.1)	(\$487.1)	\$8,524.9	\$1,375.2	(\$6,273.9)	\$0.0	

2022 Adjusted Charge Per Capita **\$2,081.52**

Allocation of Capital Program

Residential Sector	100.0%
Non-Residential Sector	0.0%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.4

Outdoor Recreation

Outdoor Recreation

The City provides outdoor recreation services to residents through a number of parks, trails, golf courses and other open spaces, all of which contain numerous facilities, buildings and other amenities. As with Indoor Recreation, all City residents have access to all facilities and the benefits of the Outdoor Recreation service are therefore deemed to be City-wide for the purpose of calculating the development charge.

Table B.4-1 2012 – 2021 Historical Service Levels

The City contains almost 2,018 hectares of developed parkland that includes 569 hectares of parks, 1,298 hectares of open space and 151 hectares of golf course land valued at \$234.43 million. The City also maintains a 216,029 linear metre trail system. The cost to develop this trail system is estimated at \$66.93 million.

Outdoor facilities include playground equipment, natural playground equipment, outdoor ice rinks, baseball diamonds, outdoor aquatic facilities, soccer pitches, sports courts, pedestrian bridges, skate parks, horseshoe pitches and other amenities. These facilities have a combined value of \$110.03 million. Outdoor buildings, field houses, golf course buildings, and fleet have an additional value of almost \$39.10 million.

The current replacement value of Outdoor Recreation capital infrastructure is \$450.48 million. It has provided the City with a ten-year average service level of \$1,536.12 per capita. This service level, when multiplied by the ten-year net population growth in the City, results in a maximum allowable funding envelope of \$58.14 million.

Table B.4-2 2022 – 2031 Development-Related Capital Program & Calculation of Unadjusted Development Charges

The development-related capital program for Outdoor Recreation includes \$79.15 million of capital works, including \$64.87 million in park development projects, \$13.58 million in trail development projects and \$694,941 in outdoor recreation studies. No grants or subsidies have been identified to offset the cost of the program. A portion of, park development and redevelopment and the new community trails amounting to \$20.55 million relates to remediation and repair of the parkland, trails, and park amenities, and is treated as a benefit to the existing community.

The remaining \$58.60 million is within the calculated maximum funding envelope of \$58.14 million (adjusted upwards to account for a \$562,130 positive reserve fund balance) and is included in the development charge calculation.

The total Outdoor Recreation ten-year development-related net capital cost of \$58.60 million is allocated 100 per cent against residential development. This yields an unadjusted development charge rate of \$1,153.63 per capita.

Table B.4-3 Cash Flow Analysis

The cash flow analysis is displayed in Table B.4-3. It considers the timing of the projects as well as the timing of the development charge revenues to adjust the calculated rates. After cash flow, this contributes to decreasing the Outdoor Recreation charge to \$1,141.13 per capita.

The following table summarizes the calculation of the Outdoor Recreation development charge:

OUTDOOR RECREATION SUMMARY						
10-year Hist.	2022 - 2031		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$1,536.12	\$79,151,701	\$58,599,673	\$1,153.63	\$0.00	\$1,141.13	\$0.00

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND DEVELOPMENT

LAND DEVELOPMENT	# of Hectares of Developed Land										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Parks	377.0	383.0	388.9	394.8	400.7	406.6	412.6	464.6	516.6	568.6	\$350,000
Open Space	1,144.5	1,151.6	1,158.6	1,165.7	1,172.8	1,179.8	1,186.9	1,223.9	1,261.0	1,298.0	\$18,600
Golf Courses	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	\$74,500
Total (ha)	1,673.0	1,685.9	1,698.9	1,711.9	1,724.9	1,737.9	1,750.8	1,839.9	1,928.9	2,018.0	
Total (\$000)	\$164,530.0	\$166,733.3	\$168,936.6	\$171,139.9	\$173,343.2	\$175,546.6	\$177,749.9	\$196,641.6	\$215,533.4	\$234,425.1	

TRAIL DEVELOPMENT	# of Metres of Developed Trails										UNIT COST (\$/m)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
MULTI-USE PATHWAYS - ASPHALT	3,891	4,643	5,541	6,714	8,428	11,210	11,460	11,460	11,460	-	\$300
MULTI-USE PATHWAYS - CONCRETE	542	562	582	650	674	674	674	674	674	-	\$180
MULTI-USE PATHWAYS - STONEDUST (TBV)	767	795	824	824	824	824	824	824	824	-	\$180
MULTI-USE TRAILS - ASPHALT	49,359	49,873	50,391	50,654	51,084	52,531	52,531	63,531	81,771	-	\$300
MULTI-USE TRAILS - CONCRETE	3,308	3,313	3,318	3,318	3,325	3,339	3,339	3,439	3,439	-	\$180
MULTI-USE TRAILS - STONEDUST	68,772	68,791	68,811	68,811	68,811	68,890	68,890	67,840	66,500	-	\$180
TRAILS NATURAL	7,804	7,806	7,808	7,808	7,808	7,808	7,808	7,808	7,808	-	\$60
MULTI-USE - PAVED (ASPHALT, CONCRETE ETC)	-	-	-	-	-	-	-	-	-	87,816	\$450
MULTI-USE - GRANULAR	-	-	-	-	-	-	-	-	-	100,940	\$150
WALKWAYS (NOT PREVIOUSLY INCLUDED)	-	-	-	-	-	-	-	-	-	27,273	\$450
Total (m)	134,442	135,782	137,275	138,779	140,954	145,276	145,526	155,576	172,476	216,029	
Total (\$000)	\$29,653.2	\$30,046.0	\$30,484.4	\$30,927.4	\$31,576.2	\$32,861.6	\$32,936.6	\$36,065.6	\$41,296.4	\$66,931.1	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

PLAYGROUND EQUIPMENT Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Small Playgrounds	81	90	92	92	94	95	96	96	96	101	\$250,000
Medium Playgrounds	35	39	40	40	41	41	42	42	42	44	\$400,000
Large Playgrounds	3	3	4	4	4	4	4	4	4	4	\$700,000
Total (#)	120	132	135	136	138	140	141	141	141	149	
Total (\$000)	\$36,846.5	\$40,155.2	\$41,442.1	\$41,748.5	\$42,361.3	\$42,974.0	\$43,280.4	\$43,280.4	\$43,280.4	\$45,731.4	

NATURAL PLAYGROUND EQUIPMENT Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
GILDNER GREEN PLAYGROUND	-	-	-	-	1	1	1	1	1	1	\$66,000
HURON NATURAL AREA PLAYGROUND 1	-	-	-	-	1	1	1	1	1	1	\$210,200
HURON NATURAL AREA PLAYGROUND 2	-	-	-	-	-	-	1	1	1	1	\$210,200
Total (#)	-	-	-	-	2	2	3	3	3	3	
Total (\$000)	\$0.0	\$0.0	\$0.0	\$0.0	\$276.2	\$276.2	\$486.4	\$486.4	\$486.4	\$486.4	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

OUTDOOR ICE RINKS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Admiral Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Belmont Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Breithaupt Park Rink Shack	-	-	-	-	-	1	1	1	1	1	\$76,900
Bridgeport Community Centre	1	1	1	1	1	1	1	1	1	1	\$76,900
Cherry Park	-	-	1	1	1	1	1	1	1	1	\$76,900
Centreville Chicopee Community Centre	-	-	1	1	1	1	1	1	1	1	\$76,900
Chandler Mowat Community Centre	-	-	1	1	1	1	1	1	1	1	\$76,900
Civic Square Rink	1	1	1	1	1	1	1	1	1	1	\$1,453,100
Conway Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Country Clair Park	-	-	1	1	1	1	1	1	1	1	\$76,900
Country Hills Community Centre	1	1	1	1	1	1	1	1	1	1	\$76,900
Crosby Park (formerly Stanley Park Public School)	-	-	1	1	1	1	1	1	1	1	\$76,900
Doon Pioneer Park Community Centre	1	1	1	1	1	1	1	1	1	1	\$76,900
Driftwood Park	1	1	-	-	-	-	-	-	-	-	\$76,900
Eby Park	1	1	-	-	-	-	-	-	-	-	\$76,900
Elmsdale Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Forest Heights Community Centre	1	1	1	1	1	1	1	1	1	1	\$76,900
George Lippert Park (Huron)	-	-	-	1	1	1	1	1	1	1	\$76,900
Glendale Park	1	1	1	1	1	1	1	1	1	1	\$76,900

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

Guelph Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Gzowski Park (now Victoria Hill Community Centre)	1	1	-	-	-	-	-	-	-	-	\$76,900
Huron Park (now George Lippert Park)	1	1	1	-	-	-	-	-	-	-	\$76,900
Idlewood Park	1	1	-	-	-	-	-	-	-	-	\$76,900
Kiwanis Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Lakeside Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Ludolph Park	-	-	-	-	1	1	1	1	1	1	\$76,900
Max Becker Commons	-	-	1	1	1	1	1	1	1	1	\$76,900
Mill Courtland Community Centre	1	1	1	1	1	1	1	1	1	1	\$76,900
Morrison Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Pioneer Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Stanley Park Community Centre	-	-	-	-	-	1	1	1	1	1	\$76,900
Timberlane Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Vanier Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Weber Park	1	1	1	1	1	1	1	1	1	1	\$76,900
Victoria Hills Commuinty Centre (Gzowski Park)	-	-	1	1	1	1	1	1	1	1	\$76,900
Victoria Park	-	-	1	1	1	1	1	1	1	1	\$88,900
Total (#)	24	24	28	28	29	31	31	31	31	31	
Total (\$000)	\$3,221.8	\$3,221.8	\$3,541.4	\$3,541.4	\$3,618.3	\$3,772.1	\$3,772.1	\$3,772.1	\$3,772.1	\$3,772.1	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

BASEBALL DIAMONDS - A1 HARDBALL Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Breithaupt Park Ball Diamond-1	1	1	1	1	1	1	1	1	1	1	\$606,500
Breithaupt Park Ball Diamond-2	1	1	1	1	1	1	1	1	1	1	\$606,500
Lions Sportsfields Diamond-2 (lit)	1	1	1	1	1	1	1	1	1	1	\$1,182,900
Total (#)	3	3	3	3	3	3	3	3	3	3	
Total (\$000)	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	\$2,395.9	

BASEBALL DIAMONDS - A1 MULTI-PURPOSE Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Breithaupt Park Ball Diamond-3	1	1	1	1	1	1	1	1	1	1	\$465,900
Bridgeport Sportsfields Joe Thompson (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Budd Park Ball Diamond 1 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Budd Park Ball Diamond 2 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Peter Hallman Ball Yard Diamond-1 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Peter Hallman Ball Yard Diamond-2 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Peter Hallman Ball Yard Diamond-3 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Rosenberg Park Diamond-1 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Rosenberg Park Diamond-2 (lit)	1	1	1	1	1	1	1	1	1	1	\$898,300
Upper Canada Park Diamond-1	1	1	1	1	1	1	1	1	1	1	\$510,400
Upper Canada Park Diamond-2 (PlayBall Academy Diamond)	1	1	1	1	1	1	1	1	1	1	\$510,400
Upper Canada Park Diamond-3	1	1	1	1	1	1	1	1	1	1	\$510,400
Upper Canada Park Diamond-4	1	1	1	1	1	1	1	1	1	1	\$510,400
Upper Canada Park Diamond-5 (T-ball)	1	1	1	1	1	1	1	1	1	1	\$93,700
Total (#)	14	14	14	14	14	14	14	14	14	14	
Total (\$000)	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	\$9,787.6	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

SOCCER PITCHES - A2 & B1 Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Biehn Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Bridgeport Sportsfields Field 1	1	1	1	1	1	1	1	1	1	1	\$156,100
Bridgeport Sportsfields Field 2	1	1	1	1	1	1	1	1	1	1	\$156,100
Budd Park Soccer Field 5	1	1	1	1	1	1	1	1	1	1	\$156,100
Budd Park Soccer Field 6	1	1	1	1	1	1	1	1	1	1	\$156,100
Cameron Hghts - Kaufman Park Soccer Field 1	1	1	1	1	1	1	1	1	1	1	\$156,100
Cameron Hghts - Kaufman Park Soccer Field 2	1	1	1	1	1	1	1	1	1	1	\$156,100
Carlyle Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Cloverdale Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Country Hills Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Countryside Park Soccer Field 1	1	1	1	1	1	1	1	1	1	1	\$156,100
Countryside Park Soccer Field 2	1	1	1	1	1	1	1	1	1	1	\$156,100
Driftwood Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Eby Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Fischer Park Lower Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Fisher Park Upper Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Idlewood Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Knollwood Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Laurentian Park Soccer Field #1	1	1	1	1	1	1	1	1	1	1	\$156,100
Laurentian Park Soccer Field #2	1	1	1	1	1	1	1	1	1	1	\$156,100
Montgomery Park Soccer Field	1	-	-	-	-	-	-	-	-	-	\$156,100
Morgan Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Morrison Park - Mini 1	1	1	1	1	1	1	1	1	1	1	\$52,000
Morrison Park - Mini 2	1	1	1	1	1	1	1	1	1	1	\$52,000
Morrison Park - Mini 3	1	1	1	1	1	1	1	1	1	1	\$52,000
Schaefer Soccer Park Soccer Field 1	1	-	-	-	-	-	-	-	-	-	\$156,100
Schaefer Soccer Park Soccer Field 2	1	-	-	-	-	-	-	-	-	-	\$156,100
Southridge Park Soccer Field	1	1	-	-	-	-	-	-	-	-	\$156,100
Westheights Park Soccer Field	1	1	1	1	1	1	1	1	1	1	\$156,100
Wilson Park	1	1	1	1	1	1	1	1	1	1	\$156,100
Total (#)	30	27	26	26	26	26	26	26	26	26	
Total (\$000)	\$4,370.7	\$3,902.4	\$3,746.3	\$3,746.3	\$3,746.3	\$3,746.3	\$3,746.3	\$3,746.3	\$3,746.3	\$3,746.3	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

SPORTS COURTS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Admiral Park	1	1	1	1	1	1	1	1	1	1	\$79,300
Belmont Park	1	1	1	1	1	1	1	1	1	1	\$140,500
Bridgeport Community Centre	1	1	1	1	1	1	1	1	1	1	\$109,300
Budd Park	1	1	1	1	1	1	1	1	1	1	\$218,600
Caryndale Park	1	1	1	1	1	1	1	1	1	1	\$27,600
Cetreville Chicopee Community Centre	1	1	1	1	1	1	1	1	1	1	\$15,600
Chandler Mowat Community Centre	1	1	1	1	1	1	1	1	1	1	\$21,600
Charles Best Park	-	-	-	1	1	1	1	1	1	1	\$14,400
Countrystone Park	1	1	1	1	1	1	1	1	1	1	\$114,100
Courty Hills Park	1	1	1	1	1	1	1	1	1	1	\$18,000
Doon Pioneer Community Centre	1	1	1	1	1	1	1	1	1	1	\$15,600
Eby Park	1	1	1	1	1	1	1	1	1	1	\$82,900
Forest Heights Community Centre	1	1	1	1	1	1	1	1	1	1	\$9,600
Forest Heights Collegiate	1	1	1	1	1	1	1	1	1	1	\$218,600
Franklin Park	1	1	1	1	1	1	1	1	1	1	\$426,300
George Lippert Park	1	1	1	1	1	1	1	1	1	1	\$69,700
Glendale Park	1	1	1	1	1	1	1	1	1	1	\$75,700
Guelph Street Park	1	1	1	1	1	1	1	1	1	1	\$109,300
Heritage Park	1	1	1	1	1	1	1	1	1	1	\$123,700
Highland Courts	1	1	1	1	1	1	1	1	1	1	\$213,800
Kaufman Park	1	1	1	1	1	1	1	1	1	1	\$228,200
Margaret Ave. Public School	1	1	1	1	1	1	1	1	1	1	\$147,700

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

SPORTS COURTS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
McLennan Park	1	1	1	1	1	1	1	1	1	1	\$266,600
Mill Courtland Community Centre	1	1	1	1	1	1	1	1	1	1	\$75,700
Montgomery Park	1	1	1	1	1	1	1	1	1	1	\$174,100
Resurrection Catholic Secondary School	1	1	1	1	1	1	1	1	1	1	\$321,800
Sandhills Park	1	1	1	1	1	1	1	1	1	1	\$26,400
Stanley Park Public School	1	1	1	1	1	1	1	1	1	1	\$200,600
Sunnyside Public School	1	1	1	1	1	1	1	1	1	1	\$204,200
Timberlane Park	1	1	1	1	1	1	1	1	1	1	\$55,200
Tremaine Park	1	1	1	1	1	1	1	1	1	1	\$37,200
Upper Canada Park	-	-	-	-	-	-	1	1	1	1	\$54,000
Vanier Park	1	1	1	1	1	1	1	1	1	1	\$73,300
Weber Park	1	1	1	1	1	1	1	1	1	1	\$75,700
Windale Park Park	1	1	1	1	1	1	1	1	1	1	\$9,600
Yellow Birch Park	1	1	1	1	1	1	1	1	1	1	\$19,200
Total (#)	34	34	34	35	35	35	36	36	36	36	
Total (\$000)	\$4,005.3	\$4,005.3	\$4,005.3	\$4,019.7	\$4,019.7	\$4,019.7	\$4,073.7	\$4,073.7	\$4,073.7	\$4,073.7	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

PEDESTRIAN BRIDGES - BOARDWALKS Description	Linear Meters										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
907 - Homer Watson Park Trail Boardwalk	-	8	8	8	8	8	8	8	8	8	\$1,800
908 - Tilts Bush Boardwalk	195	195	195	195	195	195	195	195	195	195	\$1,800
921 - Huron Natural Park Trail Bridge #1	75	75	75	75	75	75	75	75	75	75	\$1,800
922 - Huron Natural Park Trail Bridge #2	52	52	52	52	52	52	52	52	52	52	\$1,800
1093 - Doon South Boardwalk #1	-	-	182	182	182	182	182	182	182	182	\$1,800
1094 - Doon South Boardwalk #2	49	49	49	49	49	49	49	49	49	49	\$1,800
1095 - Doon South Boardwalk #3	52	52	52	52	52	52	52	52	52	52	\$1,800
1096 - Huron Natural Park Lookout Boardwalk	13	13	13	13	13	13	13	13	13	13	\$1,800
85702 - Huron Natural Park #1	2	2	2	2	2	2	2	2	2	2	\$1,800
44943 - Huron Natural Park #2	3	3	3	3	3	3	3	3	3	3	\$1,800
100000 - Huron Natural Park #3	3	3	3	3	3	3	3	3	3	3	\$1,800
47700 - Monarch Woods Boardwalk #1	6	6	6	6	6	6	6	6	6	6	\$1,800
46799 - Monarch Woods Boardwalk #2	6	6	6	6	6	6	6	6	6	6	\$1,800
Huron Natural Park #4	-	-	-	-	-	115	115	115	115	115	\$1,800
Blazer Creek Boardwalk	-	-	-	-	-	-	88	88	88	88	\$1,800
Total (#)	456	464	646	646	646	761	849	849	849	849	
Total (\$000)	\$820.8	\$835.2	\$1,162.8	\$1,162.8	\$1,162.8	\$1,369.8	\$1,528.2	\$1,528.2	\$1,528.2	\$1,528.2	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

PEDESTRIAN BRIDGES - CULVERTS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
838 - Borden Greenway Trail Bridge	1	1	1	1	1	1	1	1	1	1	\$120,100
860 - Schneider Creek Trail Culvert #2	1	1	1	1	1	1	1	1	1	1	\$658,100
868 - Idlewood Creek Trail Culvert #6	1	1	1	1	1	1	1	1	1	1	\$206,600
88067 - Concordia Park Culvert	1	1	1	1	1	1	1	1	1	1	\$206,600
92890 - Kolb Greenway Culvert	-	-	-	-	-	1	1	1	1	1	\$206,600
Total (#)	4	4	4	4	4	5	5	5	5	5	
Total (\$000)	\$1,191.4	\$1,191.4	\$1,191.4	\$1,191.4	\$1,191.4	\$1,398.0	\$1,398.0	\$1,398.0	\$1,398.0	\$1,398.0	

PEDESTRIAN BRIDGES - SPAN BRIDGES Description	# of Bridges										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Pedestrian Bridge Type 1	36	36	38	40	40	40	40	40	40	40	\$184,900
960 - Walter Bean Trail Bridge	1	1	1	1	1	1	1	1	1	1	\$1,853,900
877 - Pedestrian Bridge over Victoria Lake	1	1	1	1	1	1	1	1	1	1	\$540,400
852 - Iron Horse Trail Trestle Bridge	1	1	1	1	1	1	1	1	1	1	\$508,600
875 - Victoria Park Lake Trail Bridge #1	1	1	1	1	1	1	1	1	1	1	\$369,900
898 - Melitzer Creek Trail Bridge	1	1	1	1	1	1	1	1	1	1	\$277,400
863 - Sandrock Greenway Pedestrian Bridge #1	1	1	1	1	1	1	1	1	1	1	\$270,200
961 - Grand River Hiking Trail	1	1	1	1	1	1	-	-	-	-	\$30,000
Total (#)	43	43	45	47	47	47	46	46	46	46	
Total (\$000)	\$8,112.5	\$8,112.5	\$8,482.3	\$8,852.1	\$8,852.1	\$8,852.1	\$8,822.1	\$8,822.1	\$8,822.1	\$8,822.1	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

SKATE PARKS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Kitchener Skate Park	1	1	1	1	1	1	1	1	1	1	\$531,800
McLennan Park Skatepark	1	1	1	1	1	1	1	1	1	1	\$673,600
Optimist Club Skateboard Park	1	1	1	1	-	-	-	-	-	-	\$43,800
McLennan Park Bike Park	1	1	1	1	1	1	1	1	1	1	\$420,300
Fischer Skate Park	-	-	1	1	1	1	1	1	1	1	\$938,100
Total (#)	4	4	5	5	4	4	4	4	4	4	
Total (\$000)	\$1,669.5	\$1,669.5	\$2,607.6	\$2,607.6	\$2,563.8	\$2,563.8	\$2,563.8	\$2,563.8	\$2,563.8	\$2,563.8	

HORSESHOE PITCH Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Horseshoe Pitches Total	11	11	11	12	12	12	12	12	12	12	\$1,800
Total (#)	11	11	11	12	12	12	12	12	12	12	
Total (\$000)	\$19.8	\$19.8	\$19.8	\$21.6	\$21.6	\$21.6	\$21.6	\$21.6	\$21.6	\$21.6	

APPENDIX B.4

TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

OTHER FACILITIES Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Stadium											
Jack Couch Stadium	1	1	1	1	1	1	1	1	1	1	\$484,000
Centennial Stadium	1	1	1	1	1	1	1	1	1	1	\$1,443,500
Cricket Pitch											
Meadowlane Park Cricket Field	1	1	1	1	1	1	1	1	1	1	\$288,200
Lawn Bowling Pitch											
Heritage Greens Lawn Bowling Club	1	1	1	1	1	1	1	1	1	1	\$577,600
Highland Courts Lawnbowling - Kitchener Lawn Bowling Club	1	1	1	1	1	1	1	1	1	1	\$389,100
Shuffleboard Court											
Rockway Centre Shuffleboard Court	-	-	-	-	1	1	1	1	1	1	\$8,400
Disc Fields											
Kiwani's Park Field 1	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 2	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 3	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 4	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 5	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 6	1	1	1	1	1	1	1	1	1	1	\$7,200
Kiwani's Park Field 7	1	1	1	1	1	1	1	1	1	1	\$7,200
Field Hocket Pitch											
Lions Sportsfields - Field Hockey Pitch	1	1	1	1	1	1	1	1	1	1	\$144,100
Volleyball Court											
McLennan Park Volleyball Court	1	1	1	1	1	1	1	1	1	1	\$112,900
Elmsdale Park Volleyball Court	-	-	-	-	-	-	1	1	1	1	\$30,000

APPENDIX B.4

TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARKLAND AMENITIES

OTHER FACILITIES Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Dog Parks											
George Lippert Park Micro Dog Park	-	-	-	-	-	-	1	1	1	1	\$60,000
Kitchener Auditorium	-	-	-	-	-	-	1	1	1	1	\$30,000
McLennan Park	1	1	1	1	1	1	1	1	1	1	\$300,200
Community Venue											
Victoria Park Commons	1	1	1	1	1	1	1	1	1	1	\$97,500
Bike Rack											
Fix-It Stand	3	3	3	3	3	3	3	3	3	3	\$1,800
Racks	134	136	138	140	142	144	146	146	146	146	\$1,200
Garbage containers											
Deep Collection Molock	64	65	66	67	68	69	70	70	70	70	\$8,400
Surface Molok	15	15	15	15	16	16	16	16	16	16	\$3,600
Victorian container	41	41	42	42	43	43	44	44	44	44	\$1,200
Park Features											
Huron Natural Area Picnic Shelter	-	-	-	-	-	1	1	1	1	1	\$120,100
Victoria Park Bandstand	-	-	-	-	-	1	1	1	1	1	\$180,100
Permanent Picnic Tables	36	36	37	37	38	38	39	39	39	39	\$6,000
Total (#)	309	312	317	321	326	333	340	340	340	343	
Total (\$000)	\$4,912.0	\$4,924.8	\$4,939.5	\$4,954.4	\$4,978.0	\$5,293.5	\$5,429.1	\$5,429.0	\$5,429.0	\$5,429.1	

**APPENDIX B.4
TABLE B.4-1**

**CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARK BUILDINGS AND FLEET**

BUILDINGS AND FIELD HOUSES Description	Square Feet										UNIT COST (\$/sq.ft)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Victoria Park Bandshell	592	592	592	592	592	592	592	592	592	592	\$180
Victoria Park Boat House	3,907	3,907	3,907	3,907	3,907	3,907	3,907	3,907	3,907	3,907	\$140
Crosby Park Change House	348	348	348	348	348	348	348	348	348	348	\$120
Huron Park Change House	465	465	465	465	465	465	465	465	465	465	\$140
Woodside Park Change House	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	\$230
Kiwanis Park Change Room	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	\$140
Victoria Park Comfort Station	500	500	500	500	500	500	500	500	500	500	\$360
Victoria Park Washroom	-	-	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	\$580
Jack Couch Stadium Concession Building	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$410
Kiwanis Park Concession Building	500	500	500	500	500	500	500	500	500	500	\$190
Meinzinger Park Concession Building	897	897	897	897	897	897	897	897	897	897	\$120
Meeting Room/Dressing Room	500	500	500	500	500	500	500	500	500	500	\$410
Eby Park Field House	500	500	500	500	500	500	500	500	500	500	\$120
Storage Building	635	635	635	635	635	635	635	635	635	635	\$170
YWCA Daycare/Washrooms/Parks Storage	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	2,690	\$390
Kiwanis Park Garage	449	449	449	449	449	449	449	449	449	449	\$190
Kiwanis Park Gate House	361	361	361	361	361	361	361	361	361	361	\$50
Kaufman Sports Park Maintenance Building	463	463	463	463	463	463	463	463	463	463	\$170
Southwest Optimist Maintenance Building/Washrooms	713	713	713	713	713	713	713	713	713	713	\$350
Victoria Park Pavilion Maintenance Building	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	\$120
Victoria Park Picnic Shelter	500	500	500	500	500	500	500	500	500	500	\$150
Kiwanis Park Sun Shelter/Airplane Clubhouse	225	225	225	225	225	225	225	225	225	225	\$150
Mount Hope Cemetery Storage	215	215	215	215	215	215	215	215	215	215	\$410
West Avenue Storage	1,328	1,328	1,328	1,328	1,328	1,328	1,328	1,328	1,328	1,328	\$150
New Buildings Since 2009											
McLennan Park Washrooms	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	\$580
McLennan Park Picnic Shelter (# of buildings)	1	1	1	1	1	1	1	1	1	1	\$73,250
Total (sq.ft)	24,812	24,812	26,014	26,014	26,014	26,014	26,014	26,014	26,014	26,014	
Total (\$000)	\$5,823.4	\$5,823.4	\$6,519.5	\$6,519.5	\$6,519.5	\$6,519.5	\$6,519.5	\$6,519.5	\$6,519.5	\$6,519.5	

**APPENDIX B.4
TABLE B.4-1**

**CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARK BUILDINGS AND FLEET**

GOLF COURSE BUILDINGS Description	Square Feet										UNIT COST (\$/sq.ft)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
DOON VALLEY CONCESSION BUILDING	937	937	937	937	937	937	937	937	937	937	\$240
DOON VALLEY GOLF CLUB HOUSE	10,045	10,045	10,045	10,045	10,045	10,045	10,045	10,045	10,045	10,045	\$410
DOON VALLEY GOLF COURSE STORAGE SHED	167	167	167	167	167	167	167	167	167	167	\$90
DOON VALLEY GOLF COURSE WASHROOMS (near bridge)	120	120	120	120	120	120	120	120	120	120	\$300
DOON VALLEY MAINTENANCE BUILDING	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	\$90
DOON VALLEY PUMP HOUSE	415	415	415	415	415	415	415	415	415	415	\$300
DOON VALLEY STORAGE BUILDING	807	807	807	807	807	807	807	807	807	807	\$90
DOON VALLEY GOLF COURSE WASHROOMS (club house)	54	54	54	54	54	54	54	54	54	54	\$240
DOON VALLEY GOLF COURSE CART STORAGE	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350	4,350	\$90
DOON VALLEY GOLF COURSE STARTER SHED 1	60	60	60	60	60	60	60	60	60	60	\$120
DOON VALLEY GOLF COURSE STARTER SHED 2	60	60	60	60	60	60	60	60	60	60	\$120
ROCKWAY CART STORAGE	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	\$120
ROCKWAY CLUB HOUSE	13,060	13,060	13,060	13,060	13,060	13,060	13,060	13,060	13,060	13,060	\$410
ROCKWAY CONCESSION BUILDING	540	540	540	540	540	540	540	540	540	540	\$240
ROCKWAY GOLF CLUB CHEMICAL STORAGE BUILDING	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	3,930	\$90
ROCKWAY MAINTENANCE/STORAGE BUILDING	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	\$90
ROCKWAY PUMP HOUSE	668	668	668	668	668	668	668	668	668	668	\$240
ROCKWAY STARTER SHED	732	732	732	732	732	732	732	732	732	732	\$120
ROCKWAY EQUIPMENT STORAGE BUILDING	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	\$120
ROCKWAY GOLF COMFORT STATION	-	-	250	250	250	250	250	250	250	250	\$240
Total (sq.ft)	48,427	48,427	48,677	48,677	48,677	48,677	48,677	48,677	48,677	48,677	
Total (\$000)	\$12,343.9	\$12,343.9	\$12,403.9	\$12,403.9	\$12,403.9	\$12,403.9	\$12,403.9	\$12,403.9	\$12,403.9	\$12,403.9	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARK BUILDINGS AND FLEET

GOLF COURSE BUILDINGS Description	# of Facilities										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
DOON VALLEY GOLF COURSE RAIN SHELTER 1	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE RAIN SHELTER 2	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE RAIN SHELTER 3	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE RAIN SHELTER 4	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE RAIN SHELTER 5	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE RAIN SHELTER 6	1	1	1	1	1	1	1	1	1	1	\$6,600
DOON VALLEY GOLF COURSE REGISTRATION CANOPY	-	-	1	1	1	1	1	1	1	1	\$6,600
ROCKWAY RAIN SHELTER 1	1	1	1	1	1	1	1	1	1	1	\$6,600
ROCKWAY RAIN SHELTER 2	1	1	1	1	1	1	1	1	1	1	\$6,600
ROCKWAY RAIN SHELTER 3	1	1	1	1	1	1	1	1	1	1	\$6,600
ROCKWAY GASOLINE STORAGE BUILDING	1	1	1	1	1	1	1	1	1	1	\$8,410
Total (#)	10	10	11	11	11	11	11	11	11	11	
Total (\$000)	\$67.8	\$67.8	\$74.4	\$74.4	\$74.4	\$74.4	\$74.4	\$74.4	\$74.4	\$74.4	

LAND Description	Hectares of Land										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Storage Building	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	\$74,460
YWCA Daycare/Washrooms/Parks Storage	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	\$3,857,890
Chandler Street Green House	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	\$74,460
West Avenue Storage	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	\$74,460
All Other Land Included in Parkland Inventory											
Total (#)	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	
Total (\$000)	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	\$157.4	

APPENDIX B.4
TABLE B.4-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
OUTDOOR RECREATION
PARK BUILDINGS AND FLEET

VEHICLES Description	# of Vehicles										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Aerator	18	17	17	17	18	19	19	18	18	18	\$30,000
Aerial Truck	2	2	2	2	2	2	2	2	2	3	\$300,000
Auger	2	2	2	2	2	2	2	2	2	2	\$2,280
Compactor	2	2	2	2	2	2	2	2	2	2	\$11,050
Crew Cab	17	17	17	17	18	18	18	18	18	18	\$88,150
Ice Resurfacer	11	12	11	11	12	12	12	13	11	11	\$125,000
Landscape Rake	4	4	4	4	4	4	4	4	4	4	\$15,730
Mower	52	50	51	51	52	53	54	54	54	54	\$49,240
Outboard Motor	1	1	1	1	1	1	1	1	1	1	\$1,560
Over Seeder	4	4	4	4	4	4	4	4	4	4	\$17,290
Pick Up	25	28	28	29	29	30	30	30	30	30	\$48,040
Pick With with Dump	18	18	20	19	19	20	20	18	22	20	\$300,000
Post Pounder	1	1	1	1	1	1	1	1	1	1	\$29,660
Pres Washer	2	2	2	2	2	2	2	2	2	2	\$6,480
Pruner	15	15	15	15	16	16	16	16	16	16	\$1,200
Sod Cutter	2	2	2	2	2	2	2	2	2	2	\$12,610
Soil Renovator	1	1	1	1	1	1	1	1	1	1	\$68,690
Sprayer	5	5	5	5	5	5	5	5	5	5	\$16,210
Tiller	6	6	6	6	6	6	6	6	6	6	\$4,680
Tractor	17	17	17	17	18	18	18	18	18	9	\$90,070
Trailer	30	30	30	31	31	32	32	33	33	33	\$28,460
Trimmer	145	144	146	148	150	152	155	155	155	155	\$720
Truckster	31	27	27	28	28	29	29	29	29	29	\$32,420
Turf/Tractor	32	32	32	33	33	34	34	34	34	34	\$54,040
Water Tank	5	3	3	3	3	3	3	3	3	3	\$9,970
Watering Truck	1	1	1	1	1	1	1	1	1	1	\$312,230
Welder	2	2	2	2	2	2	2	2	2	2	\$16,810
Total (#)	451	445	452	456	464	472	478	474	476	466	
Total (\$000)	\$19,287.0	\$19,159.1	\$19,973.1	\$19,712.6	\$20,022.0	\$20,517.7	\$20,685.8	\$20,102.4	\$21,052.4	\$19,941.7	

**APPENDIX B.4
TABLE B.4-1**

**CITY OF KITCHENER
CALCULATION OF SERVICE LEVELS
OUTDOOR RECREATION**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historic Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247

INVENTORY SUMMARY (\$000)

Parkland	\$194,183.2	\$196,779.3	\$199,421.0	\$202,067.3	\$204,919.4	\$208,408.2	\$210,686.5	\$232,707.3	\$256,829.8	\$301,356.2
Park Facilities	\$93,045.2	\$95,725.4	\$101,030.0	\$101,737.3	\$102,682.9	\$104,178.6	\$105,013.1	\$105,012.9	\$107,574.8	\$110,025.9
Park Buildings and Fleet	\$37,679.5	\$37,551.6	\$39,128.3	\$38,867.9	\$39,177.3	\$39,673.0	\$39,841.0	\$39,257.6	\$40,207.6	\$39,097.0
Total (\$000)	\$324,907.8	\$330,056.3	\$339,579.3	\$342,672.5	\$346,779.6	\$352,259.7	\$355,540.6	\$376,977.8	\$404,612.2	\$450,479.0

**Average
Service
Level**

SERVICE LEVEL (\$/capita)

Parkland	\$875.11	\$875.83	\$876.60	\$877.24	\$878.62	\$881.08	\$878.25	\$956.48	\$1,040.86	\$1,204.23	\$934.43
Park Facilities	\$419.32	\$426.06	\$444.10	\$441.68	\$440.26	\$440.43	\$437.75	\$431.63	\$435.97	\$439.67	\$435.69
Park Buildings and Fleet	\$169.81	\$167.14	\$172.00	\$168.74	\$167.98	\$167.72	\$166.08	\$161.36	\$162.95	\$156.23	\$166.00
Total (\$/capita)	\$1,464.23	\$1,469.03	\$1,492.70	\$1,487.66	\$1,486.86	\$1,489.23	\$1,482.08	\$1,549.46	\$1,639.79	\$1,800.14	\$1,536.12

**CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
OUTDOOR RECREATION**

10-Year Funding Envelope Calculation

10 Year Average Service Level 2012 - 2021	\$1,536.12
Net Population Growth 2022 - 2031	37,851
Maximum Allowable Funding Envelope	\$58,143,678

APPENDIX B.4

TABLE B.4-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
OUTDOOR RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
4.0 OUTDOOR RECREATION										
4.1 Park Development										
4.1.1 Neighbourhood Park Development	Various	\$ 18,600,000	\$ -	\$ 18,600,000	0%	\$ -	\$ 18,600,000	\$ -	\$ 18,600,000	\$ -
4.1.2 Neighbourhood Park Rehabilitation & Redevelopment	Various	\$ 8,330,000	\$ -	\$ 8,330,000	50%	\$ 4,165,000	\$ 4,165,000	\$ -	\$ 4,165,000	\$ -
4.1.3 RBJ Schlegel Park	2022	\$ 520,600	\$ -	\$ 520,600	0%	\$ -	\$ 520,600	\$ -	\$ 520,600	\$ -
4.1.4 RBJ Schlegel Park	2023	\$ 2,245,700	\$ -	\$ 2,245,700	0%	\$ -	\$ 2,245,700	\$ -	\$ 2,245,700	\$ -
4.1.5 RBJ Schlegel Park	2024	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
4.1.6 RBJ Schlegel Park	2025	\$ 1,842,760	\$ -	\$ 1,842,760	0%	\$ -	\$ 1,842,760	\$ -	\$ 1,842,760	\$ -
4.1.7 RBJ Schlegel Park	2027	\$ 1,248,500	\$ -	\$ 1,248,500	0%	\$ -	\$ 1,248,500	\$ -	\$ 1,248,500	\$ -
4.1.8 City-wide Park Master Plan Implementation	2027	\$ 300,000	\$ -	\$ 300,000	50%	\$ 150,000	\$ 150,000	\$ -	\$ 150,000	\$ -
4.1.9 City-wide Park Master Plan Implementation	2029	\$ 3,000,000	\$ -	\$ 3,000,000	50%	\$ 1,500,000	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -
4.1.10 Victoria Park Master Plan Implementation	2022	\$ 300,000	\$ -	\$ 300,000	50%	\$ 150,000	\$ 150,000	\$ -	\$ 150,000	\$ -
4.1.11 Victoria Park Master Plan Implementation	2023	\$ 100,000	\$ -	\$ 100,000	50%	\$ 50,000	\$ 50,000	\$ -	\$ 50,000	\$ -
4.1.12 Victoria Park Master Plan Implementation	2024	\$ 3,000,000	\$ -	\$ 3,000,000	50%	\$ 1,500,000	\$ 1,500,000	\$ -	\$ 1,500,000	\$ -
4.1.13 Shoemaker (DMAF)	2022	\$ 315,000	\$ -	\$ 315,000	50%	\$ 157,500	\$ 157,500	\$ -	\$ 157,500	\$ -
4.1.14 Prospect Park (DMAF)	2022	\$ 120,000	\$ -	\$ 120,000	50%	\$ 60,000	\$ 60,000	\$ -	\$ 60,000	\$ -
4.1.15 Prospect Park (DMAF)	2023	\$ 746,000	\$ -	\$ 746,000	50%	\$ 373,000	\$ 373,000	\$ -	\$ 373,000	\$ -
4.1.16 Sportsfields Lighting	2025	\$ 2,500,000	\$ -	\$ 2,500,000	0%	\$ -	\$ 2,500,000	\$ -	\$ 2,500,000	\$ -
4.1.17 Provision for Parks and Sportsfields	2022	\$ 434,000	\$ -	\$ 434,000	50%	\$ 217,000	\$ 217,000	\$ -	\$ 217,000	\$ -
4.1.18 Provision for Parks and Sportsfields	2023	\$ 726,000	\$ -	\$ 726,000	50%	\$ 363,000	\$ 363,000	\$ -	\$ 363,000	\$ -
4.1.19 Provision for Parks and Sportsfields	2024	\$ 1,320,000	\$ -	\$ 1,320,000	50%	\$ 660,000	\$ 660,000	\$ -	\$ 660,000	\$ -
4.1.20 Provision for Parks and Sportsfields	2025	\$ 1,320,000	\$ -	\$ 1,320,000	50%	\$ 660,000	\$ 660,000	\$ -	\$ 660,000	\$ -
4.1.21 Provision for Parks and Sportsfields	2026	\$ 1,343,000	\$ -	\$ 1,343,000	50%	\$ 671,500	\$ 671,500	\$ -	\$ 671,500	\$ -
4.1.22 Provision for Parks and Sportsfields	2027	\$ 1,343,000	\$ -	\$ 1,343,000	50%	\$ 671,500	\$ 671,500	\$ -	\$ 671,500	\$ -
4.1.23 Provision for Parks and Sportsfields	2028	\$ 1,342,000	\$ -	\$ 1,342,000	50%	\$ 671,000	\$ 671,000	\$ -	\$ 671,000	\$ -
4.1.24 Provision for Parks and Sportsfields	2029	\$ 1,343,000	\$ -	\$ 1,343,000	50%	\$ 671,500	\$ 671,500	\$ -	\$ 671,500	\$ -
4.1.25 Provision for Parks and Sportsfields	2030	\$ 1,342,000	\$ -	\$ 1,342,000	50%	\$ 671,000	\$ 671,000	\$ -	\$ 671,000	\$ -
4.1.26 Provision for Parks and Sportsfields	2031	\$ 1,342,000	\$ -	\$ 1,342,000	50%	\$ 671,000	\$ 671,000	\$ -	\$ 671,000	\$ -

APPENDIX B.4

TABLE B.4-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
OUTDOOR RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
4.1 Park Development Con't										
4.1.27 Block Line to Manitou	2024	\$ 700,000	\$ -	\$ 700,000	0%	\$ -	\$ 700,000	\$ -	\$ 700,000	\$ -
4.1.28 Block Line to Manitou	2025	\$ 700,000	\$ -	\$ 700,000	0%	\$ -	\$ 700,000	\$ -	\$ 700,000	\$ -
4.1.29 Block Line to Manitou	2026	\$ 700,000	\$ -	\$ 700,000	0%	\$ -	\$ 700,000	\$ -	\$ 700,000	\$ -
4.1.30 Provision for Citywide Parks	Various	\$ 3,900,000	\$ -	\$ 3,900,000	50%	\$ 1,950,000	\$ 1,950,000	\$ -	\$ 1,950,000	\$ -
4.1.31 Provision for Growth-Related Outdoor Recreation Facilities*	2029	\$ 1,250,000	\$ -	\$ 1,250,000	0%	\$ -	\$ 1,250,000	\$ -	\$ 1,250,000	\$ -
4.1.32 Provision for Growth-Related Outdoor Recreation Facilities*	2030	\$ 1,250,000	\$ -	\$ 1,250,000	0%	\$ -	\$ 1,250,000	\$ -	\$ 1,250,000	\$ -
4.1.33 Provision for Growth-Related Outdoor Recreation Facilities*	2031	\$ 1,250,000	\$ -	\$ 1,250,000	0%	\$ -	\$ 1,250,000	\$ -	\$ 1,250,000	\$ -
Subtotal Park Development		\$ 64,873,560	\$ -	\$ 64,873,560		\$ 15,983,000	\$ 48,890,560	\$ -	\$ 48,890,560	\$ -
4.2 Trail Development										
4.2.1 New Community Trails	2022	\$ 392,200	\$ -	\$ 392,200	33%	\$ 130,733	\$ 261,467	\$ -	\$ 261,467	\$ -
4.2.2 New Community Trails	2023	\$ 221,100	\$ -	\$ 221,100	33%	\$ 73,700	\$ 147,400	\$ -	\$ 147,400	\$ -
4.2.3 New Community Trails	2024	\$ 1,000,700	\$ -	\$ 1,000,700	33%	\$ 333,567	\$ 667,133	\$ -	\$ 667,133	\$ -
4.2.4 New Community Trails	2025	\$ 861,000	\$ -	\$ 861,000	33%	\$ 287,000	\$ 574,000	\$ -	\$ 574,000	\$ -
4.2.5 New Community Trails	2026	\$ 995,400	\$ -	\$ 995,400	33%	\$ 331,800	\$ 663,600	\$ -	\$ 663,600	\$ -
4.2.6 New Community Trails	2027	\$ 1,093,100	\$ -	\$ 1,093,100	33%	\$ 364,367	\$ 728,733	\$ -	\$ 728,733	\$ -
4.2.7 New Community Trails	2028	\$ 1,101,300	\$ -	\$ 1,101,300	33%	\$ 367,100	\$ 734,200	\$ -	\$ 734,200	\$ -
4.2.8 New Community Trails	2029	\$ 1,144,500	\$ -	\$ 1,144,500	33%	\$ 381,500	\$ 763,000	\$ -	\$ 763,000	\$ -
4.2.9 New Community Trails	2030	\$ 1,144,700	\$ -	\$ 1,144,700	33%	\$ 381,567	\$ 763,133	\$ -	\$ 763,133	\$ -
4.2.10 New Community Trails	2031	\$ 1,144,700	\$ -	\$ 1,144,700	33%	\$ 381,567	\$ 763,133	\$ -	\$ 763,133	\$ -
4.2.10 Provison for Additional Trails	2029	\$ 1,250,000	\$ -	\$ 1,250,000	33%	\$ 416,667	\$ 833,333	\$ -	\$ 833,333	\$ -
4.2.10 Provison for Additional Trails	2030	\$ 1,250,000	\$ -	\$ 1,250,000	33%	\$ 416,667	\$ 833,333	\$ -	\$ 833,333	\$ -
4.2.10 Provison for Additional Trails	2031	\$ 1,250,000	\$ -	\$ 1,250,000	33%	\$ 416,667	\$ 833,333	\$ -	\$ 833,333	\$ -
4.2.11 Pedestrian Bridge 898 Melitzer CR Trail	2022	\$ 24,500	\$ -	\$ 24,500	33%	\$ 8,167	\$ 16,333	\$ -	\$ 16,333	\$ -
4.2.12 Pedestrian Bridge 898 Melitzer CR Trail	2023	\$ 300,000	\$ -	\$ 300,000	33%	\$ 100,000	\$ 200,000	\$ -	\$ 200,000	\$ -
4.2.13 Stirling to Madison Trail	2022	\$ 155,000	\$ -	\$ 155,000	33%	\$ 51,667	\$ 103,333	\$ -	\$ 103,333	\$ -
4.2.14 Laurentian Trail	2022	\$ 105,000	\$ -	\$ 105,000	33%	\$ 35,000	\$ 70,000	\$ -	\$ 70,000	\$ -
4.2.15 Alpine Park Trail	2022	\$ 150,000	\$ -	\$ 150,000	33%	\$ 50,000	\$ 100,000	\$ -	\$ 100,000	\$ -
Subtotal Trail Development		\$ 13,583,200	\$ -	\$ 13,583,200		\$ 4,527,733	\$ 9,055,467	\$ -	\$ 9,055,467	\$ -

APPENDIX B.4

TABLE B.4-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
OUTDOOR RECREATION

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related ¹
4.3 Outdoor Recreation Studies										
4.3.1 Open Space Strategy	2022	\$ 52,941	\$ -	\$ 52,941	10%	\$ 5,294	\$ 47,647	\$ -	\$ 47,647	\$ -
4.3.1 Open Space Strategy	2023	\$ 150,000	\$ -	\$ 150,000	10%	\$ 15,000	\$ 135,000	\$ -	\$ 135,000	\$ -
4.3.2 HNA Ecological Management Plan	2022	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
4.3.2 HNA Ecological Management Plan (Phase 2)	2023	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
4.3.2 Invasive Species Management Plan	2025	\$ 250,000	\$ -	\$ 250,000	0%	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
4.3.3 Outdoor Courts Study	2022	\$ 42,000	\$ -	\$ 42,000	50%	\$ 21,000	\$ 21,000	\$ -	\$ 21,000	\$ -
Subtotal Outdoor Recreation Studies		\$ 694,941	\$ -	\$ 694,941		\$ 41,294	\$ 653,647	\$ -	\$ 653,647	\$ -
TOTAL OUTDOOR RECREATION		\$ 79,151,701	\$ -	\$ 79,151,701		\$ 20,552,027	\$ 58,599,673	\$ -	\$ 58,599,673	\$ -

Notes:

- * Provision provides for other capital programs such as a ball diamonds, Grand River Park and/or outdoor track facility
1. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2031 DC Eligible Costs	100%	\$58,599,673
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$1,153.63
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2031 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$0.00

2022 - 2031 Net Funding Envelope	\$ 58,143,678
Reserve Fund Balance as at Dec 31, 2021	<u>\$ 562,130</u>
Adjusted 2022 - 2031 Net Funding Envelope	\$ 58,705,809

**APPENDIX B.4
TABLE B.4-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
OUTDOOR RECREATION
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

OUTDOOR RECREATION	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	\$562.1	\$2,330.0	\$2,308.5	\$2,177.6	(\$1,217.5)	\$156.1	\$721.8	\$2,863.0	\$824.8	\$423.7	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Outdoor Recreation: Non Inflated	\$4,296.38	\$6,085.60	\$6,098.63	\$8,998.26	\$4,506.60	\$5,270.23	\$3,876.70	\$7,489.33	\$5,988.97	\$5,988.97	\$58,599.7
- Outdoor Recreation: Inflated	\$4,296.4	\$6,207.3	\$6,345.0	\$9,549.0	\$4,878.1	\$5,818.8	\$4,365.8	\$8,602.9	\$7,017.0	\$7,157.4	\$64,237.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$6,014.5	\$6,107.0	\$6,139.0	\$6,170.5	\$6,293.9	\$6,369.4	\$6,445.3	\$6,521.7	\$6,598.6	\$6,730.6	\$63,390.6
INTEREST											
- Interest on Opening Balance	\$19.7	\$81.6	\$80.8	\$76.2	(\$67.0)	\$5.5	\$25.3	\$100.2	\$28.9	\$14.8	\$365.9
- Interest on In-year Transactions	\$30.1	(\$2.8)	(\$5.7)	(\$92.9)	\$24.8	\$9.6	\$36.4	(\$57.2)	(\$11.5)	(\$11.7)	(\$80.9)
TOTAL REVENUE	\$6,064.3	\$6,185.8	\$6,214.2	\$6,153.8	\$6,251.7	\$6,384.5	\$6,506.9	\$6,564.7	\$6,616.0	\$6,733.7	\$63,675.5
CLOSING CASH BALANCE	\$2,330.0	\$2,308.5	\$2,177.6	(\$1,217.5)	\$156.1	\$721.8	\$2,863.0	\$824.8	\$423.7	\$0.0	

2022 Adjusted Charge Per Capita	\$1,141.13
--	-------------------

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix B.5

Development-Related Studies

Development-Related Studies

When calculating development charges, the DCA allows for the inclusion of the costs of undertaking studies related to the provision of development-related infrastructure, including development charges background studies. The benefits of the development-related studies are deemed to be City-wide for the purpose of calculating the development charge.

Table B.5-1 2022 – 2031 Development-Related Capital Program and Calculation of Unadjusted Development Charges

Table B.5-1 provides a list of development-related studies the City anticipates undertaking during the 2022-2031 period. As required by the DCA, development charges studies must be undertaken every five years, thus two are included in the list. The total estimated cost of all studies is \$7.86 million. No grants or subsidies have been identified.

No benefit to existing shares have been identified, therefore the entire remaining \$7.86 million is attributable to development in the City from 2022 to 2031.

Of this \$7.86 million, 77 per cent or \$6.04 million is allocated against residential development and 23 per cent or \$1.82 million is allocated against non-residential development. The calculated unadjusted charges that result are \$118.88 per capita for new residential development and \$2.62 per m² for new non-residential development.

Table B.5-2 Cash Flow Analysis

After cash flow analysis, the residential charge increases to \$149.44 per capita and the non-residential charge increases to \$3.32 per m². The increase is the result of a deficit of \$1.71 million in the Development-

Related Studies development charge reserve fund that is to be funded as committed excess capacity under the DCA.

The following table summarizes the calculation of the Development-Related Studies development charge.

DEVELOPMENT-RELATED STUDIES SUMMARY					
2022 - 2031		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$7,860,000	\$7,860,000	\$118.88	\$2.62	\$149.44	\$3.32

APPENDIX B.5

TABLE B.5-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
DEVELOPMENT-RELATED STUDIES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2031	Other Dev. Related*
5.0 DEVELOPMENT-RELATED STUDIES										
5.1 Development-Related Studies										
5.1.1 DC Studies	2026	\$ 250,000	\$ -	\$ 250,000	0%	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
5.1.2 DC Studies	2031	\$ 250,000	\$ -	\$ 250,000	0%	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
5.1.3 Growth-Related Finance Studies	2023	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ -
5.1.4 Growth-Related Planning Studies	2022	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.5 Growth-Related Planning Studies	2023	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.6 Growth-Related Planning Studies	2024	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.7 Growth-Related Planning Studies	2025	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.8 Growth-Related Planning Studies	2026	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.9 Growth-Related Planning Studies	2027	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.10 Growth-Related Planning Studies	2028	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.11 Growth-Related Planning Studies	2029	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.12 Growth-Related Planning Studies	2030	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
5.1.13 Growth-Related Planning Studies	2031	\$ 721,000	\$ -	\$ 721,000	0%	\$ -	\$ 721,000	\$ -	\$ 721,000	\$ -
TOTAL DEVELOPMENT-RELATED STUDIES		\$ 7,860,000	\$ -	\$ 7,860,000		\$ -	\$ 7,860,000	\$ -	\$ 7,860,000	\$ -

*Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2031 DC Eligible Costs	77%	\$6,038,454
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$118.88
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2031 DC Eligible Costs	23%	\$1,821,546
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$2.62

Reserve Fund Balance as at Dec 31, 2021 \$ (1,712,468)

APPENDIX B.5
TABLE B.5-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
DEVELOPMENT-RELATED STUDIES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

DEVELOPMENT-RELATED STUDIES	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$1,315.6)	(\$1,150.1)	(\$1,094.1)	(\$922.6)	(\$749.2)	(\$773.4)	(\$589.5)	(\$397.8)	(\$198.0)	\$10.0	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Development-Related Studies: Non Inflated	\$553.91	\$669.15	\$553.91	\$553.91	\$745.97	\$553.91	\$553.91	\$553.91	\$553.91	\$745.97	\$6,038.5
- Development-Related Studies: Inflated	\$553.9	\$682.5	\$576.3	\$587.8	\$807.5	\$611.6	\$623.8	\$636.3	\$649.0	\$891.5	\$6,620.1
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$787.7	\$799.8	\$804.0	\$808.1	\$824.2	\$834.1	\$844.1	\$854.1	\$864.1	\$881.4	\$8,301.5
INTEREST											
- Interest on Opening Balance	(\$72.4)	(\$63.3)	(\$60.2)	(\$50.7)	(\$41.2)	(\$42.5)	(\$32.4)	(\$21.9)	(\$10.9)	\$0.4	(\$395.1)
- Interest on In-year Transactions	\$4.1	\$2.1	\$4.0	\$3.9	\$0.3	\$3.9	\$3.9	\$3.8	\$3.8	(\$0.3)	\$29.3
TOTAL REVENUE	\$719.4	\$738.6	\$747.8	\$761.2	\$783.3	\$795.5	\$815.5	\$836.0	\$857.0	\$881.5	\$7,935.7
CLOSING CASH BALANCE	(\$1,150.1)	(\$1,094.1)	(\$922.6)	(\$749.2)	(\$773.4)	(\$589.5)	(\$397.8)	(\$198.0)	\$10.0	(\$0.0)	

2022 Adjusted Charge Per Capita **\$149.44**

Allocation of Capital Program	
Residential Sector	76.8%
Non-Residential Sector	23.2%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX B.5
TABLE B.5-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
DEVELOPMENT-RELATED STUDIES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

DEVELOPMENT-RELATED STUDIES	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$396.9)	(\$370.4)	(\$373.9)	(\$336.9)	(\$293.1)	(\$305.6)	(\$249.4)	(\$184.5)	(\$110.3)	(\$25.4)	
2022 - 2031 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Development-Related Studies: Non Inflated	\$167.09	\$201.85	\$167.09	\$167.09	\$225.03	\$167.09	\$167.09	\$167.09	\$167.09	\$225.03	\$1,821.5
- Development-Related Studies: Inflated	\$167.1	\$205.9	\$173.8	\$177.3	\$243.6	\$184.5	\$188.2	\$191.9	\$195.8	\$268.9	\$1,997.0
NEW NON-RESIDENTIAL DEVELOPMENT											
- Non-Residential GFA	64,713	65,765	66,809	67,803	68,864	70,010	71,071	72,159	73,409	74,524	695,127
REVENUE											
- DC Receipts: Inflated	\$214.6	\$222.4	\$230.5	\$238.6	\$247.1	\$256.3	\$265.4	\$274.8	\$285.2	\$295.3	\$2,530.1
INTEREST											
- Interest on Opening Balance	(\$21.8)	(\$20.4)	(\$20.6)	(\$18.5)	(\$16.1)	(\$16.8)	(\$13.7)	(\$10.1)	(\$6.1)	(\$1.4)	(\$145.6)
- Interest on In-year Transactions	\$0.8	\$0.3	\$1.0	\$1.1	\$0.1	\$1.3	\$1.4	\$1.5	\$1.6	\$0.5	\$9.3
TOTAL REVENUE	\$193.6	\$202.3	\$210.9	\$221.1	\$231.1	\$240.7	\$253.0	\$266.1	\$280.7	\$294.4	\$2,393.9
CLOSING CASH BALANCE	(\$370.4)	(\$373.9)	(\$336.9)	(\$293.1)	(\$305.6)	(\$249.4)	(\$184.5)	(\$110.3)	(\$25.4)	\$0.0	

2022 Adjusted Charge Per Sq.M

\$3.32

Allocation of Capital Program

Residential Sector	76.8%
Non-Residential Sector	23.2%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C

Engineered Infrastructure

Technical Appendix

Introduction and Overview

This appendix provides the detailed analysis undertaken to establish the development charge rates for each of the engineered services in the City of Kitchener.

The appendix is divided into seven sub-sections, with one section for each of the engineered services:

- C.1 Sanitary Servicing
- C.2 Services Related to a Highway: Public Works
- C.3 Services Related to a Highway: Roads and Related
- C.4 Watermains
- C.5 Engineering Studies
- C.6 Storm/Watercourse
- C.7 Intensification Allowance

Every sub-section contains a set of two tables with the exception of Services Related to a Highway: Public Works and Roads and Related. The tables provide the background data and analysis undertaken to arrive at the calculated development charge rates for that particular service. An overview of the content and purpose of each of the tables is given below.

With the exception of Public Works and the Intensification Allowance service, the benefits of the engineered services listed above are deemed to relate to the suburban areas. The development charges for these services are therefore calculated based on development forecasts for the suburban areas only.

The Public Works service is intended to pay for the development-related capital costs of new infrastructure city-wide. Thus, the development charge for this service is calculated based on city-wide development forecasts.

The Intensification Allowance service is intended to pay for the development-related capital costs of new infrastructure in the City’s designated central neighbourhoods. Thus, the development charge for this service is calculated based on development forecasts for the central neighbourhoods only.

**Table 1 2022 – 2036 Development-Related Capital Program
 & Calculation of Unadjusted Development Charge**

The DCA requires that City Council express its intent to provide future capital facilities at the level incorporated in the development charges calculation. Based on the development forecasts presented in Appendix A and the Council approved 2022 ten-year capital program City staff have compiled a development-related capital program for the engineering services which sets out those projects that are required to service anticipated development for the period to 2036. The capital program was originally developed to achieve Official Plan population and employment targets by 2031. Given the slower than anticipated growth in recent years, these targets are now forecasted to be achieved by 2036 (for more, see Appendix A).

The development-related capital program for each engineered service is shown on Table 1 of each sub-section with the exception of Roads. Gross and net cost estimates are provided in current (2022) dollars. A detailed breakdown of cost estimates for each capital project is provided in Appendix D.

To determine the share of the program that is eligible for recovery through development charges, the net project costs are reduced by any “benefit to existing” shares. A benefit to existing share represents that portion of a capital project that will benefit the existing community. It could, for example, represent a portion of a new facility that, at least in part, replaces a facility

that is demolished, redeployed or will otherwise not be available to serve its former function (a “replacement” share). The benefit to existing share of the capital program is not deemed to be development-related and is therefore removed from the development charge calculation. The capital cost for benefit to existing shares will require funding from non-development charge sources, typically property taxes or user fees.

Calculation of the Unadjusted Development Charge Rates

Table 1 also displays the calculation of the unadjusted development charge rates. The term “unadjusted” development charge is used to distinguish the charge that is calculated prior to cash flow financing consideration. The cash flow analysis is shown on Table 2.

The first step in the determination of the unadjusted development charges rate is the allocation of the development-related net capital costs between the residential and the non-residential sectors. For all services except Storm - Schneider Creek Watercourse, and Intensification Allowance, development-related costs have been allocated 74% residential and 26% non-residential based on the ratio of forecast changes in population in new housing units and employment in new non-residential floorspace in the suburban areas over the planning period.

For Public Works, the development-related costs have been allocated 77 per cent residential and 23 per cent non-residential based on forecast changes in population in new housing units and employment in new non-residential floor space over the planning period in the suburban areas only.

For Intensification Allowance, the development-related costs have been allocated 79 per cent residential and 21 per cent non-residential based on forecast changes in population in new housing units and employment in new non-residential floor space over the planning period in the suburban areas only.

The residential development-related costs are then divided by the forecast population in new housing units in the respective service area. This gives the unadjusted residential development charge per capita. The non-residential development-related costs are divided by the forecast increase in non-residential gross floor area (GFA) in the respective service area. This yields a charge per square metre of new non-residential GFA.

Table 3 Cash Flow Analysis

A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs are accounted for in the calculation as allowed under the DCA. Based on the development forecast, the analysis calculates the development charges rate that is required to finance the net development-related capital spending plan including provisions for any borrowing costs or interest earnings on the reserve funds. The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible.

Opening cash balances in the cash flow analysis reflect the reserve fund balances that are available to fund development-related capital works as at December 31st, 2021. A summary of the reserve fund balances is shown in Appendix E.

In the cash flow analysis, an inflation rate of 2.0% is used for the funding requirements and interest rates of 5.5% (negative balance) and 3.5% (positive balance) are used for borrowing/earnings on the funds.

Table 2 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square foot (of GFA) non-residential development charges.

Appendix C.1

Sanitary Servicing

Sanitary Servicing

The City’s Engineering Services Department is responsible for the design, construction and maintenance of the City’s sanitary sewers. The benefits of the Sanitary Servicing are deemed to relate to the suburban areas for the purpose of calculating the development charge.

Table C.1-1 2022 – 2036 Development-Related Capital Program & Calculation of Unadjusted Development Charge

The development-related capital program for Sanitary Servicing includes \$79.73 million of capital works, including \$62.91 million of trunk sewer extensions, pumping stations and pumping station upgrades, and storage facilities, and \$16.82 million of development charge credit and/or refund repayment commitments. The credits and/or refund repayments are related to the various projects such as Doon South Pumping Station, Laurentian EA, Ottawa Trussler Pumping Station and others.

No grants or subsidies have been identified for the projects. Therefore the net cost of the program remains \$79.73 million.

Of this net capital cost, \$3.54 million has been identified as either a replacement share or a benefit to the existing community and has been removed from development charge consideration. The remaining \$61.88 million is related to development in the suburban areas.

No amount of the DC eligible costs are deemed to benefit growth beyond 2036 and therefore have not been netted off. The eligible 2022-2036 development-related net capital cost remains \$76.19 million, and is allocated 74 per cent to new residential development, or \$52.03 million, and 26 per cent to new non-residential development, or \$18.16 million. This

yields unadjusted development charge rates of \$1,041.44 per capita and \$22.54 per m² respectively.

Table C.1-2 Cash Flow and Reserve Fund Analysis

A reserve fund deficit of \$3.14 million in the Sanitary Sewer development charges reserve fund is eligible for development charge recovery as committed excess capacity under the DCA. After cash flow analysis, this contributes to increasing the Sanitary Servicing charge to \$1,230.29 per capita for new residential development and \$27.21 per m² for new non-residential development.

The following table summarizes the calculation of the Sanitary Servicing development charge:

SANITARY SERVICING SUMMARY					
2022 - 2036		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$79,731,355	\$70,186,743	\$1,041.44	\$22.54	\$1,230.29	\$27.21

APPENDIX C.1
TABLE C.1-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
SANITARY SERVICING

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves ¹	2022-2036	Other Dev. Related ³
	1.0 SANITARY SERVICING										
	1.1 Sanitary Sewage Works										
SA1	1.1.1 Old Mill Pumping Station	2022	\$ 3,600,000	\$ -	\$ 3,600,000	55%	\$ 1,980,000	\$ 1,620,000	\$ -	\$ 1,620,000	\$ -
	1.1.2 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2022	\$ 36,960	\$ -	\$ 36,960	0%	\$ -	\$ 36,960	\$ -	\$ 36,960	\$ -
	1.1.3 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2023	\$ 29,260	\$ -	\$ 29,260	0%	\$ -	\$ 29,260	\$ -	\$ 29,260	\$ -
SA16	1.1.4 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2024	\$ 783,860	\$ -	\$ 783,860	0%	\$ -	\$ 783,860	\$ -	\$ 783,860	\$ -
	1.1.5 Otterbein (Forwell) SPS Upgrades	2024	\$ 233,750	\$ -	\$ 233,750	0%	\$ -	\$ 233,750	\$ -	\$ 233,750	\$ -
	1.1.6 Otterbein (Forwell) SPS Upgrades	2025	\$ 4,241,875	\$ -	\$ 4,241,875	0%	\$ -	\$ 4,241,875	\$ -	\$ 4,241,875	\$ -
SA2	1.1.7 Borden Greenway Trunk Sewer	2025	\$ 50,875	\$ -	\$ 50,875	30%	\$ 15,263	\$ 35,613	\$ -	\$ 35,613	\$ -
	1.1.8 Borden Greenway Trunk Sewer	2025	\$ 929,500	\$ -	\$ 929,500	30%	\$ 278,850	\$ 650,650	\$ -	\$ 650,650	\$ -
SA5	1.1.9 Falconridge SPS Upgrades	2024	\$ 61,875	\$ -	\$ 61,875	0%	\$ -	\$ 61,875	\$ -	\$ 61,875	\$ -
	1.1.10 Falconridge SPS Upgrades	2025	\$ 1,124,750	\$ -	\$ 1,124,750	0%	\$ -	\$ 1,124,750	\$ -	\$ 1,124,750	\$ -
SA8	1.1.11 Middle Strasburg Creek Sanitary Sewer Trunks	2022	\$ 7,166,667	\$ -	\$ 7,166,667	0%	\$ -	\$ 7,166,667	\$ 6,000,000	\$ 1,166,667	\$ -
	1.1.12 Middle Strasburg Creek Sanitary Sewer Trunks	2023	\$ 7,166,667	\$ -	\$ 7,166,667	0%	\$ -	\$ 7,166,667	\$ -	\$ 7,166,667	\$ -
	1.1.13 Middle Strasburg Creek Sanitary Sewer Trunks	2024	\$ 7,166,667	\$ -	\$ 7,166,667	0%	\$ -	\$ 7,166,667	\$ -	\$ 7,166,667	\$ -
SA14	1.1.15 Upper Hidden Valley Sewage Facility	2023	\$ 499,125	\$ -	\$ 499,125	0%	\$ -	\$ 499,125	\$ -	\$ 499,125	\$ -
	1.1.16 Upper Hidden Valley Sewage Facility	2024	\$ 18,317,875	\$ -	\$ 18,317,875	0%	\$ -	\$ 18,317,875	\$ -	\$ 18,317,875	\$ -
	1.1.17 Doon South SPS - Forcemain	2026	\$ 83,875	\$ -	\$ 83,875	0%	\$ -	\$ 83,875	\$ -	\$ 83,875	\$ -
	1.1.18 Doon South SPS - Forcemain	2027	\$ 140,250	\$ -	\$ 140,250	0%	\$ -	\$ 140,250	\$ -	\$ 140,250	\$ -
	1.1.19 Doon South SPS - Forcemain	2028	\$ 3,001,625	\$ -	\$ 3,001,625	0%	\$ -	\$ 3,001,625	\$ -	\$ 3,001,625	\$ -
	1.1.20 Dodge Drive Sanitary Sewer & Road Upgrades	2027	\$ 275,600	\$ -	\$ 275,600	0%	\$ -	\$ 275,600	\$ -	\$ 275,600	\$ -
	1.1.21 Dodge Drive Sanitary Sewer & Road Upgrades	2028	\$ 6,188,200	\$ -	\$ 6,188,200	0%	\$ -	\$ 6,188,200	\$ -	\$ 6,188,200	\$ -
	1.1.22 City Wide Flow Monitoring and S.C.A.D.A. Controls	Various	\$ 1,815,000	\$ -	\$ 1,815,000	70%	\$ 1,270,500	\$ 544,500	\$ -	\$ 544,500	\$ -
	Subtotal Sanitary Sewage Works		\$ 62,914,255	\$ -	\$ 62,914,255		\$ 3,544,613	\$ 59,369,643	\$ 6,000,000	\$ 53,369,643	\$ -

APPENDIX C.1
TABLE C.1-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
SANITARY SERVICING

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves ¹	2022-2036	Other Dev. Related ²
	1.0 SANITARY SERVICING CONTINUED										
	1.2 DC Credits/Refunds ²										
	1.2.1 DC Credits/Refunds	2022	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.2 DC Credits/Refunds	2023	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.3 DC Credits/Refunds	2024	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.4 DC Credits/Refunds	2025	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.5 DC Credits/Refunds	2026	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.6 DC Credits/Refunds	2027	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.7 DC Credits/Refunds	2028	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.8 DC Credits/Refunds	2029	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.9 DC Credits/Refunds	2030	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	1.2.10 DC Credits/Refunds	2031	\$ 1,681,710	\$ -	\$ 1,681,710	0%	\$ -	\$ 1,681,710	\$ -	\$ 1,681,710	\$ -
	Subtotal DC Credits/Refunds		\$ 16,817,100	\$ -	\$ 16,817,100		\$ -	\$ 16,817,100	\$ -	\$ 16,817,100	\$ -
	TOTAL SANITARY SERVICING		\$ 79,731,355	\$ -	\$ 79,731,355		\$ 3,544,613	\$ 76,186,743	\$ 6,000,000	\$ 70,186,743	\$ -

1. Represents development charge funds that have been committed to fund specific projects and are not accounted for in Sanitary Servicing development charge reserve fund.

2. Includes Doon South PS and Laurentian EA & OttawaTrussler PS.

3. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	74%	\$52,026,616
2022-2036 Growth in Population in New Units (Suburban Areas)		49,957
Unadjusted Development Charge Per Capita		\$1,041.44
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	26%	\$18,160,126
2022-2036 Growth in Square Metres (Suburban Areas)		805,552
Unadjusted Development Charge Per Square Metre		\$22.54

**APPENDIX C.1
TABLE C.1-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SANITARY SERVICING
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

SANITARY SERVICING	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$2,330.0)	(\$1,129.9)	(\$3,689.4)	(\$21,522.8)	(\$24,243.9)	(\$22,257.1)	(\$20,463.5)	(\$26,101.5)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Sanitary Servicing: Non Inflated	\$3,366.5	\$6,977.5	\$20,964.3	\$5,760.3	\$1,335.7	\$1,581.7	\$8,085.5	\$1,273.5
- Sanitary Servicing: Inflated	\$3,366.5	\$7,117.1	\$21,811.3	\$6,112.8	\$1,445.8	\$1,746.4	\$9,105.6	\$1,462.8
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3797	3735	3635	3536	3536	3469	3402	3335
REVENUE								
- DC Receipts: Inflated	\$4,671.9	\$4,686.58	\$4,652.67	\$4,616.58	\$4,708.92	\$4,712.24	\$4,713.82	\$4,713.58
INTEREST								
- Interest on Opening Balance	(\$128.1)	(\$62.1)	(\$202.9)	(\$1,183.8)	(\$1,333.4)	(\$1,224.1)	(\$1,125.5)	(\$1,435.6)
- Interest on In-year Transactions	\$22.8	(\$66.8)	(\$471.9)	(\$41.1)	\$57.1	\$51.9	(\$120.8)	\$56.9
TOTAL REVENUE	\$4,566.6	\$4,557.6	\$3,977.9	\$3,391.7	\$3,432.6	\$3,540.0	\$3,467.6	\$3,334.9
CLOSING CASH BALANCE	(\$1,129.9)	(\$3,689.4)	(\$21,522.8)	(\$24,243.9)	(\$22,257.1)	(\$20,463.5)	(\$26,101.5)	(\$24,229.5)

**APPENDIX C.1
TABLE C.1-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SANITARY SERVICING
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

SANITARY SERVICING	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$24,229.5)	(\$22,286.5)	(\$20,171.0)	(\$16,449.6)	(\$12,552.7)	(\$8,473.7)	(\$4,205.9)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Sanitary Servicing: Non Inflated	\$1,273.5	\$1,273.5	\$26.9	\$26.9	\$26.9	\$26.9	\$26.9	\$52,026.6
- Sanitary Servicing: Inflated	\$1,492.1	\$1,521.9	\$32.8	\$33.5	\$34.1	\$34.8	\$35.5	\$55,353.1
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3268	3268	3188	3107	3026	2945	2708	49,957
REVENUE								
- DC Receipts: Inflated	\$4,711.44	\$4,805.67	\$4,780.56	\$4,752.52	\$4,721.46	\$4,687.24	\$4,396.41	\$70,331.6
INTEREST								
- Interest on Opening Balance	(\$1,332.6)	(\$1,225.8)	(\$1,109.4)	(\$904.7)	(\$690.4)	(\$466.1)	(\$231.3)	(\$12,655.9)
- Interest on In-year Transactions	\$56.3	\$57.5	\$83.1	\$82.6	\$82.0	\$81.4	\$76.3	\$7.4
TOTAL REVENUE	\$3,435.2	\$3,637.4	\$3,754.2	\$3,930.4	\$4,113.1	\$4,302.6	\$4,241.4	\$57,683.0
CLOSING CASH BALANCE	(\$22,286.5)	(\$20,171.0)	(\$16,449.6)	(\$12,552.7)	(\$8,473.7)	(\$4,205.9)	\$0.0	

2022 Adjusted Charge Per Capita	\$1,230.29
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Allocation of Capital Program	
Residential Sector	74.1%
Non-Residential Sector	25.9%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX C.1
TABLE C.1-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SANITARY SERVICING
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

SANITARY SERVICING	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$813.3)	(\$705.6)	(\$1,888.1)	(\$8,358.0)	(\$9,505.2)	(\$9,001.0)	(\$8,521.6)	(\$10,592.1)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Sanitary Servicing: Non Inflated	\$1,175.1	\$2,435.5	\$7,317.7	\$2,010.6	\$466.2	\$552.1	\$2,822.3	\$444.5
- Sanitary Servicing: Inflated	\$1,175.1	\$2,484.2	\$7,613.3	\$2,133.7	\$504.7	\$609.6	\$3,178.4	\$510.6
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	48,695	49,411	50,082	50,726	51,408	52,174	52,854	53,551
REVENUE								
- DC Receipts: Inflated	\$1,324.9	\$1,371.23	\$1,417.65	\$1,464.60	\$1,513.97	\$1,567.26	\$1,619.44	\$1,673.61
INTEREST								
- Interest on Opening Balance	(\$44.7)	(\$38.8)	(\$103.8)	(\$459.7)	(\$522.8)	(\$495.1)	(\$468.7)	(\$582.6)
- Interest on In-year Transactions	\$2.6	(\$30.6)	(\$170.4)	(\$18.4)	\$17.7	\$16.8	(\$42.9)	\$20.4
TOTAL REVENUE	\$1,282.8	\$1,301.8	\$1,143.4	\$986.5	\$1,008.9	\$1,089.0	\$1,107.9	\$1,111.4
CLOSING CASH BALANCE	(\$705.6)	(\$1,888.1)	(\$8,358.0)	(\$9,505.2)	(\$9,001.0)	(\$8,521.6)	(\$10,592.1)	(\$9,991.3)

**APPENDIX C.1
TABLE C.1-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
SANITARY SERVICING
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

SANITARY SERVICING	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$9,991.3)	(\$9,307.3)	(\$8,537.5)	(\$7,132.5)	(\$5,587.9)	(\$3,890.1)	(\$2,031.6)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Sanitary Servicing: Non Inflated	\$444.5	\$444.5	\$9.4	\$9.4	\$9.4	\$9.4	\$9.4	\$18,160.1
- Sanitary Servicing: Inflated	\$520.8	\$531.2	\$11.4	\$11.7	\$11.9	\$12.1	\$12.4	\$19,321.2
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	54369	55077	55894	56615	57458	58216	59022	805,552
REVENUE								
- DC Receipts: Inflated	\$1,733.16	\$1,790.85	\$1,853.76	\$1,915.23	\$1,982.62	\$2,048.95	\$2,118.86	\$25,396.1
INTEREST								
- Interest on Opening Balance	(\$549.5)	(\$511.9)	(\$469.6)	(\$392.3)	(\$307.3)	(\$214.0)	(\$111.7)	(\$5,272.5)
- Interest on In-year Transactions	\$21.2	\$22.0	\$32.2	\$33.3	\$34.5	\$35.6	\$36.9	\$10.9
TOTAL REVENUE	\$1,204.9	\$1,301.0	\$1,416.4	\$1,556.2	\$1,709.8	\$1,870.6	\$2,044.0	\$20,134.5
CLOSING CASH BALANCE	(\$9,307.3)	(\$8,537.5)	(\$7,132.5)	(\$5,587.9)	(\$3,890.1)	(\$2,031.6)	\$0.0	

2022 Adjusted Charge Per Sq.M

\$27.21

Allocation of Capital Program

Residential Sector	74.1%
Non-Residential Sector	25.9%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.2

Services Related to a Highway: Public Works

Services Related to a Highway: Public Works

The capital costs associated with Public Works functions “related to a highway” are accounted for in this section. Note that capital costs associated with road construction are dealt with under the Roads and Related service. For the purpose of calculating a development charge for Public Works, city-wide development is considered.

Table C.2-1 2012 – 2021 Historical Service Levels

The Public Works ten-year historical inventory of capital assets includes 338,454 sq. ft. of buildings, including the recently constructed Kitchener Operations Facility. The buildings are valued at \$105.89 million. Excess capacity of 12,546 square feet associated with the outstanding costs of the Kitchener Operations Facility is netted off the total building area between 2012 and 2021. The land area associated with the buildings is 24.6 hectares and is valued at almost \$19.01 million. The fleet of 423 vehicles is valued at \$41.01 million.

The current replacement value of Public Works capital infrastructure is \$165.91 million. It has provided the City with a ten-year average service level of \$495.21 per capita and employment. This service level, when multiplied by the ten-year city-wide net population and employment growth, results in a maximum allowable funding envelope of \$26.33 million to be recovered through development charges.

Table C.2-2 2022 – 2031 Development-Related Capital Program & Calculation of Unadjusted Development Charges

The development-related capital program for Public Works includes the recovery of a portion of the construction cost of the Kitchener Operations Facility, a facility that both replaced previous public works buildings and associated lands and expanded the capacity of the public works functions. The total cost of the project was \$45.53 million, of which \$1.80 million was funded from Federal and Provincial grants. Of the \$43.73 million net cost, \$21.86 million or 50 per cent, represents a replacement share that is ineligible for development charge funding. About \$9.48 million of development charge reserve funds have been spent on the project to date. Of the remaining \$12.38 million, the full amount can be funded from development charges within the ten-year planning period.

A further \$13.00 million worth of new equipment acquisitions and upgrades is also projected to be required, with \$10.96 million required over the ten-year planning period. The remaining \$2.04 million is related to other development related costs which may be recovered from funding from future DC Studies or other growth funding tools.

The total ten-year capital program for Public Works amounts to \$34.86 million, all of which is considered to be related to development city-wide. Of the \$34.86 million, \$9.48 million has already been funded from development charges and \$2.04 million represents a cost to be recovered from other sources or future DC Studies. The remaining \$23.34 million is carried forward to the development charges calculation.

The development charge eligible cost of \$23.34 million is allocated 77% against residential development and 23% against non-residential development based on the ratio of city-wide forecast growth in population in new units and employment in new floor space. This yields unadjusted

development charge rates of \$353.00 per capita and \$7.78 per square metre respectively.

Table C.2-3 Cash Flow Analysis

The cash flow analysis is displayed in Table C.2-3. It considers the timing of the projects against the timing of the development charge revenues to determine adjusted calculated rates. After cash flow analysis, the residential charge increases to \$406.49 per capita and the non-residential charge increases to \$9.02 per m². The increase in the charge reflects the current \$2.99 million reserve fund deficit. The following table summarizes the calculation of the Public Works development charge:

PUBLIC WORKS SUMMARY						
10-year Hist.	2022 - 2031		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$495.21	\$58,527,078	\$23,339,771	\$353.00	\$7.78	\$406.49	\$9.02

APPENDIX C.2

TABLE C.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft.)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Kitchener Operations Facility	315,000	315,000	315,000	315,000	315,000	315,000	315,000	315,000	315,000	315,000	\$340
<i>Excess Capacity</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	<i>(12,546)</i>	\$340
Salt Dome	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	\$85
Greenhouse	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	\$85
Total (#)	338,454	338,454	338,454	338,454	338,454	338,454	338,454	338,454	338,454	338,454	
Total (\$000)	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Battler Aggregate Yard (Snow Storage)	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	6.37	\$865,000
Kitchener Operations Facility	18.20	18.20	18.20	18.20	18.20	18.20	18.20	18.20	18.20	18.20	\$741,500
Total (ha)	24.57	24.57	24.57	24.57	24.57	24.57	24.57	24.57	24.57	24.57	
Total (\$000)	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	

APPENDIX C.2

TABLE C.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

VEHICLES & EQUIPMENT Description	# of Vehicles and Equipment										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Asphalt Equipment	11	13	12	10	11	10	10	12	14	11	\$30,000
Backhoe	12	12	12	12	14	14	14	13	15	14	\$200,000
Brush Chipper	6	7	8	6	7	6	8	10	10	10	\$120,000
Car	28	27	29	25	22	21	23	18	21	13	\$35,000
Car - Electric (Full)	-	-	-	-	-	-	-	-	-	8	\$45,000
Compressor	10	11	12	14	14	13	13	14	13	14	\$35,000
Crewcab (Chassis w Body)	35	34	37	36	37	37	48	49	49	49	\$73,000
Dozer	2	2	2	2	1	1	1	1	-	-	\$400,000
Dump Truck (Tri/Tandem/Single Axle)	18	18	20	19	19	20	20	18	18	18	\$300,000
Excavator	1	1	1	1	1	1	1	1	2	3	\$350,000
Fork Lift	9	8	7	10	9	10	9	10	11	6	\$45,000
Grader	5	5	5	5	4	6	6	6	6	6	\$250,000
Hoists Small	12	13	14	14	14	15	15	15	15	15	\$30,000
Hoists large	6	6	6	6	6	6	6	6	6	6	\$110,000
Jet Rodder Vactor	2	2	2	2	2	2	2	2	2	3	\$650,000
Loader	11	11	12	10	10	10	9	10	12	12	\$350,000
Mower	20	18	19	19	20	20	21	21	21	21	\$50,000
Municipal Tractor	22	19	22	18	19	19	19	18	21	23	\$160,000
Roller	10	10	10	10	9	9	9	9	7	7	\$60,000
Pavement Marker	1	1	1	1	1	1	1	1	1	1	\$320,000
Pickup Truck	73	74	68	67	66	65	68	67	67	66	\$45,000
Salter/Sander (Slide in Attachment)	7	11	10	12	12	13	16	17	18	18	\$12,500
Epoke (Slide in Attachment)	8	9	10	11	11	11	11	12	12	12	\$140,000
Snow Blower (large)	2	2	2	2	3	3	3	3	3	4	\$180,000
Stump Cutter	2	2	2	2	2	2	2	2	2	2	\$65,000
SUV	10	11	15	17	24	26	29	32	33	36	\$40,000
Sweeper Large	7	7	7	7	7	7	7	6	5	5	\$400,000
Sweeper Small	2	4	6	4	4	4	4	7	7	7	\$150,000
Trailer	44	47	55	57	61	58	59	32	32	32	\$15,000
Trash Vacuum	2	1	1	1	1	1	1	1	1	1	\$150,000
Total (#)	378	386	408	400	411	411	435	413	424	423	
Total (\$000)	\$36,636.8	\$36,530.5	\$39,043.5	\$36,859.7	\$37,321.0	\$37,978.5	\$39,054.0	\$38,594.5	\$39,832.0	\$41,007.0	

APPENDIX C.2

TABLE C.2-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historic Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247
Historic Employment	<u>90,874</u>	<u>91,396</u>	<u>91,921</u>	<u>92,449</u>	<u>92,982</u>	<u>94,302</u>	<u>95,605</u>	<u>96,932</u>	<u>98,284</u>	<u>99,662</u>
Total Historic Population & Employment	312,770	316,073	319,414	322,793	326,212	330,840	335,498	340,228	345,031	349,909

INVENTORY SUMMARY (\$000)

Buildings	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5	\$105,894.5
Land	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8	\$19,008.8
Vehicles & Equipment	\$36,636.8	\$36,530.5	\$39,043.5	\$36,859.7	\$37,321.0	\$37,978.5	\$39,054.0	\$38,594.5	\$39,832.0	\$41,007.0
Total (\$000)	\$161,540.1	\$161,433.9	\$163,946.8	\$161,763.0	\$162,224.3	\$162,881.8	\$163,957.3	\$163,497.8	\$164,735.3	\$165,910.3

SERVICE LEVEL (\$/pop & emp)

Average
Service
Level

Buildings	\$338.57	\$335.03	\$331.53	\$328.06	\$324.62	\$320.08	\$315.63	\$311.25	\$306.91	\$302.63	\$321.43
Land	\$60.78	\$60.14	\$59.51	\$58.89	\$58.27	\$57.46	\$56.66	\$55.87	\$55.09	\$54.33	\$57.70
Vehicles & Equipment	\$117.14	\$115.58	\$122.23	\$114.19	\$114.41	\$114.79	\$116.41	\$113.44	\$115.44	\$117.19	\$116.08
Total (\$/pop & emp)	\$516.48	\$510.75	\$513.27	\$501.14	\$497.30	\$492.33	\$488.70	\$480.55	\$477.45	\$474.15	\$495.21

CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
PUBLIC WORKS

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2012 - 2021	\$495.21
Net Pop. & Employment Growth 2022 - 2031	53,174
Maximum Allowable Funding Envelope	\$26,332,297

APPENDIX C.2
TABLE C.2-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC WORKS

Project Description	Timing	Gross Project Cost ¹	Grants/ Subsidies/Other Recoveries ²	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves ³	2022-2031	Other Dev. Related ⁴
2.0 PUBLIC WORKS										
2.1 Buildings and Land										
2.1.1 Recovery of Kitchener Operations Facility	Various	\$ 45,527,078	\$ 1,801,171	\$ 43,725,907	50%	\$ 21,862,953	\$ 21,862,953	\$ 9,481,521	\$ 12,381,432	\$ -
Subtotal Buildings and Land		\$ 45,527,078	\$ 1,801,171	\$ 43,725,907		\$ 21,862,953	\$ 21,862,953	\$ 9,481,521	\$ 12,381,432	\$ -
2.2 Equipment and Fleet										
2.2.1 Equipment Acquisitions and Upgrades	Various	\$ 13,000,000	\$ -	\$ 13,000,000	0%	\$ -	\$ 13,000,000	\$ -	\$ 10,958,339	\$ 2,041,661
Subtotal Equipment and Fleet		\$ 13,000,000	\$ -	\$ 13,000,000		\$ -	\$ 13,000,000	\$ -	\$ 10,958,339	\$ 2,041,661
TOTAL PUBLIC WORKS		\$ 58,527,078	\$ 1,801,171	\$ 56,725,907		\$ 21,862,953	\$ 34,862,953	\$ 9,481,521	\$ 23,339,771	\$ 2,041,661

1. For Kitchener Operations Facility, represents actual project costs.
2. Grants/Subsidies/Other Recoveries for Kitchener Operations Facility includes Provincial and Regional funding.
3. For Kitchener Operations Facility, committed DC Reserves accounts for DC funds already spent on project.
4. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2031 DC Eligible Costs	77%	\$17,930,806
10-Year Growth in Population in New Units		50,796
Unadjusted Development Charge Per Capita		\$353.00
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2031 DC Eligible Costs	23%	\$5,408,965
10-Year Growth in Square Metres		695,127
Unadjusted Development Charge Per Square Metre		\$7.78

2022 - 2031 Net Funding Envelope	\$ 26,332,297
Reserve Fund Balance as at Dec 31, 2021	\$ (2,992,526)
Adjusted 2022 - 2031 Net Funding Envelope	\$ 23,339,771

**APPENDIX C.2
TABLE C.2-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

PUBLIC WORKS	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$2,299.0)	(\$2,070.0)	(\$1,831.3)	(\$1,605.1)	(\$1,393.0)	(\$1,163.3)	(\$933.0)	(\$702.9)	(\$473.5)	(\$245.6)	
2022 - 2031 RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$1,793.08	\$17,930.8
- Public Works: Inflated	\$1,793.1	\$1,828.9	\$1,865.5	\$1,902.8	\$1,940.9	\$1,979.7	\$2,019.3	\$2,059.7	\$2,100.9	\$2,142.9	\$19,633.7
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	5,271	5,247	5,171	5,095	5,095	5,055	5,015	4,975	4,935	4,935	50,796
REVENUE											
- DC Receipts: Inflated	\$2,142.5	\$2,175.4	\$2,186.8	\$2,198.0	\$2,242.0	\$2,268.9	\$2,295.9	\$2,323.1	\$2,350.5	\$2,397.5	\$22,580.6
INTEREST											
- Interest on Opening Balance	(\$126.4)	(\$113.8)	(\$100.7)	(\$88.3)	(\$76.6)	(\$64.0)	(\$51.3)	(\$38.7)	(\$26.0)	(\$13.5)	(\$699.4)
- Interest on In-year Transactions	\$6.1	\$6.1	\$5.6	\$5.2	\$5.3	\$5.1	\$4.8	\$4.6	\$4.4	\$4.5	\$51.6
TOTAL REVENUE	\$2,022.1	\$2,067.6	\$2,091.7	\$2,114.9	\$2,170.6	\$2,209.9	\$2,249.4	\$2,289.1	\$2,328.8	\$2,388.5	\$21,932.7
CLOSING CASH BALANCE	(\$2,070.0)	(\$1,831.3)	(\$1,605.1)	(\$1,393.0)	(\$1,163.3)	(\$933.0)	(\$702.9)	(\$473.5)	(\$245.6)	\$0.0	

2022 Adjusted Charge Per Capita \$406.49

Allocation of Capital Program

Residential Sector	76.8%
Non-Residential Sector	23.2%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX C.2
TABLE C.2-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

PUBLIC WORKS	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
OPENING CASH BALANCE	(\$693.5)	(\$688.2)	(\$671.8)	(\$643.5)	(\$602.7)	(\$547.5)	(\$475.9)	(\$387.4)	(\$280.3)	(\$151.3)	
2022 - 2031 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$540.90	\$5,409.0
- Public Works: Inflated	\$540.9	\$551.7	\$562.7	\$574.0	\$585.5	\$597.2	\$609.1	\$621.3	\$633.7	\$646.4	\$5,922.7
NEW NON-RESIDENTIAL DEVELOPMENT											
- Non-Residential GFA	64,713	65,765	66,809	67,803	68,864	70,010	71,071	72,159	73,409	74,524	695,127
REVENUE											
- DC Receipts: Inflated	\$583.6	\$605.0	\$626.9	\$648.9	\$672.3	\$697.1	\$721.8	\$747.6	\$775.7	\$803.2	\$6,882.2
INTEREST											
- Interest on Opening Balance	(\$38.1)	(\$37.8)	(\$36.9)	(\$35.4)	(\$33.1)	(\$30.1)	(\$26.2)	(\$21.3)	(\$15.4)	(\$8.3)	(\$282.8)
- Interest on In-year Transactions	\$0.7	\$0.9	\$1.1	\$1.3	\$1.5	\$1.7	\$2.0	\$2.2	\$2.5	\$2.7	\$16.8
TOTAL REVENUE	\$546.2	\$568.1	\$591.1	\$614.9	\$640.6	\$668.8	\$697.6	\$728.5	\$762.8	\$797.7	\$6,616.2
CLOSING CASH BALANCE	(\$688.2)	(\$671.8)	(\$643.5)	(\$602.7)	(\$547.5)	(\$475.9)	(\$387.4)	(\$280.3)	(\$151.3)	\$0.0	

2022 Adjusted Charge Per Sq.M

\$9.02

Allocation of Capital Program

Residential Sector	76.8%
Non-Residential Sector	23.2%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.3

Services Related to a Highway: Roads and Related

Services Related to a Highway: Roads and Related

This service includes all roads and related infrastructure including the road network, streetlights, intersection improvements, traffic signalization and other related structures. The benefits of the Roads and Related service are deemed to relate to the suburban areas for the purpose of calculating the development charge.

Table C.3-1 2012-2021 Historical Service Levels

Table C.3-1 displays the Roads and Related ten-year historical inventory of road kilometers, bridges and culverts. The total length of the City’s roadway is 733 km including one, two, three and four lane roads and is valued at \$2.75 billion. The 117 bridges and culverts are valued at \$296.24 million.

The current replacement value of the inventory of capital assets for Roads and Related is \$3.05 billion and the ten-year historical average service level is \$9,228.85 per capita. The historical service level, multiplied by the forecast net population growth from 2022 to 2036 in the suburban areas of the City, results in a maximum allowable funding envelope of \$621.97 million.

Table C.3-2 2022 – 2036 Development-Related Capital Program & Calculation of Unadjusted Development Charge

The development-related capital program for Roads and Related includes \$63.17 million of capital works, including \$59.66 million of new road construction, \$639,000 of intersection improvements, and \$2.87 million of Roads and Related development charge credit and/or refund repayments to

which the City is committed. The credits and/or refund repayments relate to projects such as Strasburg Road and Blair Creek Bridge capital costs.

No grants or subsidies have been identified for any of the projects. Given that all of the capital projects in the Roads and Related capital program represent entirely new infrastructure, the entire \$63.17 million net capital cost is considered development-related.

No costs are deemed to benefit post-period development and therefore have not been netted off the 2022-2036 development-related net capital cost. The in-period DC eligible cost of \$63.17 million is allocated 74 per cent to residential development, or \$46.83 million, and 26 per cent to non-residential development, or \$16.34 million. This yields unadjusted development charge rates of \$937.33 per capita and \$20.29 per m² respectively.

Table C.3-3 Cash Flow Analysis

A reserve fund deficit of \$7.09 million in the Roads and Related development charges reserve fund is eligible for development charge recovery as committed excess capacity under the DCA. After cash flow, this contributes to increasing the Roads and Related charge to \$1,152.64 per capita and \$25.49 per m² respectively.

The following table summarizes the calculation of the Roads and Related development charge:

ROADS AND RELATED SUMMARY						
10-year Hist. Service Level per pop & emp	2022 - 2036		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$9,228.85	\$63,170,440	\$63,170,440	\$937.33	\$20.29	\$1,152.64	\$25.49

APPENDIX C.3
TABLE C.3-1

CITY OF KITCHENER
INVENTORY OF CAPITAL ASSETS
ROADS AND RELATED

ROADS Type of Road	# of Kilometres										UNIT COST (\$/km)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
1 lane	17	17	17	17	17	17	17	17	17	17	\$1,812,000
2 lane	671	672	672	672	672	672	672	672	672	672	\$3,624,000
3 lane	18	18	18	18	18	18	18	18	18	18	\$5,436,000
4 lane	25	25	25	25	25	25	26	26	26	26	\$7,248,000
Total (km)	731	732	732	732	732	732	733	733	733	733	
Total (\$000)	\$2,741,556.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,753,877.6	\$2,752,428.0	\$2,752,428.0	\$2,752,428.0	

BRIDGES & CULVERTS Description	# of Bridges & Culverts										UNIT COST (\$/unit)
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Bridges - 3 Metre Span Or Greater	67	67	68	68	68	68	69	69	69	69	\$4,052,000
Culverts - 3 Metre Span Or Greater	47	47	47	47	47	47	48	48	48	48	\$347,000
Total (#)	114	114	115	115	115	115	117	117	117	117	
Total (\$000)	\$287,793.0	\$287,793.0	\$291,845.0	\$291,845.0	\$291,845.0	\$291,845.0	\$296,244.0	\$296,244.0	\$296,244.0	\$296,244.0	

**APPENDIX C.3
TABLE C.3-1**

**CITY OF KITCHENER
CALCULATION OF SERVICE LEVELS
ROADS AND RELATED**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Historic Population	221,896	224,677	227,493	230,344	233,230	236,538	239,893	243,296	246,747	250,247
Historic Employment	<u>90,874</u>	<u>91,396</u>	<u>91,921</u>	<u>92,449</u>	<u>92,982</u>	<u>94,302</u>	<u>95,605</u>	<u>96,932</u>	<u>98,284</u>	<u>99,662</u>
Total Historic Population & Employment	312,770	316,073	319,414	322,793	326,212	330,840	335,498	340,228	345,031	349,909

INVENTORY SUMMARY (\$000)

Roads	\$2,741,556.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,745,180.0	\$2,753,877.6	\$2,752,428.0	\$2,752,428.0	\$2,752,428.0
Bridges & Culverts	\$287,793.0	\$287,793.0	\$291,845.0	\$291,845.0	\$291,845.0	\$291,845.0	\$296,244.0	\$296,244.0	\$296,244.0	\$296,244.0
Total (\$000)	\$3,029,349.0	\$3,032,973.0	\$3,037,025.0	\$3,037,025.0	\$3,037,025.0	\$3,037,025.0	\$3,050,121.6	\$3,048,672.0	\$3,048,672.0	\$3,048,672.0

SERVICE LEVEL (\$/pop & emp)

											Average Service Level
Roads	\$8,765.41	\$8,685.27	\$8,594.43	\$8,504.46	\$8,415.33	\$8,297.61	\$8,208.33	\$8,089.95	\$7,977.34	\$7,866.13	\$8,340.42
Bridges & Culverts	\$920.14	\$910.53	\$913.69	\$904.12	\$894.65	\$882.13	\$883.00	\$870.72	\$858.60	\$846.63	\$888.42
Total (\$/pop & emp)	\$9,685.55	\$9,595.80	\$9,508.11	\$9,408.58	\$9,309.98	\$9,179.74	\$9,091.33	\$8,960.67	\$8,835.94	\$8,712.76	\$9,228.85

**CITY OF KITCHENER
CALCULATION OF MAXIMUM ALLOWABLE
ROADS AND RELATED**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2012 - 2021	\$9,228.85
Net Population & Employment Growth 2022 - 2036 (Suburban)	67,394
Maximum Allowable Funding Envelope	\$621,970,391

APPENDIX C.3

TABLE C.3-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS AND RELATED

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves	2022-2036	Other Dev. Related ²
	3.0 ROADS AND RELATED										
	3.1 Road Construction										
R1	3.1.1 Biehn Drive and Sanitary Trunk Extension	2022	\$ 746,900	\$ -	\$ 746,900	0%	\$ -	\$ 746,900	\$ -	\$ 746,900	\$ -
	3.1.2 Biehn Drive and Sanitary Trunk Extension	2023	\$ 689,920	\$ -	\$ 689,920	0%	\$ -	\$ 689,920	\$ -	\$ 689,920	\$ -
	3.1.3 Biehn Drive and Sanitary Trunk Extension	2024	\$ 6,056,820	\$ -	\$ 6,056,820	0%	\$ -	\$ 6,056,820	\$ -	\$ 6,056,820	\$ -
	3.1.4 Amand Drive	2024	\$ 195,250	\$ -	\$ 195,250	0%	\$ -	\$ 195,250	\$ -	\$ 195,250	\$ -
	3.1.5 Amand Drive	2025	\$ 156,750	\$ -	\$ 156,750	0%	\$ -	\$ 156,750	\$ -	\$ 156,750	\$ -
	3.1.6 Amand Drive	2026	\$ 4,138,750	\$ -	\$ 4,138,750	0%	\$ -	\$ 4,138,750	\$ -	\$ 4,138,750	\$ -
	3.1.7 Blair Creek Drive	2022	\$ 176,000	\$ -	\$ 176,000	0%	\$ -	\$ 176,000	\$ -	\$ 176,000	\$ -
R7	3.1.8 Blair Creek Drive	2025	\$ 140,250	\$ -	\$ 140,250	0%	\$ -	\$ 140,250	\$ -	\$ 140,250	\$ -
	3.1.9 Blair Creek Drive	2026	\$ 3,716,625	\$ -	\$ 3,716,625	0%	\$ -	\$ 3,716,625	\$ -	\$ 3,716,625	\$ -
	3.1.14 Strasburg Road South	2023	\$ 683,375	\$ -	\$ 683,375	0%	\$ -	\$ 683,375	\$ -	\$ 683,375	\$ -
R4	3.1.15 Strasburg Road South	2024	\$ 6,548,438	\$ -	\$ 6,548,438	0%	\$ -	\$ 6,548,438	\$ -	\$ 6,548,438	\$ -
	3.1.16 Strasburg Road South	2025	\$ 6,548,438	\$ -	\$ 6,548,438	0%	\$ -	\$ 6,548,438	\$ -	\$ 6,548,438	\$ -
	3.1.17 Huron Road Improvements & Watermain Extension	2025	\$ 622,875	\$ -	\$ 622,875	0%	\$ -	\$ 622,875	\$ -	\$ 622,875	\$ -
R3	3.1.18 Huron Road Improvements & Watermain Extension	2026	\$ 11,316,250	\$ -	\$ 11,316,250	0%	\$ -	\$ 11,316,250	\$ -	\$ 11,316,250	\$ -
	3.1.19 Doon South SPS - Forcemain	2026	\$ 30,250	\$ -	\$ 30,250	0%	\$ -	\$ 30,250	\$ -	\$ 30,250	\$ -
	3.1.20 Doon South SPS - Forcemain	2027	\$ 50,875	\$ -	\$ 50,875	0%	\$ -	\$ 50,875	\$ -	\$ 50,875	\$ -
	3.1.21 Doon South SPS - Forcemain	2028	\$ 1,073,875	\$ -	\$ 1,073,875	0%	\$ -	\$ 1,073,875	\$ -	\$ 1,073,875	\$ -
	3.1.22 Dodge Drive Sanitary Sewer & Road Restoration	2027	\$ 129,400	\$ -	\$ 129,400	0%	\$ -	\$ 129,400	\$ -	\$ 129,400	\$ -
	3.1.23 Dodge Drive Sanitary Sewer & Road Restoration	2028	\$ 2,906,800	\$ -	\$ 2,906,800	0%	\$ -	\$ 2,906,800	\$ -	\$ 2,906,800	\$ -
	3.1.24 City Share of Subdivision Works	Various	\$ 13,734,000	\$ -	\$ 13,734,000	0%	\$ -	\$ 13,734,000	\$ -	\$ 13,734,000	\$ -
	Subtotal Road Construction		\$ 59,661,840	\$ -	\$ 59,661,840		\$ -	\$ 59,661,840	\$ -	\$ 59,661,840	\$ -
	3.2 Intersection Improvements										
IN3	3.2.1 Intersection Improvements - Strasburg Rd & Huron Rd	2024	\$ 639,000	\$ -	\$ 639,000	0%	\$ -	\$ 639,000	\$ -	\$ 639,000	\$ -
	Subtotal Intersection Improvements		\$ 639,000	\$ -	\$ 639,000		\$ -	\$ 639,000	\$ -	\$ 639,000	\$ -

APPENDIX C.3

TABLE C.3-2

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
ROADS AND RELATED

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves	2022-2036	Other Dev. Related ²
	3.0 ROADS AND RELATED CONTINUED										
	3.3 DC Credits/Refunds ¹										
	3.3.1 DC Credits/Refunds	2022	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.2 DC Credits/Refunds	2023	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.3 DC Credits/Refunds	2024	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.4 DC Credits/Refunds	2025	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.5 DC Credits/Refunds	2026	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.6 DC Credits/Refunds	2027	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.7 DC Credits/Refunds	2028	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.8 DC Credits/Refunds	2029	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.9 DC Credits/Refunds	2030	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	3.3.10 DC Credits/Refunds	2031	\$ 286,960	\$ -	\$ 286,960	0%	\$ -	\$ 286,960	\$ -	\$ 286,960	\$ -
	Subtotal DC Credits/Refunds		\$ 2,869,600	\$ -	\$ 2,869,600		\$ -	\$ 2,869,600	\$ -	\$ 2,869,600	\$ -
	TOTAL ROADS AND RELATED		\$ 63,170,440	\$ -	\$ 63,170,440		\$ -	\$ 63,170,440	\$ -	\$ 63,170,440	\$ -

1. Includes Strasburg Road and Blair Creek Bridge.

2. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	74%	\$46,825,713
2022-2036 Growth in Population in New Units (Suburban Areas)		49,957
Unadjusted Development Charge Per Capita		\$937.33
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	26%	\$16,344,727
2022-2036 Growth in Square Metres (Suburban Areas)		805,552
Unadjusted Development Charge Per Square Metre		\$20.29

**APPENDIX C.3
TABLE C.3-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS AND RELATED
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

ROADS AND RELATED	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$5,254.4)	(\$2,692.9)	(\$355.0)	(\$7,498.2)	(\$10,474.8)	(\$23,339.9)	(\$21,283.0)	(\$22,362.6)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Roads And Related: Non Inflated	\$1,575.5	\$1,909.4	\$10,853.6	\$6,427.4	\$15,125.0	\$1,025.0	\$3,842.1	\$891.4
- Roads And Related: Inflated	\$1,575.5	\$1,947.6	\$11,292.1	\$6,820.8	\$16,371.8	\$1,131.7	\$4,326.9	\$1,023.9
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3797	3735	3635	3536	3536	3469	3402	3335
REVENUE								
- DC Receipts: Inflated	\$4,377.0	\$4,390.79	\$4,359.02	\$4,325.21	\$4,411.71	\$4,414.83	\$4,416.31	\$4,416.08
INTEREST								
- Interest on Opening Balance	(\$289.0)	(\$148.1)	(\$19.5)	(\$412.4)	(\$576.1)	(\$1,283.7)	(\$1,170.6)	(\$1,229.9)
- Interest on In-year Transactions	\$49.0	\$42.8	(\$190.7)	(\$68.6)	(\$328.9)	\$57.5	\$1.6	\$59.4
TOTAL REVENUE	\$4,137.1	\$4,285.4	\$4,148.8	\$3,844.2	\$3,506.7	\$3,188.6	\$3,247.3	\$3,245.5
CLOSING CASH BALANCE	(\$2,692.9)	(\$355.0)	(\$7,498.2)	(\$10,474.8)	(\$23,339.9)	(\$21,283.0)	(\$22,362.6)	(\$20,141.0)

APPENDIX C.3
TABLE C.3-3

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS AND RELATED
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ROADS AND RELATED	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$20,141.0)	(\$17,820.2)	(\$15,303.1)	(\$12,429.3)	(\$9,441.1)	(\$6,335.3)	(\$3,108.8)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Roads And Related: Non Inflated	\$891.4	\$891.4	\$678.7	\$678.7	\$678.7	\$678.7	\$678.7	\$46,825.7
- Roads And Related: Inflated	\$1,044.4	\$1,065.3	\$827.3	\$843.9	\$860.8	\$878.0	\$895.5	\$50,905.4
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3268	3268	3188	3107	3026	2945	2708	-
REVENUE								
- DC Receipts: Inflated	\$4,414.08	\$4,502.36	\$4,478.83	\$4,452.57	\$4,423.46	\$4,391.41	\$4,118.93	\$65,892.6
INTEREST								
- Interest on Opening Balance	(\$1,107.8)	(\$980.1)	(\$841.7)	(\$683.6)	(\$519.3)	(\$348.4)	(\$171.0)	(\$9,781.2)
- Interest on In-year Transactions	\$59.0	\$60.1	\$63.9	\$63.2	\$62.3	\$61.5	\$56.4	\$48.4
TOTAL REVENUE	\$3,365.3	\$3,582.4	\$3,701.1	\$3,832.1	\$3,966.5	\$4,104.5	\$4,004.4	\$56,159.8
CLOSING CASH BALANCE	(\$17,820.2)	(\$15,303.1)	(\$12,429.3)	(\$9,441.1)	(\$6,335.3)	(\$3,108.8)	\$0.0	

2022 Adjusted Charge Per Capita	\$1,152.64
--	-------------------

Allocation of Capital Program	
Residential Sector	74.1%
Non-Residential Sector	25.9%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX C.3
TABLE C.3-3**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS AND RELATED
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

ROADS AND RELATED	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$1,834.1)	(\$1,231.7)	(\$684.1)	(\$3,407.1)	(\$4,631.0)	(\$9,300.2)	(\$8,719.7)	(\$9,192.4)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Roads And Related: Non Inflated	\$549.9	\$666.5	\$3,788.5	\$2,243.5	\$5,279.4	\$357.8	\$1,341.1	\$311.2
- Roads And Related: Inflated	\$549.9	\$679.8	\$3,941.5	\$2,380.8	\$5,714.6	\$395.0	\$1,510.3	\$357.4
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	48,695	49,411	50,082	50,726	51,408	52,174	52,854	53,551
REVENUE								
- DC Receipts: Inflated	\$1,241.1	\$1,284.57	\$1,328.05	\$1,372.03	\$1,418.29	\$1,468.21	\$1,517.09	\$1,567.84
INTEREST								
- Interest on Opening Balance	(\$100.9)	(\$67.7)	(\$37.6)	(\$187.4)	(\$254.7)	(\$511.5)	(\$479.6)	(\$505.6)
- Interest on In-year Transactions	\$12.1	\$10.6	(\$71.9)	(\$27.7)	(\$118.1)	\$18.8	\$0.1	\$21.2
TOTAL REVENUE	\$1,152.4	\$1,227.4	\$1,218.6	\$1,156.9	\$1,045.4	\$975.5	\$1,037.6	\$1,083.4
CLOSING CASH BALANCE	(\$1,231.7)	(\$684.1)	(\$3,407.1)	(\$4,631.0)	(\$9,300.2)	(\$8,719.7)	(\$9,192.4)	(\$8,466.4)

APPENDIX C.3
TABLE C.3-3

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADS AND RELATED
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ROADS AND RELATED	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$8,466.4)	(\$7,651.0)	(\$6,743.1)	(\$5,640.8)	(\$4,425.2)	(\$3,084.5)	(\$1,612.9)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Roads And Related: Non Inflated	\$311.2	\$311.2	\$236.9	\$236.9	\$236.9	\$236.9	\$236.9	\$16,344.7
- Roads And Related: Inflated	\$364.6	\$371.9	\$288.8	\$294.6	\$300.4	\$306.5	\$312.6	\$17,768.8
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	54369	55077	55894	56615	57458	58216	59022	805,552
REVENUE								
- DC Receipts: Inflated	\$1,623.62	\$1,677.66	\$1,736.60	\$1,794.18	\$1,857.31	\$1,919.45	\$1,984.95	\$23,791.0
INTEREST								
- Interest on Opening Balance	(\$465.7)	(\$420.8)	(\$370.9)	(\$310.2)	(\$243.4)	(\$169.6)	(\$88.7)	(\$4,214.3)
- Interest on In-year Transactions	\$22.0	\$22.9	\$25.3	\$26.2	\$27.2	\$28.2	\$29.3	\$26.2
TOTAL REVENUE	\$1,180.0	\$1,279.7	\$1,391.1	\$1,510.2	\$1,641.2	\$1,778.0	\$1,925.5	\$19,602.8
CLOSING CASH BALANCE	(\$7,651.0)	(\$6,743.1)	(\$5,640.8)	(\$4,425.2)	(\$3,084.5)	(\$1,612.9)	(\$0.0)	

2022 Adjusted Charge Per Sq.M \$25.49

Allocation of Capital Program

Residential Sector 74.1%
Non-Residential Sector 25.9%

Rates for 2022

Inflation Rate: 2.0%
Interest Rate on Positive Balances 3.5%
Interest Rate on Negative Balances 5.5%

Appendix C.4

Watermains

Watermains

The Watermains service incorporates the capital cost of installing new watermains for which the City is responsible. The benefits of the Watermains service are deemed to relate to the suburban areas for the purpose of calculating the development charge.

Table C.4-1 2022 – 2036 Development-Related Capital Program & Calculation of Unadjusted Development Charge

The development-related capital program for Watermains totals \$13.00 million. No grants or subsidies have been identified for any of the projects. Therefore the net cost of the program remains at \$13.00 million.

Of the net capital costs, \$2.55 million has been identified as a benefit to the existing share as it relates to maintaining water quality for existing users. This share has been removed from development charge consideration. The remaining \$10.45 million is related to development in the suburban areas and is carried forward to the development charge calculation.

No costs are deemed to benefit post-period development and therefore have not been netted off the 2022-2036 development-related net capital cost. The in-period DC eligible cost of \$10.45 million is allocated 74 per cent to residential development, or \$7.74 million, and 26 per cent to non-residential development, or \$2.70 million. This yields unadjusted development charge rates of \$155.00 per capita and \$3.36 per m2 respectively.

Table C.4-2 Cash Flow Analysis

A \$3.09 million surplus in the Watermains development charge reserve fund contributes to the adjusted development charge decreasing to \$121.12 per capita and \$2.67 per m² after cash flow.

The following table summarizes the calculation of the Watermains development charge:

WATERMAINS SUMMARY					
2022 - 2036		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$12,998,755	\$10,446,205	\$155.00	\$3.36	\$121.12	\$2.67

APPENDIX C.4
TABLE C.4-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
WATERMAINS

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves	2022-2036	Other Dev. Related*
	4.0 WATERMAINS										
	4.1 Watermain Projects										
	4.1.1 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2022	\$ 63,140	\$ -	\$ 63,140	0%	\$ -	\$ 63,140	\$ -	\$ 63,140	\$ -
	4.1.2 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2023	\$ 49,280	\$ -	\$ 49,280	0%	\$ -	\$ 49,280	\$ -	\$ 49,280	\$ -
	4.1.3 Biehn Drive and Strasburg South Sanitary Trunk Extn.	2024	\$ 1,322,860	\$ -	\$ 1,322,860	0%	\$ -	\$ 1,322,860	\$ -	\$ 1,322,860	\$ -
W2	4.1.4 Highway 7 Extension - Secondary Watermain	2023	\$ 300,300	\$ -	\$ 300,300	50%	\$ 150,150	\$ 150,150	\$ -	\$ 150,150	\$ -
W2	4.1.5 Highway 7 Extension - Secondary Watermain	2024	\$ 257,400	\$ -	\$ 257,400	50%	\$ 128,700	\$ 128,700	\$ -	\$ 128,700	\$ -
W2	4.1.6 Highway 7 Extension - Secondary Watermain	2025	\$ 4,547,400	\$ -	\$ 4,547,400	50%	\$ 2,273,700	\$ 2,273,700	\$ -	\$ 2,273,700	\$ -
W4	4.1.7 Strasburg Road South Watermain Extension	2023	\$ 154,000	\$ -	\$ 154,000	0%	\$ -	\$ 154,000	\$ -	\$ 154,000	\$ -
	4.1.8 Strasburg Road South Watermain Extension	2024	\$ 1,745,563	\$ -	\$ 1,745,563	0%	\$ -	\$ 1,745,563	\$ -	\$ 1,745,563	\$ -
	4.1.9 Strasburg Road South Watermain Extension	2025	\$ 1,745,563	\$ -	\$ 1,745,563	0%	\$ -	\$ 1,745,563	\$ -	\$ 1,745,563	\$ -
W1	4.1.10 Amand Drive Watermain	2024	\$ 56,375	\$ -	\$ 56,375	0%	\$ -	\$ 56,375	\$ -	\$ 56,375	\$ -
	4.1.11 Amand Drive Watermain	2025	\$ 44,000	\$ -	\$ 44,000	0%	\$ -	\$ 44,000	\$ -	\$ 44,000	\$ -
	4.1.12 Amand Drive Watermain	2026	\$ 1,181,125	\$ -	\$ 1,181,125	0%	\$ -	\$ 1,181,125	\$ -	\$ 1,181,125	\$ -
W3	4.1.13 Huron Road Improvements & Watermain Extension	2025	\$ 19,250	\$ -	\$ 19,250	0%	\$ -	\$ 19,250	\$ -	\$ 19,250	\$ -
	4.1.14 Huron Road Improvements & Watermain Extension	2026	\$ 358,875	\$ -	\$ 358,875	0%	\$ -	\$ 358,875	\$ -	\$ 358,875	\$ -
	4.1.15 Blair Creek Drive	2022	\$ 49,500	\$ -	\$ 49,500	0%	\$ -	\$ 49,500	\$ -	\$ 49,500	\$ -
	4.1.16 Blair Creek Drive	2025	\$ 39,875	\$ -	\$ 39,875	0%	\$ -	\$ 39,875	\$ -	\$ 39,875	\$ -
	4.1.17 Blair Creek Drive	2026	\$ 1,064,250	\$ -	\$ 1,064,250	0%	\$ -	\$ 1,064,250	\$ -	\$ 1,064,250	\$ -
	Subtotal Watermain Projects		\$ 12,998,755	\$ -	\$ 12,998,755		\$ 2,552,550	\$ 10,446,205	\$ -	\$ 10,446,205	\$ -
	TOTAL WATERMAINS		\$ 12,998,755	\$ -	\$ 12,998,755		\$ 2,552,550	\$ 10,446,205	\$ -	\$ 10,446,205	\$ -

*Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	74%	\$7,743,353
2022-2036 Growth in Population in New Units (Suburban Areas)		49,957
Unadjusted Development Charge Per Capita		\$155.00
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	26%	\$2,702,852
2022-2036 Growth in Square Metres (Suburban Areas)		805,552
Unadjusted Development Charge Per Square Metre		\$3.36

APPENDIX C.4

TABLE C.4-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATERMAINS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WATERMAINS	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	\$2,287.8	\$2,750.9	\$3,044.7	\$1,043.8	(\$1,784.6)	(\$3,553.5)	(\$3,276.9)	(\$2,985.0)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Watermains: Non Inflated	\$83.5	\$262.0	\$2,411.7	\$3,055.8	\$1,930.4	\$0.0	\$0.0	\$0.0
- Watermains: Inflated	\$83.5	\$267.2	\$2,509.1	\$3,242.8	\$2,089.6	\$0.0	\$0.0	\$0.0
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3797	3735	3635	3536	3536	3469	3402	3335
REVENUE								
- DC Receipts: Inflated	\$459.9	\$461.37	\$458.03	\$454.48	\$463.57	\$463.90	\$464.05	\$464.03
INTEREST								
- Interest on Opening Balance	\$80.1	\$96.3	\$106.6	\$36.5	(\$98.2)	(\$195.4)	(\$180.2)	(\$164.2)
- Interest on In-year Transactions	\$6.6	\$3.4	(\$56.4)	(\$76.7)	(\$44.7)	\$8.1	\$8.1	\$8.1
TOTAL REVENUE	\$546.6	\$561.1	\$508.2	\$414.3	\$320.7	\$276.6	\$291.9	\$308.0
CLOSING CASH BALANCE	\$2,750.9	\$3,044.7	\$1,043.8	(\$1,784.6)	(\$3,553.5)	(\$3,276.9)	(\$2,985.0)	(\$2,677.0)

APPENDIX C.4
TABLE C.4-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATERMAINS
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WATERMAINS	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$2,677.0)	(\$2,352.3)	(\$2,000.3)	(\$1,631.5)	(\$1,245.2)	(\$840.7)	(\$417.4)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Watermains: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$7,743.4
- Watermains: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8,192.2
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3268	3268	3188	3107	3026	2945	2708	49,957
REVENUE								
- DC Receipts: Inflated	\$463.82	\$473.09	\$470.62	\$467.86	\$464.80	\$461.44	\$432.81	\$6,029.6
INTEREST								
- Interest on Opening Balance	(\$147.2)	(\$129.4)	(\$110.0)	(\$89.7)	(\$68.5)	(\$46.2)	(\$23.0)	(\$932.6)
- Interest on In-year Transactions	\$8.1	\$8.3	\$8.2	\$8.2	\$8.1	\$8.1	\$7.6	(\$86.9)
TOTAL REVENUE	\$324.7	\$352.0	\$368.8	\$386.3	\$404.5	\$423.3	\$417.4	\$5,904.4
CLOSING CASH BALANCE	(\$2,352.3)	(\$2,000.3)	(\$1,631.5)	(\$1,245.2)	(\$840.7)	(\$417.4)	\$0.0	

2022 Adjusted Charge Per Capita \$121.12

Allocation of Capital Program

Residential Sector	74.1%
Non-Residential Sector	25.9%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.4
TABLE C.4-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATERMAINS
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WATERMAINS	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	\$798.6	\$929.3	\$1,004.1	\$282.4	(\$722.9)	(\$1,359.2)	(\$1,277.2)	(\$1,185.6)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Watermains: Non Inflated	\$29.1	\$91.4	\$841.8	\$1,066.6	\$673.8	\$0.0	\$0.0	\$0.0
- Watermains: Inflated	\$29.1	\$93.3	\$875.8	\$1,131.9	\$729.4	\$0.0	\$0.0	\$0.0
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	48,695	49,411	50,082	50,726	51,408	52,174	52,854	53,551
REVENUE								
- DC Receipts: Inflated	\$130.2	\$134.74	\$139.30	\$143.92	\$148.77	\$154.01	\$159.13	\$164.46
INTEREST								
- Interest on Opening Balance	\$28.0	\$32.5	\$35.1	\$9.9	(\$39.8)	(\$74.8)	(\$70.2)	(\$65.2)
- Interest on In-year Transactions	\$1.8	\$0.7	(\$20.3)	(\$27.2)	(\$16.0)	\$2.7	\$2.8	\$2.9
TOTAL REVENUE	\$159.9	\$168.0	\$154.2	\$126.6	\$93.0	\$81.9	\$91.7	\$102.1
CLOSING CASH BALANCE	\$929.3	\$1,004.1	\$282.4	(\$722.9)	(\$1,359.2)	(\$1,277.2)	(\$1,185.6)	(\$1,083.4)

APPENDIX C.4
TABLE C.4-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
WATERMAINS
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

WATERMAINS	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$1,083.4)	(\$969.7)	(\$844.0)	(\$705.1)	(\$552.4)	(\$384.5)	(\$200.8)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Watermains: Non Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,702.9
- Watermains: Inflated	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,859.5
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	54369	55077	55894	56615	57458	58216	59022	805,552
REVENUE								
- DC Receipts: Inflated	\$170.31	\$175.98	\$182.16	\$188.20	\$194.82	\$201.34	\$208.21	\$2,495.5
INTEREST								
- Interest on Opening Balance	(\$59.6)	(\$53.3)	(\$46.4)	(\$38.8)	(\$30.4)	(\$21.1)	(\$11.0)	(\$405.2)
- Interest on In-year Transactions	\$3.0	\$3.1	\$3.2	\$3.3	\$3.4	\$3.5	\$3.6	(\$29.4)
TOTAL REVENUE	\$113.7	\$125.7	\$138.9	\$152.7	\$167.8	\$183.7	\$200.8	\$2,060.9
CLOSING CASH BALANCE	(\$969.7)	(\$844.0)	(\$705.1)	(\$552.4)	(\$384.5)	(\$200.8)	\$0.0	

2022 Adjusted Charge Per Sq.M

\$2.67

Allocation of Capital Program

Residential Sector	74.1%
Non-Residential Sector	25.9%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.5

Engineering Studies

Engineering Studies

When calculating development charges, the DCA allows for the inclusion of the costs of undertaking studies related to the provision of development-related infrastructure, including development charges background studies. The benefits of the engineering development-related studies are deemed to relate to the suburban areas for the purpose of calculating the development charge.

**Table C.5-1 2022 – 2036 Development-Related Capital
Program and Calculation of Unadjusted
Development Charges**

Table C.5-1 provides a list of engineering development-related studies the City anticipates undertaking during the 2022-2036 period. As required by the DCA, development charges studies must be undertaken every five years, and the engineering component of the studies are included in the list. The total estimated cost of all studies is \$5.42 million. No benefit to existing share has been identified. Thus the entire \$5.42 million is attributable to development in the suburban areas from 2022 to 2036 and is carried forward to the development charge calculation.

Of the \$5.42 million development-related net capital cost, 74 per cent is allocated against residential development, or \$4.02 million, and 26 per cent is allocated against non-residential development, or \$1.40 million. This yields unadjusted development charge rates of \$80.39 per capita and \$1.74 per m² respectively.

Table C.5-2 Cash Flow Analysis

The cash flow analysis is displayed in Table C.5-2. It considers the timing of the projects as well as the timing of the development charge revenues to adjust the calculated rates. A reserve fund deficit in the Engineering Studies development charges reserve fund of \$1.12 million is also eligible for recovery and is treated as committed excess capacity. After cash flow analysis, this contributes to increasing the Engineering Studies charges to \$100.77 per capita and \$2.23 m².

The following table summarizes the calculation of the Engineering Studies development charge:

ENGINEERING STUDIES SUMMARY					
2022 - 2036		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$5,418,000	\$5,418,000	\$80.39	\$1.74	\$100.77	\$2.23

APPENDIX C.5

TABLE C.5-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
ENGINEERING STUDIES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2036	Other Dev. Related*
5.0 ENGINEERING STUDIES										
5.1 Engineering Studies										
5.1.1 Monitor/Update Program - Upper Blair Creek	Various	\$ 1,680,000	\$ -	\$ 1,680,000	0%	\$ -	\$ 1,680,000	\$ -	\$ 1,680,000	\$ -
5.1.2 Master Plans/Feasibility Studies	Various	\$ 1,078,000	\$ -	\$ 1,078,000	0%	\$ -	\$ 1,078,000	\$ -	\$ 1,078,000	\$ -
5.1.3 Engineering Studies	Various	\$ 2,660,000	\$ -	\$ 2,660,000	0%	\$ -	\$ 2,660,000	\$ -	\$ 2,660,000	\$ -
Subtotal Engineering Studies		\$ 5,418,000	\$ -	\$ 5,418,000		\$ -	\$ 5,418,000	\$ -	\$ 5,418,000	\$ -
TOTAL ENGINEERING STUDIES		\$ 5,418,000	\$ -	\$ 5,418,000		\$ -	\$ 5,418,000	\$ -	\$ 5,418,000	\$ -

*Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	74%	\$4,016,146
2022-2036 Growth in Population in New Units (Suburban Areas)		49,957
Unadjusted Development Charge Per Capita		\$80.39
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	26%	\$1,401,854
2022-2036 Growth in Square Metres (Suburban Areas)		805,552
Unadjusted Development Charge Per Square Metre		\$1.74

APPENDIX C.5

TABLE C.5-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ENGINEERING STUDIES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ENGINEERING STUDIES	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$832.0)	(\$760.8)	(\$690.0)	(\$623.6)	(\$562.3)	(\$495.6)	(\$430.9)	(\$368.6)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Engineering Studies: Non Inflated	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7
- Engineering Studies: Inflated	\$267.7	\$273.1	\$278.6	\$284.1	\$289.8	\$295.6	\$301.5	\$307.6
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3797	3735	3635	3536	3536	3469	3402	3335
REVENUE								
- DC Receipts: Inflated	\$382.7	\$383.87	\$381.09	\$378.13	\$385.70	\$385.97	\$386.10	\$386.08
INTEREST								
- Interest on Opening Balance	(\$45.8)	(\$41.8)	(\$37.9)	(\$34.3)	(\$30.9)	(\$27.3)	(\$23.7)	(\$20.3)
- Interest on In-year Transactions	\$2.0	\$1.9	\$1.8	\$1.6	\$1.7	\$1.6	\$1.5	\$1.4
TOTAL REVENUE	\$338.9	\$344.0	\$344.9	\$345.5	\$356.5	\$360.3	\$363.9	\$367.2
CLOSING CASH BALANCE	(\$760.8)	(\$690.0)	(\$623.6)	(\$562.3)	(\$495.6)	(\$430.9)	(\$368.6)	(\$308.9)

APPENDIX C.5

TABLE C.5-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ENGINEERING STUDIES
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ENGINEERING STUDIES	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$308.9)	(\$252.5)	(\$191.4)	(\$135.6)	(\$85.7)	(\$42.5)	(\$6.6)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Engineering Studies: Non Inflated	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$267.7	\$4,016.1
- Engineering Studies: Inflated	\$313.7	\$320.0	\$326.4	\$332.9	\$339.6	\$346.4	\$353.3	\$4,630.2
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3268	3268	3188	3107	3026	2945	2708	49,957
REVENUE								
- DC Receipts: Inflated	\$385.90	\$393.62	\$391.57	\$389.27	\$386.72	\$383.92	\$360.10	\$5,016.7
INTEREST								
- Interest on Opening Balance	(\$17.0)	(\$13.9)	(\$10.5)	(\$7.5)	(\$4.7)	(\$2.3)	(\$0.4)	(\$318.3)
- Interest on In-year Transactions	\$1.3	\$1.3	\$1.1	\$1.0	\$0.8	\$0.7	\$0.1	\$19.8
TOTAL REVENUE	\$370.2	\$381.0	\$382.2	\$382.8	\$382.8	\$382.2	\$359.9	\$5,462.2
CLOSING CASH BALANCE	(\$252.5)	(\$191.4)	(\$135.6)	(\$85.7)	(\$42.5)	(\$6.6)	(\$0.0)	

2022 Adjusted Charge Per Capita	\$100.77
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Allocation of Capital Program	
Residential Sector	74.1%
Non-Residential Sector	25.9%
Rates for 2022	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.5

TABLE C.5-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ENGINEERING STUDIES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ENGINEERING STUDIES	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$290.4)	(\$291.1)	(\$289.9)	(\$286.6)	(\$281.3)	(\$273.6)	(\$263.0)	(\$249.7)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Engineering Studies: Non Inflated	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5
- Engineering Studies: Inflated	\$93.5	\$95.3	\$97.2	\$99.2	\$101.2	\$103.2	\$105.2	\$107.4
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	48,695	49,411	50,082	50,726	51,408	52,174	52,854	53,551
REVENUE								
- DC Receipts: Inflated	\$108.5	\$112.28	\$116.08	\$119.92	\$123.97	\$128.33	\$132.60	\$137.04
INTEREST								
- Interest on Opening Balance	(\$16.0)	(\$16.0)	(\$15.9)	(\$15.8)	(\$15.5)	(\$15.0)	(\$14.5)	(\$13.7)
- Interest on In-year Transactions	\$0.3	\$0.3	\$0.3	\$0.4	\$0.4	\$0.4	\$0.5	\$0.5
TOTAL REVENUE	\$92.8	\$96.6	\$100.5	\$104.5	\$108.9	\$113.7	\$118.6	\$123.8
CLOSING CASH BALANCE	(\$291.1)	(\$289.9)	(\$286.6)	(\$281.3)	(\$273.6)	(\$263.0)	(\$249.7)	(\$233.2)

APPENDIX C.5
TABLE C.5-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ENGINEERING STUDIES
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

ENGINEERING STUDIES	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$233.2)	(\$213.0)	(\$189.2)	(\$161.1)	(\$128.6)	(\$91.1)	(\$48.4)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Engineering Studies: Non Inflated	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$93.5	\$1,401.9
- Engineering Studies: Inflated	\$109.5	\$111.7	\$113.9	\$116.2	\$118.5	\$120.9	\$123.3	\$1,616.2
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	54369	55077	55894	56615	57458	58216	59022	805,552
REVENUE								
- DC Receipts: Inflated	\$141.91	\$146.64	\$151.79	\$156.82	\$162.34	\$167.77	\$173.49	\$2,079.5
INTEREST								
- Interest on Opening Balance	(\$12.8)	(\$11.7)	(\$10.4)	(\$8.9)	(\$7.1)	(\$5.0)	(\$2.7)	(\$181.0)
- Interest on In-year Transactions	\$0.6	\$0.6	\$0.7	\$0.7	\$0.8	\$0.8	\$0.9	\$8.1
TOTAL REVENUE	\$129.7	\$135.5	\$142.0	\$148.7	\$156.0	\$163.6	\$171.7	\$1,906.6
CLOSING CASH BALANCE	(\$213.0)	(\$189.2)	(\$161.1)	(\$128.6)	(\$91.1)	(\$48.4)	\$0.0	

2022 Adjusted Charge Per Sq.M **\$2.23**

Allocation of Capital Program

Residential Sector	74.1%
Non-Residential Sector	25.9%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.6

Storm/Watercourse

Storm/Watercourse

The benefits of the Storm/Watercourse service are deemed to relate to the suburban areas for the purpose of calculating the development charge.

Table C.6-1 2022 – 2036 Development-Related Capital Program and Calculation of Unadjusted Development Charges

The development-related capital program for Storm/Watercourse includes \$20.28 million of capital works, including \$5.88 million for the reconstruction of the Schneider Creek watercourse.

The benefit to existing share for Hidden Valley Creek improvements and Laurel Creek Watercourse is 90 per cent, given that most of the benefitting lands associated with these projects as already developed. Other projects such as Miscellaneous Creek Rehabilitation Project have 0% BTE and Schneider Creek Watercourse (New) have benefit to existing shares of 27% for the cost in 2023 and 100% related to the costs in 2024. The remaining amount of \$5.51 million is deemed to be development charge eligible.

The remainder of the benefit to existing share is attributed to Schneider Creek Watercourse Phase 3 rehabilitation project in the amount of \$2.94 million (based on the Ontario Municipal Board order no. 2483, pp.25, 35).

The 2022-2036 development-related net capital cost of \$5.51 million relating to all projects except for the Schneider Creek project is allocated 74 per cent against residential development and 26 per cent against non-residential development. The development-related net capital cost of the Schneider Creek project has been allocated 60 per cent residential and 40 per cent non-residential development in accordance with the above noted Ontario Municipal Board ruling.

The resulting unadjusted development charge rates are \$117.06 per capita for residential development and \$3.23 per m² for non-residential development.

Table C.6-2 Cash Flow Analysis

A \$4.62 million surplus in the Storm/Watercourse development charges reserve fund is available to partially fund the development-related capital program. After cash flow, the Storm/Watercourse residential charge decreases to \$52.96 per capita and the non-residential charge decreases to \$1.51 per m².

The following table summarizes the calculation of the Storm/Watercourse development charge:

STORM/WATERCOURSE SUMMARY					
2022 - 2036		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$20,282,868	\$8,449,491	\$117.06	\$3.23	\$52.96	\$1.51

APPENDIX C.6

TABLE C.6-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
STORM/WATERCOURSE

Project Sheet #	Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
						BTE (%)	Benefit to Existing		Committed DC Reserves ¹	2022-2036	Other Dev. Related ²
	6.0 STORM/WATERCOURSE										
	6.1 Storm/Watercourse Projects										
SW3	6.1.1 Hidden Valley Creek Improvements	2024	\$ 243,375	\$ -	\$ 243,375	90%	\$ 219,038	\$ 24,338	\$ -	\$ 24,338	\$ -
	6.1.2 Hidden Valley Creek Improvements	2027	\$ 193,875	\$ -	\$ 193,875	90%	\$ 174,488	\$ 19,388	\$ -	\$ 19,388	\$ -
	6.1.3 Hidden Valley Creek Improvements	2028	\$ 5,145,250	\$ -	\$ 5,145,250	90%	\$ 4,630,725	\$ 514,525	\$ -	\$ 514,525	\$ -
SW6	6.1.4 Laurel Creek Watercourse	2023	\$ 366,025	\$ -	\$ 366,025	90%	\$ 329,423	\$ 36,603	\$ -	\$ 36,603	\$ -
	6.1.5 Laurel Creek Watercourse	2025	\$ 366,025	\$ -	\$ 366,025	90%	\$ 329,423	\$ 36,603	\$ -	\$ 36,603	\$ -
	6.1.6 Laurel Creek Watercourse	2026	\$ 386,100	\$ -	\$ 386,100	90%	\$ 347,490	\$ 38,610	\$ -	\$ 38,610	\$ -
SW8	6.1.7 Miscellaneous Creek Rehabilitation Project	Various	\$ 1,940,400	\$ -	\$ 1,940,400	0%	\$ -	\$ 1,940,400	\$ -	\$ 1,940,400	\$ -
	6.1.8 Schneider Creek Watercourse (New)	2023	\$ 3,998,274	\$ -	\$ 3,998,274	27%	\$ 1,098,748	\$ 2,899,526	\$ -	\$ 2,899,526	\$ -
	6.1.9 Schneider Creek Watercourse (New)	2024	\$ 1,764,545	\$ -	\$ 1,764,545	100%	\$ 1,764,545	\$ -	\$ -	\$ -	\$ -
	Subtotal Storm/Watercourse Projects		\$ 14,403,868	\$ -	\$ 14,403,868		\$ 8,893,878	\$ 5,509,991	\$ -	\$ 5,509,991	\$ -
	6.2 Schneider Creek Watercourse										
SW9	6.2.1 Schneider Creek Watercourse - Phase 3		\$ 153,000	\$ -	\$ 153,000	50%					
	Residential (30%)	2022				30%	\$ 45,900	\$ 45,900	\$ -	\$ 45,900	\$ -
	Non-Residential (20%)	2022				20%	\$ 30,600	\$ 30,600	\$ -	\$ 30,600	\$ -
	Schneider Creek Watercourse - Phase 3		\$ 153,000	\$ -	\$ 153,000	50%					
	Residential (30%)	2023				30%	\$ 45,900	\$ 45,900	\$ -	\$ 45,900	\$ -
	Non-Residential (20%)	2023				20%	\$ 30,600	\$ 30,600	\$ -	\$ 30,600	\$ -
	Schneider Creek Watercourse - Phase 3		\$ 5,573,000	\$ -	\$ 5,573,000	50%					
	Residential (30%)	2025				30%	\$ 1,671,900	\$ 1,671,900	\$ -	\$ 1,671,900	\$ -
	Non-Residential (20%)	2025				20%	\$ 1,114,600	\$ 1,114,600	\$ -	\$ 1,114,600	\$ -
	Subtotal Schneider Creek Watercourse		\$ 5,879,000	\$ -	\$ 5,879,000		\$ 2,939,500	\$ 2,939,500		\$ 2,939,500	\$ -
	TOTAL STORM/WATERCOURSE		\$ 20,282,868	\$ -	\$ 20,282,868		\$ 11,833,378	\$ 8,449,491	\$ -	\$ 8,449,491	\$ -

1. Represents development charge funds that have been committed to fund specific projects and are not accounted for in Storm/Watercourse development charge reserve fund.

2. Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	74%	\$4,084,335
Residential Share of Schneider Creek Watercourse	60%	\$1,763,700
2022-2036 Growth in Population in New Units (Suburban Areas)		49,957
Unadjusted Development Charge Per Capita		\$117.06
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	26%	\$1,425,656
Non-Residential Share of Schneider Creek Watercourse	40%	\$1,175,800
2022-2036 Growth in Square Metres (Suburban Areas)		805,552
Unadjusted Development Charge Per Square Metre		\$3.23

APPENDIX C.6

TABLE C.6-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM/WATERCOURSE
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

STORM/WATERCOURSE	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	\$3,195.8	\$3,368.0	\$1,263.5	\$1,390.9	(\$313.4)	(\$261.5)	(\$193.3)	(\$547.8)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Storm/Watercourse: Non Inflated	\$141.8	\$2,318.2	\$113.9	\$1,794.9	\$124.5	\$110.3	\$477.3	\$95.9
- Storm/Watercourse: Inflated	\$141.8	\$2,364.6	\$118.5	\$1,904.8	\$134.8	\$121.7	\$537.5	\$110.1
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3797	3735	3635	3536	3536	3469	3402	3335
REVENUE								
- DC Receipts: Inflated	\$201.1	\$201.74	\$200.28	\$198.73	\$202.70	\$202.84	\$202.91	\$202.90
INTEREST								
- Interest on Opening Balance	\$111.9	\$117.9	\$44.2	\$48.7	(\$17.2)	(\$14.4)	(\$10.6)	(\$30.1)
- Interest on In-year Transactions	\$1.0	(\$59.5)	\$1.4	(\$46.9)	\$1.2	\$1.4	(\$9.2)	\$1.6
TOTAL REVENUE	\$314.0	\$260.1	\$245.9	\$200.5	\$186.7	\$189.9	\$183.1	\$174.4
CLOSING CASH BALANCE	\$3,368.0	\$1,263.5	\$1,390.9	(\$313.4)	(\$261.5)	(\$193.3)	(\$547.8)	(\$483.5)

APPENDIX C.6

TABLE C.6-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM/WATERCOURSE
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

STORM/WATERCOURSE	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$483.5)	(\$418.1)	(\$347.2)	(\$275.8)	(\$204.1)	(\$132.3)	(\$60.5)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Storm/Watercourse: Non Inflated	\$95.9	\$95.9	\$95.9	\$95.9	\$95.9	\$95.9	\$95.9	\$5,848.0
- Storm/Watercourse: Inflated	\$112.3	\$114.6	\$116.9	\$119.2	\$121.6	\$124.0	\$126.5	\$6,269.1
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	3268	3268	3188	3107	3026	2945	2708	49,957
REVENUE								
- DC Receipts: Inflated	\$202.81	\$206.86	\$205.78	\$204.58	\$203.24	\$201.77	\$189.25	\$2,636.5
INTEREST								
- Interest on Opening Balance	(\$26.6)	(\$23.0)	(\$19.1)	(\$15.2)	(\$11.2)	(\$7.3)	(\$3.3)	\$144.6
- Interest on In-year Transactions	\$1.6	\$1.6	\$1.6	\$1.5	\$1.4	\$1.4	\$1.1	(\$98.8)
TOTAL REVENUE	\$177.8	\$185.5	\$188.2	\$190.9	\$193.4	\$195.9	\$187.0	\$3,073.3
CLOSING CASH BALANCE	(\$418.1)	(\$347.2)	(\$275.8)	(\$204.1)	(\$132.3)	(\$60.5)	\$0.0	

2022 Adjusted Charge Per Capita

\$52.96

Allocation of Capital Program

Residential Sector	69.2%
Non-Residential Sector	30.8%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.6

TABLE C.6-2

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM/WATERCOURSE
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

STORM/WATERCOURSE	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	\$1,421.6	\$1,481.2	\$748.0	\$812.3	(\$337.7)	(\$318.4)	(\$290.5)	(\$406.7)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Storm/Watercourse: Non Inflated	\$64.1	\$823.8	\$39.8	\$1,157.5	\$43.5	\$38.5	\$166.6	\$33.5
- Storm/Watercourse: Inflated	\$64.1	\$840.2	\$41.4	\$1,228.4	\$47.0	\$42.5	\$187.6	\$38.4
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	48,695	49,411	50,082	50,726	51,408	52,174	52,854	53,551
REVENUE								
- DC Receipts: Inflated	\$73.69	\$76.27	\$78.85	\$81.46	\$84.21	\$87.18	\$90.08	\$93.09
INTEREST								
- Interest on Opening Balance	\$49.8	\$51.8	\$26.2	\$28.4	(\$18.6)	(\$17.5)	(\$16.0)	(\$22.4)
- Interest on In-year Transactions	\$0.2	(\$21.0)	\$0.7	(\$31.5)	\$0.7	\$0.8	(\$2.7)	\$1.0
TOTAL REVENUE	\$123.6	\$107.1	\$105.7	\$78.4	\$66.3	\$70.4	\$71.4	\$71.7
CLOSING CASH BALANCE	\$1,481.2	\$748.0	\$812.3	(\$337.7)	(\$318.4)	(\$290.5)	(\$406.7)	(\$373.5)

**APPENDIX C.6
TABLE C.6-2**

**CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
STORM/WATERCOURSE
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)**

STORM/WATERCOURSE	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$373.5)	(\$335.8)	(\$293.6)	(\$246.4)	(\$193.9)	(\$135.5)	(\$71.1)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Storm/Watercourse: Non Inflated	\$33.5	\$33.5	\$33.5	\$33.5	\$33.5	\$33.5	\$33.5	\$2,601.5
- Storm/Watercourse: Inflated	\$39.2	\$40.0	\$40.8	\$41.6	\$42.4	\$43.3	\$44.2	\$2,781.2
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA	54369	55077	55894	56615	57458	58216	59022	805,552
REVENUE								
- DC Receipts: Inflated	\$96.40	\$99.61	\$103.11	\$106.53	\$110.28	\$113.97	\$117.86	\$1,412.6
INTEREST								
- Interest on Opening Balance	(\$20.5)	(\$18.5)	(\$16.1)	(\$13.6)	(\$10.7)	(\$7.5)	(\$3.9)	(\$9.0)
- Interest on In-year Transactions	\$1.0	\$1.0	\$1.1	\$1.1	\$1.2	\$1.2	\$1.3	(\$44.0)
TOTAL REVENUE	\$76.9	\$82.2	\$88.1	\$94.1	\$100.8	\$107.8	\$115.2	\$1,359.6
CLOSING CASH BALANCE	(\$335.8)	(\$293.6)	(\$246.4)	(\$193.9)	(\$135.5)	(\$71.1)	(\$0.0)	

2022 Adjusted Charge Per Sq.M

\$1.51

Allocation of Capital Program

Residential Sector	69.2%
Non-Residential Sector	30.8%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix C.7

Intensification Allowance

Intensification Allowance

The City has for many years levied a development charge in the Central Neighbourhoods to pay for the capital cost of additional engineering service capacity and upgrades for development and redevelopment. In keeping with past practice, the benefits of this “Intensification Allowance” are deemed to relate to the Central Neighbourhoods for the purpose of calculating the development charge.

It is noted that the Ontario Municipal Board ruled in 2006 that “the City’s approach [to the Intensification Allowance] is fair, reasonable and makes good sense” (Decision/Order No. 2483, p.32).

The following Intensification Allowance Guidelines are based on a review of the application of the funds and indicates that the development charge in Central Neighbourhoods is intended to pay for the capital cost of additional engineering service capacity and upgrades for unanticipated development and redevelopment within the Central Neighbourhoods.

- i. The Intensification Allowance will fund local (not trunk) sanitary and storm sewers and watermains.
- ii. The Intensification Allowance will fully fund “infrastructure extensions” which means pipe extensions where no pipe currently exists.
- iii. The Intensification Allowance will fund “capacity upgrades” which means the replacement of existing pipes with new larger pipes to accommodate increased flows from unanticipated development and redevelopment on the basis that the lifecycle of the pipes averages 80 years:

if the age of the existing pipe(s) is 25 years or less, the Intensification Allowance will fully fund the pipe(s) replacement project.

if the age of the existing pipe(s) is between 26 – 54 years, the pipe(s) replacement project will be funded on a 50/50 basis between the Intensification Allowance account and the respective Utility (Sanitary, Water, Stormwater).

if the age of the existing pipe(s) is greater than 55 years, the respective Utility (Sanitary, Water, Stormwater) will fully fund the pipe(s) replacement project.

- iv. The Intensification Allowance will continue to fund Accelerated Infrastructure Replacement Program (AIRP) projects within the Central Neighbourhoods.

Table C.7-1 2022 – 2036 Development-Related Capital Program and Calculation of Unadjusted Development Charges

Table C.7-1 provides for a capital expenditure of \$14.50 million over the period 2022 to 2036. The total is composed of \$4.50 million to account for the Intensification Allowance and \$10.00 million has been included for active transportation improvements (cycling infrastructure). The benefit to existing share for both the Intensification Allowance and the active transportation improvements equals one third or \$4.83 million. The remaining \$9.67 million is attributable to development in the Central Neighbourhoods from 2022 to 2036 and is carried forward to the development charge calculation.

Of the \$9.67 million in development-related net capital costs, 79 per cent is allocated against residential development, or \$7.60 million, and 21 per cent is allocated against non-residential development, or \$2.07 million, based on the ratio of anticipated growth in population in new units to employment growth in new non-residential floorspace in the Central Neighbourhoods to 2036. This yields unadjusted development charges of \$307.97 per capita and \$7.38 per m² respectively.

Table C.7-2 Cash Flow Analysis

A reserve fund deficit in the Intensification Allowance development charges reserve fund of \$945,355 is eligible for development charge recovery and is treated as committed excess capacity under the DCA. After cash flow, the Intensification Allowance residential charge is increased to \$350.37 per capita and the non-residential charge is increased to \$8.44 per m².

The following table summarizes the calculation of the Intensification Allowance development charge:

INTENSIFICATION ALLOWANCE SUMMARY					
2022 - 2036		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$14,500,000	\$9,666,667	\$307.97	\$7.38	\$350.37	\$8.44

APPENDIX C.7

TABLE C.7-1

CITY OF KITCHENER
DEVELOPMENT-RELATED CAPITAL PROGRAM
INTENSIFICATION ALLOWANCE

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares		Committed DC Reserves	2022-2036	Other Dev. Related*
7.0 INTENSIFICATION ALLOWANCE										
7.1 Intensification Allowance										
7.1.1 Intensification Allowance	Various	\$ 4,500,000	\$ -	\$ 4,500,000	33%	\$ 1,500,000	\$ 3,000,000	\$ -	\$ 3,000,000	\$ -
7.2 Active Transportation Improvements										
7.2.1 Cycling Infrastructure	Various	\$ 10,000,000	\$ -	\$ 10,000,000	33%	\$ 3,333,333	\$ 6,666,667	\$ -	\$ 6,666,667	\$ -
TOTAL INTENSIFICATION ALLOWANCE		\$ 14,500,000	\$ -	\$ 14,500,000		\$ 4,833,333	\$ 9,666,667	\$ -	\$ 9,666,667	\$ -

*Development related costs to be considered for funding from other tools and/or future DC Studies.

Residential Development Charge Calculation		
Residential Share of 2022 - 2036 DC Eligible Costs	79%	\$7,595,303
2022-2036 Growth in Population in New Units (Central Neighbourhoods)		24,662
Unadjusted Development Charge Per Capita		\$307.97
Non-Residential Development Charge Calculation		
Non-Residential Share of 2022 - 2036 DC Eligible Costs	21%	\$2,071,364
2022-2036 Growth in Square Metres (Central Neighbourhoods)		280,517
Unadjusted Development Charge Per Square Metre		\$7.38

APPENDIX C.7
TABLE C.7-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
INTENSIFICATION ALLOWANCE
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

INTENSIFICATION ALLOWANCE	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$742.8)	(\$773.6)	(\$791.9)	(\$801.8)	(\$802.6)	(\$802.7)	(\$791.3)	(\$767.4)
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Intensification Allowance: Non Inflated	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4
- Intensification Allowance: Inflated	\$506.4	\$516.5	\$526.8	\$537.3	\$548.1	\$559.1	\$570.2	\$581.6
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	1473	1512	1536	1559	1559	1586	1613	1640
REVENUE								
- DC Receipts: Inflated	\$516.2	\$540.38	\$559.88	\$579.83	\$591.42	\$613.63	\$636.50	\$660.03
INTEREST								
- Interest on Opening Balance	(\$40.9)	(\$42.5)	(\$43.6)	(\$44.1)	(\$44.1)	(\$44.1)	(\$43.5)	(\$42.2)
- Interest on In-year Transactions	\$0.2	\$0.4	\$0.6	\$0.7	\$0.8	\$1.0	\$1.2	\$1.4
TOTAL REVENUE	\$475.5	\$498.2	\$516.9	\$536.5	\$548.0	\$570.4	\$594.1	\$619.2
CLOSING CASH BALANCE	(\$773.6)	(\$791.9)	(\$801.8)	(\$802.6)	(\$802.7)	(\$791.3)	(\$767.4)	(\$729.9)

APPENDIX C.7
TABLE C.7-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
INTENSIFICATION ALLOWANCE
RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

INTENSIFICATION ALLOWANCE	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$729.9)	(\$677.4)	(\$620.3)	(\$544.6)	(\$448.6)	(\$330.8)	(\$189.3)	
2022 - 2036 RESIDENTIAL FUNDING REQUIREMENTS								
- Intensification Allowance: Non Inflated	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$506.4	\$7,595.3
- Intensification Allowance: Inflated	\$593.3	\$605.1	\$617.2	\$629.6	\$642.2	\$655.0	\$668.1	\$8,756.6
NEW RESIDENTIAL DEVELOPMENT								
- Population Growth in New Units	1667	1667	1698	1729	1760	1792	1870	24,662
REVENUE								
- DC Receipts: Inflated	\$684.25	\$697.93	\$725.20	\$753.29	\$782.20	\$811.98	\$864.44	\$8,340.7
INTEREST								
- Interest on Opening Balance	(\$40.1)	(\$37.3)	(\$34.1)	(\$30.0)	(\$24.7)	(\$18.2)	(\$10.4)	(\$539.8)
- Interest on In-year Transactions	\$1.6	\$1.6	\$1.9	\$2.2	\$2.5	\$2.7	\$3.4	\$22.1
TOTAL REVENUE	\$645.7	\$662.3	\$693.0	\$725.5	\$760.0	\$796.5	\$857.5	\$9,499.4
CLOSING CASH BALANCE	(\$677.4)	(\$620.3)	(\$544.6)	(\$448.6)	(\$330.8)	(\$189.3)	(\$0.0)	

2022 Adjusted Charge Per Capita **\$350.37**

Allocation of Capital Program

Residential Sector	78.6%
Non-Residential Sector	21.4%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

APPENDIX C.7

TABLE C.7-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
INTENSIFICATION ALLOWANCE
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

INTENSIFICATION ALLOWANCE	2022	2023	2024	2025	2026	2027	2028	2029
OPENING CASH BALANCE	(\$202.6)	(\$216.8)	(\$228.8)	(\$238.2)	(\$244.9)	(\$248.2)	(\$248.0)	(\$243.8)
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Intensification Allowance: Non Inflated	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1
- Intensification Allowance: Inflated	\$138.1	\$140.9	\$143.7	\$146.5	\$149.5	\$152.5	\$155.5	\$158.6
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA in Central Neighbourhoods	16018	16354	16728	17077	17456	17836	18216	18609
REVENUE								
- DC Receipts: Inflated	\$135.1	\$140.72	\$146.82	\$152.88	\$159.40	\$166.12	\$173.06	\$180.32
INTEREST								
- Interest on Opening Balance	(\$11.1)	(\$11.9)	(\$12.6)	(\$13.1)	(\$13.5)	(\$13.7)	(\$13.6)	(\$13.4)
- Interest on In-year Transactions	(\$0.1)	(\$0.0)	\$0.1	\$0.1	\$0.2	\$0.2	\$0.3	\$0.4
TOTAL REVENUE	\$123.9	\$128.8	\$134.3	\$139.9	\$146.1	\$152.7	\$159.7	\$167.3
CLOSING CASH BALANCE	(\$216.8)	(\$228.8)	(\$238.2)	(\$244.9)	(\$248.2)	(\$248.0)	(\$243.8)	(\$235.1)

APPENDIX C.7
TABLE C.7-2

CITY OF KITCHENER
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
INTENSIFICATION ALLOWANCE
NON-RESIDENTIAL DEVELOPMENT CHARGE
(in \$000)

INTENSIFICATION ALLOWANCE	2030	2031	2032	2033	2034	2035	2036	TOTAL
OPENING CASH BALANCE	(\$235.1)	(\$221.2)	(\$201.7)	(\$176.2)	(\$144.0)	(\$104.4)	(\$56.6)	
2022 - 2036 NON-RESIDENTIAL FUNDING REQUIREMENTS								
- Intensification Allowance: Non Inflated	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$138.1	\$2,071.4
- Intensification Allowance: Inflated	\$161.8	\$165.0	\$168.3	\$171.7	\$175.1	\$178.6	\$182.2	\$2,388.1
NEW NON-RESIDENTIAL DEVELOPMENT								
- Non-Residential GFA in Central Neighbourhoods	19041	19448	19871	20291	20742	21192	21638	280,517
REVENUE								
- DC Receipts: Inflated	\$188.20	\$196.07	\$204.34	\$212.83	\$221.91	\$231.26	\$240.85	\$2,749.9
INTEREST								
- Interest on Opening Balance	(\$12.9)	(\$12.2)	(\$11.1)	(\$9.7)	(\$7.9)	(\$5.7)	(\$3.1)	(\$165.6)
- Interest on In-year Transactions	\$0.5	\$0.5	\$0.6	\$0.7	\$0.8	\$0.9	\$1.0	\$6.3
TOTAL REVENUE	\$175.7	\$184.4	\$193.9	\$203.9	\$214.8	\$226.4	\$238.8	\$2,590.6
CLOSING CASH BALANCE	(\$221.2)	(\$201.7)	(\$176.2)	(\$144.0)	(\$104.4)	(\$56.6)	(\$0.0)	

2022 Adjusted Charge Per Sq.M

\$8.44

Allocation of Capital Program

Residential Sector	78.6%
Non-Residential Sector	21.4%

Rates for 2022

Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Appendix D

Detailed Engineering Project Sheets

Detailed Engineering Project Sheets

The following appendix contains detailed engineering project sheets related to the capital program presented in Appendix C, excluding C.2 Services Related to a Highway: Public Works. The following are provided for information purposes as the costs contained are based on estimates in 2019 dollars. For the 2022 Study, the cost estimates have been indexed to 2022 by ten per cent. As the design and construction of various projects proceed more refined cost estimates may become available. Future Development Charge Studies will reflect the best available information.

Kitchener 2019 DC Bylaw - Background Study
Project List



Updated January 2022

Item No.	Description	% DC Funding	EA Req'd?	Funding Contributions				DC Project #	Length of Infrastructure	Project Location / Limits	Part A EA / Pre Design	Funding Year	Part B Design & Tender	Funding Year	Part C Construction	Funding Year	Total Project Cost (2019 \$\$)
1	Biehn Drive and Sanitary Trunk Extension EA	100%	Y	Y	Y	Y	N	SA1	660 m	Current Terminus to Robert Ferrie Drive	\$770,000	2020	\$699,000	2021	\$7,421,000	2022	\$8,890,000
2	Dodge Drive Sanitary Sewer & Road Restoration	100%	N	Y	Y	N	N	--	1,200 m	Generally between eastern and western intersections with New Dundee Road	\$0		\$326,000	2027	\$5,928,000	2028	\$6,254,000
3	Doon South SPS - Forcemain	100%	Y	N	Y	N	N	--	2,500 m	From Doon South Pumping Station to Doon South Drive @ Doon Village Road	\$104,000	2026	\$174,000	2027	\$3,706,000	2028	\$3,984,000
4	Borden Greenway Trunk Sewer	70%	N	N	Y	N	N	SA2	46 m	From: South of Ottawa Street To: North of Ottawa Street	\$0		\$46,000	2025	\$845,000	2025	\$891,000
5	Huron Road Improvements & Watermain Extension	100%	N	Y	N	Y	N	R4 W3	2,225 m	From: Fischer-Hallman Road To: Trussler Road	\$0		\$584,000	2025	\$10,614,000	2026	\$11,198,000
6	Strasburg Road South Road & Watermain Extension	100%	N	Y	N	Y	N	R7 W4	2,520 m	Future Strasburg Road Terminus to New Dundee Road with Roundabout	\$0		\$761,000	2023	\$14,831,000	2024 / 2025	\$15,592,000
7	Middle Strasburg Creek Sanitary Sewer Trunk	100%	N	N	Y	N	N	SA8	1,850 m	Brigadoon Subdivision to Bleams Road	\$0		\$0		\$14,200,000	2022 - 2024	\$14,200,000
8	Amand Drive - Road & Watermain Extension	100%	Y	Y	N	Y	N	R1 W1	670 m	Extension north from existing terminus	\$229,000	2024	\$183,000	2025	\$4,837,000	2026	\$5,249,000
9	Blair Creek Drive - Road & Watermain Extension	100%	Y	Y	N	Y	N	--	700 m	From Future Strasburg Road to Reidel Drive	\$205,000	2022	\$164,000	2025	\$4,346,000	2026	\$4,715,000
10	Upper Hidden Valley SPS & Forcemain	100%	Y	N	Y	N	N	SA14	--	Hidden Valley Area (TBA)	\$454,000	2020	\$363,000	2026	\$9,607,000	2027	\$10,424,000
11	Falconridge SPS Upgrades	100%	N	N	Y	N	N	SA5	--	Falconridge Drive (Kiwanis Park Neighbourhood)	\$0		\$56,000	2024	\$1,023,000	2025	\$1,079,000
12	Otterbein (Forwell) SPS Upgrades	100%	N	N	Y	N	N	SA16	--	Misty Street / Otterbein	\$0		\$213,000	2024	\$3,857,000	2025	\$4,070,000
13	Hidden Valley Creek Improvements	10%	Y	N	N	N	Y	SW3	510 m	Wabanaki Drive and Hidden Valley Creek	\$221,000	2020	\$176,000	2027	\$4,678,000	2028	\$5,075,000
14	Laurel Creek Watercourse	10%	Y	N	N	N	Y	SW6	1,000 m	Lower Laurel Creek from Bridge Street to Kitchener municipal boundary - Middle & Upper reaches	\$332,750	2026	\$332,750	2027	\$351,000	2028	\$1,016,500
15	Schneider Creek Watercourse	50%	N	N	N	N	Y	SW9	Reach 2 = 170m	Manitou Drive to Hayward Avenue; Homer Watson to Grand River	\$0		\$306,000	2019 / 2020	\$5,573,000	2021	\$5,879,000
16	Highway 7 Extension - Secondary Watermain	0%	Y	N	N	Y	N	W2	1,200 m	Shirley Ave to Bridge Street East (location to be determined)	\$273,000		\$234,000	2019 / 2020	\$4,134,000	2021	\$4,641,000

Development Charges Project Sheet

Project Name:	Biehn Drive and Sanitary Trunk Extension EA	Project #	SA1
Project Scope:	Road Extension, Trunk Sanitary Sewer Extension	Project Type:	Sanitary
Location	Current Terminus to Robert Ferrie Drive		
Length of Infrastructure	660 m	Date Updated:	Jan 2022

PROJECT

DESCRIPTION

Class Environmental Assessment, Preliminary Design, Detailed Design and Construction for approximately 660m of new roadway and trunk sanitary sewer. Works include storm sewers and extension of 300mm watermain along Biehn Drive from its current terminus to the proposed Robert Ferrie Drive.

Note: The EA and Design costs include a total of \$600,000 for potential environmental investigations and monitoring.

No land costs have been included in the current estimate. Land Acquisition will be evaluated after the EA is completed.



ESTIMATE

				Engineering	Construction	Total	
<u>Part A - Class EA / Preliminary Design</u>							
	Road			\$185,000	\$300,000	\$485,000	
	Sanitary			\$24,000	\$0	\$24,000	
	Water			\$41,000	\$0	\$41,000	
	Subtotal			\$250,000	\$300,000	\$550,000	
	Contingency	40%		\$100,000	\$120,000	\$220,000	
	Total			\$350,000	\$420,000	\$770,000	
<u>Part B - Design & Tendering</u>							
	Road			\$148,000	\$300,000	\$448,000	
	Sanitary			\$19,000	\$0	\$19,000	
	Water			\$32,000	\$0	\$32,000	
	Subtotal			\$199,000	\$300,000	\$499,000	
	Contingency	40%		\$80,000	\$120,000	\$200,000	
	Total			\$279,000	\$420,000	\$699,000	
<u>Part C - Construction</u>							
	Road			\$223,000	\$3,710,000	\$3,933,000	
	Sanitary			\$29,000	\$480,000	\$509,000	
	Water			\$49,000	\$810,000	\$859,000	
	Subtotal			\$301,000	\$5,000,000	\$5,301,000	
	Contingency	40%		\$120,000	\$2,000,000	\$2,120,000	
	Total			\$421,000	\$7,000,000	\$7,421,000	
Total Project Cost				\$1,050,000	\$7,840,000	\$8,890,000	
Attributable to New Growth				100%	\$1,050,000	\$7,840,000	\$8,890,000
DC Funding	Road			\$779,000	\$6,034,000	\$6,813,000	
	Sanitary			\$101,000	\$672,000	\$773,000	
	Water			\$171,000	\$1,134,000	\$1,305,000	
				\$1,051,000	\$7,840,000	\$8,891,000	

Notes:

1. All costs are in \$2022

Development Charges Project Sheet

Project Name: Dodge Drive Sanitary Sewer & Road Restoration	Project # --
Project Scope: New Sanitary Line	Project Type Sanitary
Location Generally between eastern and western intersections with New Dundee Road	
Length of Infrastructure 1,200 m	Date Updated: April 2019

PROJECT

DESCRIPTION

Preliminary Design, Detailed Design and Construction for approximately 1200m of new roadway and 600mm diameter trunk sanitary sewer.

Sewer costs updated per MTE estimate (April 17, 2019), to include for deep, reinforced concrete pipe and trenchless installation.

The existing roadway will be restored to a rural cross-section with roadside ditches (no curb and gutter or storm sewers). A Heritage study may be required to finalize road details.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency				25%	\$0	\$0
Total				\$0	\$0	\$0
Part B - Design & Tendering						
Road				\$84,000		\$84,000
Sanitary				\$177,000		\$177,000
Water				\$0		\$0
Subtotal				\$261,000	\$0	\$261,000
Contingency				25%	\$65,000	\$65,000
Total				\$326,000	\$0	\$326,000
Part C - Construction						
Road				\$125,000	\$1,390,000	\$1,515,000
Sanitary				\$267,000	\$2,960,000	\$3,227,000
Water				\$0	\$0	\$0
Subtotal				\$392,000	\$4,350,000	\$4,742,000
Contingency				25%	\$98,000	\$1,186,000
Total				\$490,000	\$5,438,000	\$5,928,000
Total Project Cost				\$816,000	\$5,438,000	\$6,254,000
Attributable to New Growth				100%	\$816,000	\$5,438,000
						\$6,254,000
DC Funding						
Road				\$261,000	\$1,738,000	\$1,999,000
Sanitary				\$555,000	\$3,700,000	\$4,255,000
Water				\$0	\$0	\$0
				\$816,000	\$5,438,000	\$6,254,000

Notes:

1. All costs are in \$2019

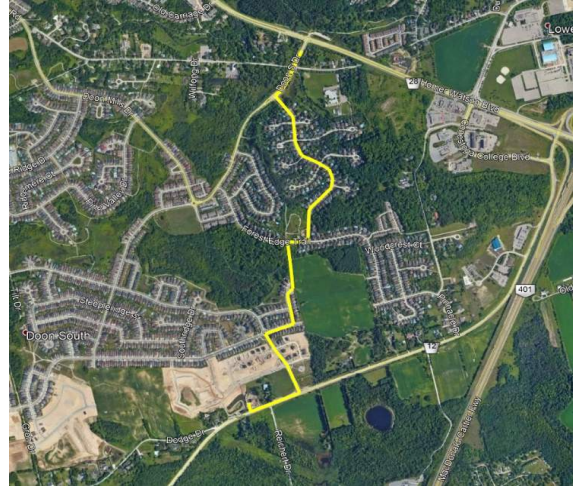
Development Charges Project Sheet

Project Name: Doon South SPS - Forcemain	Project # --
Project Scope: New Sanitary Force mains	Project Type Sanitary
Location From Doon South Pumping Station to Doon South Drive @ Doon Village Road	
Length of Infrastructure 2,500 m	Date Updated: Jan 2019

PROJECT

DESCRIPTION

Class Environmental Assessment (Update Addendum to Schedule 'B' study), Preliminary Design, Detailed Design and Construction for approximately 2200m of 300mm diameter sanitary force main from the Doon South Pumping Station to the existing 600mm diameter gravity sewer that feeds into the Homer Watson pumping station. Includes restoration of all disturbed areas to existing conditions.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$22,000	\$0	\$22,000
Sanitary				\$61,000	\$0	\$61,000
Water				\$0	\$0	\$0
Subtotal				\$83,000	\$0	\$83,000
Contingency		25%		\$21,000	\$0	\$21,000
Total				\$104,000	\$0	\$104,000
Part B - Design & Tendering						
Road				\$37,000		\$37,000
Sanitary				\$102,000		\$102,000
Water				\$0		\$0
Subtotal				\$139,000	\$0	\$139,000
Contingency		25%		\$35,000	\$0	\$35,000
Total				\$174,000	\$0	\$174,000
Part C - Construction						
Road				\$51,000	\$730,000	\$781,000
Sanitary				\$143,000	\$2,040,000	\$2,183,000
Water				\$0	\$0	\$0
Subtotal				\$194,000	\$2,770,000	\$2,964,000
Contingency		25%		\$49,000	\$693,000	\$742,000
Total				\$243,000	\$3,463,000	\$3,706,000
Total Project Cost				\$521,000	\$3,463,000	\$3,984,000
Attributable to New Growth			100%	\$521,000	\$3,463,000	\$3,984,000
DC Funding	Road			\$138,000	\$913,000	\$1,051,000
	Sanitary			\$383,000	\$2,550,000	\$2,933,000
	Water			\$0	\$0	\$0
				\$521,000	\$3,463,000	\$3,984,000

Notes:

1. All costs are in \$2019

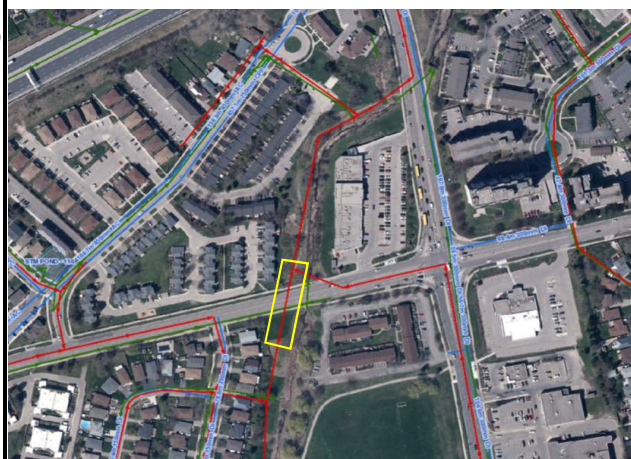
Development Charges Project Sheet

Project Name:	Borden Greenway Trunk Sewer	Project #	SA2
Project Scope:	Trunk Sanitary Sewer Replacement	Project Type	Sanitary
Location	From: South of Ottawa Street To: North of Ottawa Street		
Length of Infrastructure	46 m	Date Updated:	Jan 2019

PROJECT

DESCRIPTION

The Borden Greenway Trunk Sanitary Sewer (600mm diameter) for a short section from 46 metres south of Ottawa Street South to a manhole just north of Ottawa Street South requires a upgrade in order to accommodate the ultimate flows from areas west of Westmount Road. An Environmental Assessment Study should not be required (i.e Schedule A) to determine the preferred method of achieving these upgrades.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency	25%			\$0	\$0	\$0
Total				\$0	\$0	\$0
Part B - Design & Tendering						
Road				\$0		\$0
Sanitary				\$37,000		\$37,000
Water				\$0		\$0
Subtotal				\$37,000	\$0	\$37,000
Contingency	25%			\$9,000	\$0	\$9,000
Total				\$46,000	\$0	\$46,000
Part C - Construction						
Road				\$0	\$0	\$0
Sanitary				\$56,000	\$620,000	\$676,000
Water				\$0	\$0	\$0
Subtotal				\$56,000	\$620,000	\$676,000
Contingency	25%			\$14,000	\$155,000	\$169,000
Total				\$70,000	\$775,000	\$845,000
Total Project Cost				\$116,000	\$775,000	\$891,000
Attributable to New Growth				70%		
				\$81,200	\$542,500	\$623,700
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$81,200	\$542,500	\$623,700
Water				\$0	\$0	\$0
				\$81,200	\$542,500	\$623,700

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Huron Road Improvements & Watermain Extension	Project # R4 W3
Project Scope: Road Improvements (Urbanization) & Watermain Extension	Project Type Road
Location From: Fischer-Hallman Road To: Trussler Road	
Length of Infrastructure 2,225 m	Date Updated: Jan 2019

PROJECT

DESCRIPTION

Huron Road Improvements from Strasburg road to Fischer Hallman were completed in 2012. Phase 2 of Huron Road Improvements (urbanization) will be completed from Fischer Hallman to Trussler Road. (approx. 2,225m). and will include new curb & gutter and new storm sewers. As no road widening is anticipated, a Class EA should not be required.

Estimated need for new 300mm watermain extension along Huron Road - From the current watermain terminus approximately 205m east of Amand Drive to Amand Drive.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency	25%			\$0	\$0	\$0
Total				\$0	\$0	\$0
Part B - Design & Tendering						
Road				\$453,000		\$453,000
Sanitary				\$0		\$0
Water				\$14,000		\$14,000
Subtotal				\$467,000	\$0	\$467,000
Contingency	25%			\$117,000	\$0	\$117,000
Total				\$584,000	\$0	\$584,000
Part C - Construction						
Road				\$680,000	\$7,550,000	\$8,230,000
Sanitary				\$0	\$0	\$0
Water				\$21,000	\$240,000	\$261,000
Subtotal				\$701,000	\$7,790,000	\$8,491,000
Contingency	25%			\$175,000	\$1,948,000	\$2,123,000
Total				\$876,000	\$9,738,000	\$10,614,000
Total Project Cost				\$1,460,000	\$9,738,000	\$11,198,000
Attributable to New Growth			100%	\$1,460,000	\$9,738,000	\$11,198,000
DC Funding						
Road				\$1,416,000	\$9,438,000	\$10,854,000
Sanitary				\$0	\$0	\$0
Water				\$44,000	\$300,000	\$344,000
				\$1,460,000	\$9,738,000	\$11,198,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Strasburg Road South Road & Watermain Extension	Project # R7 W4
Project Scope: New Road & Watermain	Project Type Road
Location Future Strasburg Road Terminus to New Dundee Road with Roundabout	
Length of Infrastructure 2,520 m	Date Updated: Sep 2019

PROJECT

DESCRIPTION

Preliminary & Detailed Design and Construction of 2,520m of arterial roadway, including new storm sewers and watermain and a new roundabout at New Dundee Road.

Note: No land costs have been included in the current estimate. Land Acquisition will be evaluated through detailed design.



ESTIMATE

				Engineering	Construction	Total
<u>Part A - Class EA / Preliminary Design</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
	Subtotal			\$0	\$0	\$0
	Contingency	25%		\$0	\$0	\$0
	Total			\$0	\$0	\$0
<u>Part B - Design & Tendering</u>						
Road				\$497,000		\$497,000
Sanitary				\$0		\$0
Water				\$112,000		\$112,000
	Subtotal			\$609,000	\$0	\$609,000
	Contingency	25%		\$152,000	\$0	\$152,000
	Total			\$761,000	\$0	\$761,000
<u>Part C - Construction</u>						
Road				\$745,000	\$9,080,000	\$9,825,000
Sanitary				\$0	\$0	\$0
Water				\$169,000	\$1,870,000	\$2,039,000
	Subtotal			\$914,000	\$10,950,000	\$11,864,000
	Contingency	25%		\$229,000	\$2,738,000	\$2,967,000
	Total			\$1,143,000	\$13,688,000	\$14,831,000
Total Project Cost				\$1,904,000	\$13,688,000	\$15,592,000
Attributable to New Growth			100%	\$1,904,000	\$13,688,000	\$15,592,000
DC Funding						
Road				\$1,553,000	\$11,350,000	\$12,903,000
Sanitary				\$0	\$0	\$0
Water				\$351,000	\$2,338,000	\$2,689,000
				\$1,904,000	\$13,688,000	\$15,592,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Middle Strasburg Creek Sanitary Sewer Trunk	Project # SA8
Project Scope: Sanitary Sewer	Project Type Sanitary
Location Brigadoon Subdivision to Bleams Road	
Length of Infrastructure 1,850 m	Date Updated: Jan 2019

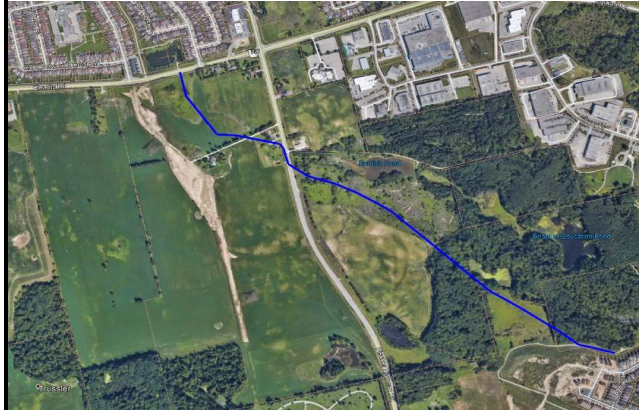
PROJECT

DESCRIPTION

The portion of the Middle Strasburg sanitary trunk sewer from Woodbine Avenue to Bleams Road.

Sections of sewer along / crossing Fischer-Hallman Road to be installed in 2020 as part of the Region of Waterloo's Road Improvements project.

Note: No land purchase will be required for this project.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency	25%			\$0	\$0	\$0
Total				\$0	\$0	\$0
Part B - Design & Tendering						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency	25%			\$0	\$0	\$0
Total				\$0	\$0	\$0
Part C - Construction						
Road				\$0	\$0	\$0
Sanitary				\$1,480,000	\$9,880,000	\$11,360,000
Water				\$0	\$0	\$0
Subtotal				\$1,480,000	\$9,880,000	\$11,360,000
Contingency	25%			\$370,000	\$2,470,000	\$2,840,000
Total				\$1,850,000	\$12,350,000	\$14,200,000
Total Project Cost				\$1,850,000	\$12,350,000	\$14,200,000
Attributable to New Growth			100%	\$1,850,000	\$12,350,000	\$14,200,000
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$1,850,000	\$12,350,000	\$14,200,000
Water				\$0	\$0	\$0
				\$1,850,000	\$12,350,000	\$14,200,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Amand Drive - Road & Watermain Extension	Project # R1 W1
Project Scope: New Road	Project Type Road
Location Extension north from existing terminus	
Length of Infrastructure 670 m	Date Updated: Jan 2019

PROJECT

DESCRIPTION

Class EA, Preliminary & Detailed Design and Construction of 670m of roadway, including new storm sewers and 300mm diameter watermain.

Note: No land costs have been included in the current estimate. Land Acquisition will be evaluated after the EA is completed.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$142,000	\$0	\$142,000
Sanitary				\$0	\$0	\$0
Water				\$41,000	\$0	\$41,000
Subtotal				\$183,000	\$0	\$183,000
Contingency	25%			\$46,000	\$0	\$46,000
Total				\$229,000	\$0	\$229,000
Part B - Design & Tendering						
Road				\$114,000		\$114,000
Sanitary				\$0		\$0
Water				\$32,000		\$32,000
Subtotal				\$146,000	\$0	\$146,000
Contingency	25%			\$37,000	\$0	\$37,000
Total				\$183,000	\$0	\$183,000
Part C - Construction						
Road				\$170,000	\$2,840,000	\$3,010,000
Sanitary				\$0	\$0	\$0
Water				\$49,000	\$810,000	\$859,000
Subtotal				\$219,000	\$3,650,000	\$3,869,000
Contingency	25%			\$55,000	\$913,000	\$968,000
Total				\$274,000	\$4,563,000	\$4,837,000
Total Project Cost				\$686,000	\$4,563,000	\$5,249,000
Attributable to New Growth			100%	\$686,000	\$4,563,000	\$5,249,000
DC Funding						
Road				\$533,000	\$3,550,000	\$4,083,000
Sanitary				\$0	\$0	\$0
Water				\$153,000	\$1,013,000	\$1,166,000
				\$686,000	\$4,563,000	\$5,249,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Blair Creek Drive - Road & Watermain Extension	Project # --
Project Scope: New Road	Project Type Road
Location From Future Strasburg Road to Reidel Drive	
Length of Infrastructure 700 m	Date Updated: Jan 2019

PROJECT

DESCRIPTION

Class EA, Preliminary & Detailed Design and Construction of 700m of roadway, including new storm sewers and 300mm diameter watermain.

Sanitary sewers are not included but may be added pending the outcome of the Class EA.

Note: No land costs have been included in the current estimate. Land Acquisition will be evaluated after the EA is completed.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$128,000	\$0	\$128,000
Sanitary				\$0	\$0	\$0
Water				\$36,000	\$0	\$36,000
	Subtotal			\$164,000	\$0	\$164,000
	Contingency	25%		\$41,000	\$0	\$41,000
	Total			\$205,000	\$0	\$205,000
Part B - Design & Tendering						
Road				\$102,000		\$102,000
Sanitary				\$0		\$0
Water				\$29,000		\$29,000
	Subtotal			\$131,000	\$0	\$131,000
	Contingency	25%		\$33,000	\$0	\$33,000
	Total			\$164,000	\$0	\$164,000
Part C - Construction						
Road				\$153,000	\$2,550,000	\$2,703,000
Sanitary				\$0	\$0	\$0
Water				\$44,000	\$730,000	\$774,000
	Subtotal			\$197,000	\$3,280,000	\$3,477,000
	Contingency	25%		\$49,000	\$820,000	\$869,000
	Total			\$246,000	\$4,100,000	\$4,346,000
Total Project Cost				\$615,000	\$4,100,000	\$4,715,000
Attributable to New Growth			100%	\$615,000	\$4,100,000	\$4,715,000
DC Funding						
Road				\$479,000	\$3,187,000	\$3,666,000
Sanitary				\$0	\$0	\$0
Water				\$136,000	\$913,000	\$1,049,000
				\$615,000	\$4,100,000	\$4,715,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

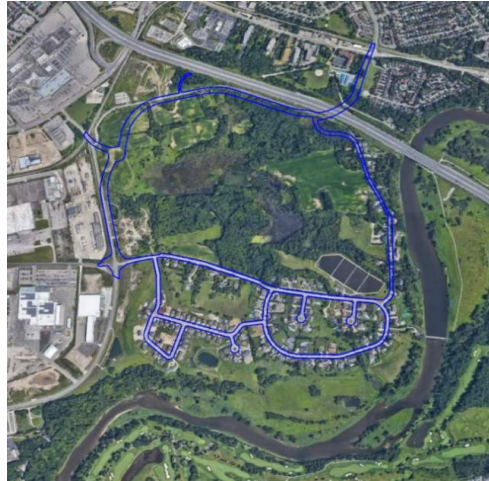
Project Name: Upper Hidden Valley SPS & Forcemain	Project # SA14
Project Scope: Sanitary Pumping Station and Forcemain	Project Type Sanitary
Location Hidden Valley Area (TBA)	
Length of Infrastructure --	Date Updated: Jan 2019

PROJECT

DESCRIPTION

Class Environmental Assessment, Preliminary Design, Detailed Design and Construction for a new Pumping Station and Forcemain connection to provide sanitary servicing for the Hidden Valley Lands.

Note: The construction costs include a total of \$1,000,000 for potential land purchase.



ESTIMATE

				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$363,000	\$0	\$363,000
Water				\$0	\$0	\$0
Subtotal				\$363,000	\$0	\$363,000
Contingency	25%			\$91,000	\$0	\$91,000
Total				\$454,000	\$0	\$454,000
Part B - Design & Tendering						
Road				\$0	\$0	\$0
Sanitary				\$290,000	\$0	\$290,000
Water				\$0	\$0	\$0
Subtotal				\$290,000	\$0	\$290,000
Contingency	25%			\$73,000	\$0	\$73,000
Total				\$363,000	\$0	\$363,000
Part C - Construction						
Road				\$0	\$0	\$0
Sanitary				\$435,000	\$7,250,000	\$7,685,000
Water				\$0	\$0	\$0
Subtotal				\$435,000	\$7,250,000	\$7,685,000
Contingency	25%			\$109,000	\$1,813,000	\$1,922,000
Total				\$544,000	\$9,063,000	\$9,607,000
Total Project Cost				\$1,361,000	\$9,063,000	\$10,424,000
Attributable to New Growth			100%	\$1,361,000	\$9,063,000	\$10,424,000
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$1,361,000	\$9,063,000	\$10,424,000
Water				\$0	\$0	\$0
				\$1,361,000	\$9,063,000	\$10,424,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet

Project Name: Falconridge SPS Upgrades	Project # SA5
Project Scope: Sanitary Pumping Station Capacity Upgrades	Project Type Sanitary
Location Falconridge Drive (Kiwanis Park Neighbourhood)	
Length of Infrastructure --	Date Updated: Jan 2019

PROJECT

DESCRIPTION

The Falconridge Sanitary Pumping Station requires capacity upgrades (include pumps, valves and electrical only) to service future development within the catchment. An Environmental Assessment not will be required.



ESTIMATE

				Engineering	Construction	Total
<u>Part A - Class EA / Preliminary Design</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency	25%			\$0	\$0	\$0
Total				\$0	\$0	\$0
<u>Part B - Design & Tendering</u>						
Road				\$0		\$0
Sanitary				\$45,000		\$45,000
Water				\$0		\$0
Subtotal				\$45,000	\$0	\$45,000
Contingency	25%			\$11,000	\$0	\$11,000
Total				\$56,000	\$0	\$56,000
<u>Part C - Construction</u>						
Road				\$0	\$0	\$0
Sanitary				\$68,000	\$750,000	\$818,000
Water				\$0	\$0	\$0
Subtotal				\$68,000	\$750,000	\$818,000
Contingency	25%			\$17,000	\$188,000	\$205,000
Total				\$85,000	\$938,000	\$1,023,000
Total Project Cost				\$141,000	\$938,000	\$1,079,000
Attributable to New Growth			100%	\$141,000	\$938,000	\$1,079,000
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$141,000	\$938,000	\$1,079,000
Water				\$0	\$0	\$0
				\$141,000	\$938,000	\$1,079,000

Notes:

1. All costs are in \$2019

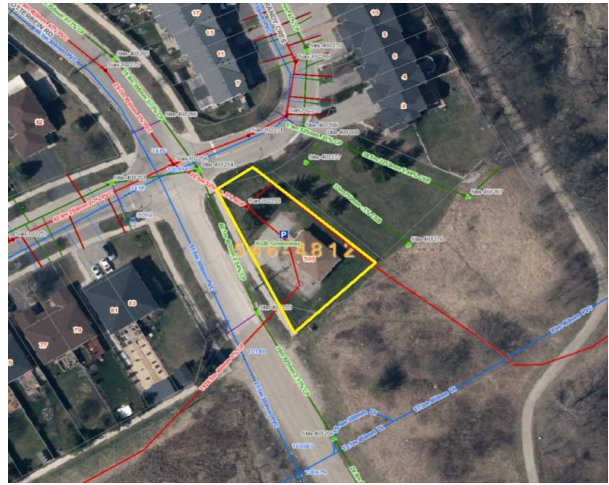
Development Charges Project Sheet

Project Name: Otterbein (Forwell) SPS Upgrades	Project # SA16
Project Scope: Sanitary Pumping Station Capacity Upgrades	Project Type Sanitary
Location Misty Street / Otterbein	
Length of Infrastructure --	Date Updated: Jan 2019

PROJECT

DESCRIPTION

The Forwell SPS requires capacity upgrades to support area development. Detailed design of upgrades and construction of emergency storage capacity is required.



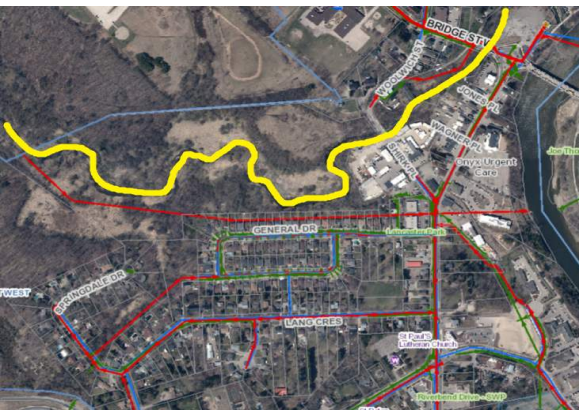
ESTIMATE

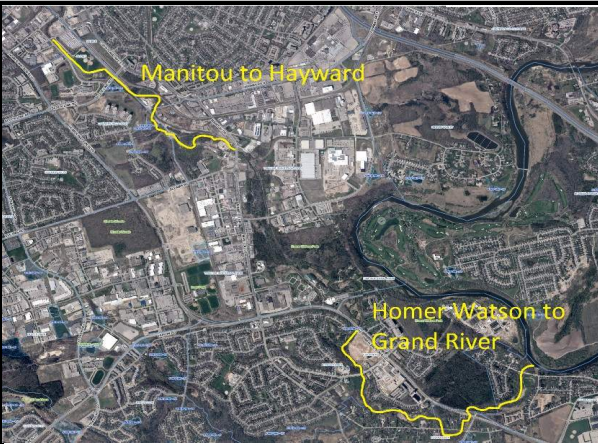
				Engineering	Construction	Total
<u>Part A - Class EA / Preliminary Design</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
	Subtotal			\$0	\$0	\$0
	Contingency	25%		\$0	\$0	\$0
	Total			\$0	\$0	\$0
<u>Part B - Design & Tendering</u>						
Road				\$0		\$0
Sanitary				\$170,000		\$170,000
Water				\$0		\$0
	Subtotal			\$170,000	\$0	\$170,000
	Contingency	25%		\$43,000	\$0	\$43,000
	Total			\$213,000	\$0	\$213,000
<u>Part C - Construction</u>						
Road				\$0	\$0	\$0
Sanitary				\$255,000	\$2,830,000	\$3,085,000
Water				\$0	\$0	\$0
	Subtotal			\$255,000	\$2,830,000	\$3,085,000
	Contingency	25%		\$64,000	\$708,000	\$772,000
	Total			\$319,000	\$3,538,000	\$3,857,000
Total Project Cost				\$532,000	\$3,538,000	\$4,070,000
Attributable to New Growth			100%	\$532,000	\$3,538,000	\$4,070,000
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$532,000	\$3,538,000	\$4,070,000
Water				\$0	\$0	\$0
				\$532,000	\$3,538,000	\$4,070,000

Notes:

1. All costs are in \$2019

Development Charges Project Sheet					
Project Name:		Hidden Valley Creek Improvements		Project #	SW3
Project Scope:		Creek and Storm Sewer Improvements		Project Type	SWM
Location		Wabanaki Drive and Hidden Valley Creek		Date Updated: Jan 2019	
Length of Infrastructure		510 m			
PROJECT					
DESCRIPTION					
The catchment to this creek is a mixture of commercial and residential and includes a Regional ESPA east of Wabanaki. It is expected that the majority of the built up area was developed prior to the requirement for SWM controls. An EA is required to fully understand the creek system in light of future development including the extension of River Road and greenfield development and potential for increased erosion and sediment deposition entering the watercourse along with incremental flows due to increased runoff. Note: It has been assumed that no land purchase will be required for this project.					
ESTIMATE					
			Engineering	Construction	Total
Part A - Class EA / Preliminary Design					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$177,000	\$0	\$177,000
Subtotal			\$177,000	\$0	\$177,000
Contingency 25%			\$44,000	\$0	\$44,000
Total			\$221,000	\$0	\$221,000
Part B - Design & Tendering					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$141,000	\$0	\$141,000
Subtotal			\$141,000	\$0	\$141,000
Contingency 25%			\$35,000	\$0	\$35,000
Total			\$176,000	\$0	\$176,000
Part C - Construction					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$212,000	\$3,530,000	\$3,742,000
Subtotal			\$212,000	\$3,530,000	\$3,742,000
Contingency 25%			\$53,000	\$883,000	\$936,000
Total			\$265,000	\$4,413,000	\$4,678,000
Total Project Cost			\$662,000	\$4,413,000	\$5,075,000
Attributable to New Growth			10%	\$66,200	\$441,300
					\$507,500
DC Funding					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$66,200	\$441,300	\$507,500
			\$66,200	\$441,300	\$507,500
Notes:					
1. All costs are in \$2019					

Development Charges Project Sheet					
Project Name: Laurel Creek Watercourse		Project # SW6			
Project Scope: Creek Rehabilitation		Project Type SWM			
Location: Lower Laurel Creek from Bridge Street to Kitchener municipal boundary - Middle & Upper reaches					
Length of Infrastructure		1,000 m		Date Updated: Jan 2019	
PROJECT					
DESCRIPTION					
In 1995 the Grand River Conservation Authority finalized the Slope Stabilization and Erosion Control Class Environmental Assessment for the Lower Laurel Creek between the Grand River and City of Kitchener Municipal Boundary. A portion of this creek was upgraded in accordance with this plan. Note: It has been assumed that no land purchase will be required for this project.					
ESTIMATE					
			Engineering	Construction	Total
Part A - Class EA / Preliminary Design					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$35,000	\$231,000	\$266,000
Subtotal			\$35,000	\$231,000	\$266,000
Contingency		25%	\$9,000	\$57,750	\$66,750
Total			\$44,000	\$288,750	\$332,750
Part B - Design & Tendering					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$35,000	\$231,000	\$266,000
Subtotal			\$35,000	\$231,000	\$266,000
Contingency		25%	\$9,000	\$57,750	\$66,750
Total			\$44,000	\$288,750	\$332,750
Part C - Construction					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$42,000	\$238,000	\$280,000
Subtotal			\$42,000	\$238,000	\$280,000
Contingency		25%	\$11,000	\$60,000	\$71,000
Total			\$53,000	\$298,000	\$351,000
Total Project Cost			\$141,000	\$875,500	\$1,016,500
Attributable to New Growth			10%	\$14,100	\$87,550
					\$101,650
DC Funding					
Road			\$0	\$0	\$0
Sanitary			\$0	\$0	\$0
Water			\$0	\$0	\$0
Stormwater			\$14,100	\$87,550	\$101,650
Total			\$14,100	\$87,550	\$101,650
Notes:					
1. All costs are in \$2019					

Development Charges Project Sheet						
Project Name:		Schneider Creek Watercourse			Project # SW9	
Project Scope:		Creek Rehabilitation			Project Type SWM	
Location		Manitou Drive to Hayward Avenue; Homer Watson to Grand River				
Length of Infrastructure		Reach 2 = 170m			Date Updated: Jan 2019	
PROJECT						
DESCRIPTION The Class Environmental Study Report for Schneider Creek between Manitou Drive and Hayward Avenue has been completed. Preferred alternatives are broken into 3 reaches. Reaches 1 and 3 have been constructed. Reach 2 cost estimates were updated in late 2014. Previously it was also proposed to undertake remedial work on the creek from Homer Watson to the Grand River due to extensive erosion problems. Recent discussions with the GRCA have indicated that remedial works for this southern section are not currently required. Note: It has been assumed that no land purchase will be required for this project.						
ESTIMATE						
				Engineering	Construction	Total
Part A - Class EA / Preliminary Design						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Stormwater				\$0	\$0	\$0
Subtotal				\$0	\$0	\$0
Contingency 25%				\$0	\$0	\$0
Total				\$0	\$0	\$0
Part B - Design & Tendering						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Stormwater				\$245,000	\$0	\$245,000
Subtotal				\$245,000	\$0	\$245,000
Contingency 25%				\$61,000	\$0	\$61,000
Total				\$306,000	\$0	\$306,000
Part C - Construction						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Stormwater				\$368,000	\$4,090,000	\$4,458,000
Subtotal				\$368,000	\$4,090,000	\$4,458,000
Contingency 25%				\$92,000	\$1,023,000	\$1,115,000
Total				\$460,000	\$5,113,000	\$5,573,000
Total Project Cost				\$766,000	\$5,113,000	\$5,879,000
Attributable to New Growth				50%	\$383,000	\$2,556,500
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$0	\$0	\$0
Stormwater				\$383,000	\$2,556,500	\$2,939,500
				\$0	\$0	\$0
Notes: 1. All costs are in \$2019						

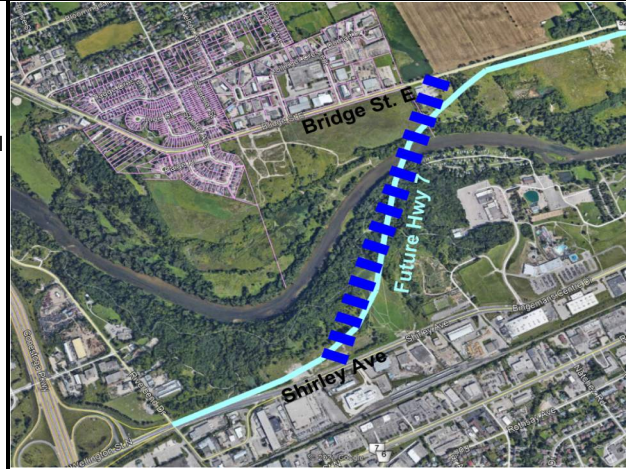
Development Charges Project Sheet

Project Name:	Highway 7 Extension - Secondary Watermain	Project #	W2
Project Scope:	Watermain	Project Type	Sanitary
Location	Shirley Ave to Bridge Street East (location to be determined)		
Length of Infrastructure	1200m	Date Updated:	Rev Aug 2021

PROJECT

DESCRIPTION

For security of water supply into the Bridgeport Area a secondary watermain connection is necessary. Route selection and watermain sizing are to be determined during the Environmental Assessment, however existing feed is a 450mm and the same size was assumed for redundancy. And additional benefit of this connection will be an increase in water circulation to maintain quality. The work cannot be combined with Highway 7 construction.



ESTIMATE

				Engineering	Construction	Total
<u>Part A - Class EA / Preliminary Design</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$218,000	\$0	\$0
Stormwater				\$0	\$0	\$0
Subtotal				\$218,000	\$0	\$0
Contingency	25%			\$55,000	\$0	\$55,000
Total				\$273,000	\$0	\$273,000
<u>Part B - Design & Tendering</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$187,000	\$0	\$0
Stormwater				\$0	\$0	\$0
Subtotal				\$187,000	\$0	\$0
Contingency	25%			\$47,000	\$0	\$47,000
Total				\$234,000	\$0	\$234,000
<u>Part C - Construction</u>						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$187,000	\$3,120,000	\$3,307,000
Stormwater				\$0	\$0	\$0
Subtotal				\$187,000	\$3,120,000	\$3,307,000
Contingency	25%			\$47,000	\$780,000	\$827,000
Total				\$234,000	\$3,900,000	\$4,134,000
Total Project Cost				\$741,000	\$3,900,000	\$4,641,000
Attributable to New Growth			50%	\$370,500	\$1,950,000	\$2,320,500
DC Funding						
Road				\$0	\$0	\$0
Sanitary				\$0	\$0	\$0
Water				\$740,000	\$3,900,000	\$4,640,000
Stormwater				\$0	\$0	\$0
				\$740,000	\$3,900,000	\$4,640,000

Notes:

1. All costs are in \$2019

Appendix E

Reserve Fund Balances

Development Charges Reserve Fund Balances

The *DCA* requires that a reserve fund be established for each service for which development charges are collected. Table E-1 presents the reserve fund balances that are available to help fund the development-related net capital costs identified in this study. The opening balances of the development charges reserve funds as at December 31, 2021. Of note, Parking Services and Cemeteries DC reserves are included in the list however as they are no longer an eligible DC service under the *DCA*, the funds are not applied to a capital program. All other available reserve fund balances are therefore accounted for in this study.

As shown on Table E-1, the December 31, 2021 total reserve fund balance was in a positive position of \$16.52 million.

The application of each of the balances in each of the reserve funds is discussed in the appendix section related to each service. The reserve funds are assigned to projects in the initial years of the capital program for the services in which the reserves are a position balance. This has the effect of reducing and deferring capital costs brought forward to the development charge calculation and the cash flow analysis. Where there is a negative balance, the amount is brought forward to the DC capital forecast for recovery through future development charges.

The reserves for Parking and Cemeteries are included in the table but no capital program or rates have been calculated in this 2022 DC Study.

APPENDIX E
TABLE E-1

CITY OF KITCHENER
2022 DEVELOPMENT CHARGES BACKGROUND STUDY
DEVELOPMENT CHARGES RESERVE FUND
BALANCES AS AT DECEMBER 31, 2021

Service	Adjusted Reserve Fund Balance as at Dec. 31, 2021
Library	(\$2,611,365.49)
Indoor Recreation	\$24,286,404.05
Outdoor Recreation	\$562,130.43
Development-Related Studies	(\$1,712,467.71)
Roads	(\$7,088,464.46)
Sanitary Sewer	(\$3,143,244.55)
Watermains	\$3,086,396.98
Storm/Watercourse	\$4,617,396.00
Fire Protection	\$2,191,022.56
Public Works	(\$2,992,525.53)
Engineering Studies	(\$1,122,430.43)
Intensification Allowance	(\$945,355.60)
Parking*	\$1,113,576.49
Cemeteries*	\$276,305.98
Total Development Charge Reserve Funds	\$16,517,379

Notes: Not included in this DC calculation.

Appendix F

Cost of Growth Analysis

Cost of Growth Analysis

Asset Management Plan

The DCA requires that municipalities complete an Asset Management Plan before passing a development charges by-law. A key function of the Asset Management Plan is to demonstrate that all assets funded under the development charges by-law are financially sustainable over their full life cycle.

i. Asset Types

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table F-1 and Table F-2. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. The exception and the justification is as follows:

- Some of the works identified may represent one-time expenditures and may be temporary in nature. Therefore, the assets would not be required to be replaced and no ongoing operation and maintenance costs exist. Such assets are identified as “not a long-term asset” in the table.
- Some projects do not relate to the emplacement of a tangible capital asset– some examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. Such projects are identified as “not infrastructure” in the table.
- For assets that have been constructed (i.e. recovery of past commitments) it is assumed that the related contribution is already included within the City’s annual provision. As such, these projects are identified as “not applicable” in the table.

It should be noted that the capital cost estimates prepared for each of the projects identified in this section include grouped costs of various individual elements, which, as a stand-alone item, may have its own useful life (ex. New buildings include: HVAC, structural elements, roof, etc.). Accordingly, the average useful life assumptions noted below are applicable to all project components.

Table F-1 – Summary of Municipal Assets Considered City-wide General Services

Service and Amenities	Estimated Useful Life
Library ▪ Recovery of Central Library ▪ Buildings ▪ Material and equipment ▪ Studies	Not applicable 50 years 10 years Not infrastructure
Fire Services ▪ Buildings ▪ Vehicles ▪ Equipment	50 years 20 years 8 years
Indoor Recreation ▪ Recreation Facilities ▪ Studies	50 years Not infrastructure
Outdoor Recreation ▪ Park Amenities ▪ Studies	20 years Not infrastructure
Public Works ▪ Recovery of Kitchener Operations Facility ▪ Vehicles & Equipment	Not applicable 12 years
Development-Related Studies ▪ Development-related studies, etc.	Not infrastructure

Table F-2: Summary of Municipal Assets Considered Engineered Services

Capital Project Description	Estimated Useful Life
Sanitary Servicing ▪ Linear sanitary infrastructure ▪ Sanitary facilities and other structures ▪ Other equipment	80 years 50 years 20 years
Roads and Related ▪ Linear Roads Infrastructure ▪ Stand Alone Intersection Improvements ▪ DC Credits/refunds	50 years 50 years Not infrastructure
Watermains ▪ Linear Water Infrastructure	80 years
Engineering Studies ▪ Development-related studies, etc.	Not infrastructure
Intensification Allowance ▪ Intensification allowance (for undefined engineered works in the central neighbourhoods) ▪ Cycling infrastructure	50 years 20 years
Storm/Watercourse ▪ Linear infrastructure	80 years

ii. Annual Provision

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not growth-related and are therefore not eligible for

funding through development charge revenues or other developer contributions.

Based on the information obtained from City staff regarding useful life assumptions and the capital cost of acquiring and/or emplacing each asset, a provision for infrastructure replacement has been calculated for both the general and engineered services. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the DCA, assets that are proposed to be funded under the development charges by-law have been included in the analysis. As a result, the total calculated annual provision for development charge related infrastructure has been netted down to consider the replacement of existing infrastructure or benefit-to-existing development. However, for reference, the annual replacement provisions associated with the non-development charge funded costs, including costs related to the ten per cent statutory discount, benefit-to-existing and post-period benefit have also been calculated.

Tables F-3 and F-4 provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2022-2031 and 2022-2036 DC recoverable portion. The year 2032 and 2037 have been included to calculate the annual contribution for the 2022-2031 and 2022-2036 periods as the expenditures in 2031 and 2036 will not trigger asset management contributions until 2032 and 2037, respectively. As shown in Table F-3, by 2032, the City will need to fund an additional \$7.29 million per annum in order to properly fund the full life cycle costs of the new assets related to general services supported under the development charges by-law.

Table F-4 provides a separate analysis of the annual provisions required for the engineered services capital program as the program extends to 2036. As shown in Table F-4, the annual provision in 2037 amounts to \$2.83 million.

Table F-3: Calculated Annual Provision by 2032 for General Services

General Services	2022-2031 Capital Program		Calculated AMP Annual Provision by 2032	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Library	\$27,145,000	\$14,230,000	\$322,000	\$382,000
Fire Protection	\$14,456,000	\$4,394,000	\$151,000	\$204,000
Indoor Recreation	\$129,947,000	\$29,944,000	\$2,787,000	\$655,000
Outdoor Recreation	\$58,600,000	\$20,552,000	\$3,108,000	\$1,117,000
Public Works*	\$32,821,000	\$25,706,000	\$920,000	\$171,000
Development-Related Studies	\$7,860,000	\$0	\$0	\$0
Total	\$270,829,000	\$94,826,000	\$7,288,000	\$2,529,000

* Note this service is an engineered service related to a highway but has a 10-yr capital program so is included in Table 3.

Table F-4: Calculated Annual Provision by 2037 for Engineered Services

Engineered Services	2022-2036 Capital Program		Calculated AMP Annual Provision by 2037	
	DC Recoverable	Non-DC Funded	DC Related	Non-DC Related
Sanitary Servicing	\$76,187,000	\$3,545,000	\$954,000	\$107,000
Roads And Related	\$63,170,000	\$0	\$1,259,000	\$0
Watermains	\$10,446,000	\$2,553,000	\$124,000	\$30,000
Engineering Studies	\$5,418,000	\$0	\$0	\$0
Intensification Allowance	\$9,667,000	\$4,833,000	\$398,000	\$199,000
Storm/Watercourse	\$8,449,000	\$11,833,000	\$98,000	\$143,000
Total	\$173,337,000	\$22,764,000	\$2,833,000	\$479,000

iii. Financial Sustainability of the Program

a) Future Revenue Growth

The calculated annual funding provision should be considered within the context of the City's projected growth. Over the next ten years (to 2031) the City is projected to increase by approximately 20,040 households, which represents a 20 per cent increase over the existing base. In addition, the City will also add nearly 15,323 new employees that will result in approximately

695,127 square metres of additional non-residential building space. By 2036, there will be an increase of nearly 30,030 new dwelling units and 1.09 million square metres of non-residential building space. This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the development charges by-law. The collection of these funds is intended to be allocated to the City's reserves for the future replacement of these assets.

Long-term Capital and Operating Impact Analysis

As shown in Table F-5, by 2031, the City's net operating costs are estimated to increase by \$8.65 million for property tax supported services. Increases in net operating costs will be experienced as new facilities such as community centres are opened. Operating and maintenance costs will also increase as additions to the City's road network are made. Sanitary, Watermains, Intensification Allowance, and Storm/Watercourse capital expenditures are expected to be off-set by user fees and water/wastewater rates rather than property taxes and therefore no impact is reflected in the analysis. Capital costs related to studies are not expected to have an impact on property tax supported costs.

Table F-6 summarizes the components of the development-related capital forecast that will require funding from non-DC sources. In total, \$77.32 million will need to be financed from non-DC sources over the 2022-2031 and 2022-2036 planning periods. Council is made aware of these factors so that they understand the operating and capital costs that will not be covered by DCs as it adopts the development-related capital forecast set out in the study.

In addition, \$20.48 million in interim DC financing related to post-period shares of projects may be required. However, because DC by-laws must be

revisited at least every five years, it is difficult to determine the quantum of interim financing that may be necessary.

The Program is Deemed Financially Sustainable

In summary, the asset management plan and long-term capital and operating analysis included in this appendix demonstrates that the City can afford to invest and operate the identified general and engineered services infrastructure over the ten-year and long-term planning period.

Importantly, the City's annual budget review allows staff to continue to monitor and implement mitigating measures should the program become less sustainable.

APPENDIX F

TABLE F-5

**CITY OF KITCHENER
ESTIMATED NET OPERATING COST OF THE PROPOSED
DEVELOPMENT-RELATED CAPITAL PROGRAM
(in constant 2022 dollars)**

Category	Cost Driver (in 2022 \$)			Additional Operating Costs at 2031
	\$ (000)	unit measure	Quantity	
Library Services				\$2,838.9
Southwest Community Library	\$1,419	per facility	1	\$1,419.5
Additional Library	\$1,419	per facility	1	\$1,419.5
Fire Protection				\$1,384.5
Additional Fire Hall Space & Furnishings	\$1,385	per facility	1	\$1,384.5
Indoor Recreation				\$2,413.8
Rosenberg Community Centre (Southwest)	\$422	per facility	1	\$422.0
Forest Heights Community Centre Addition	\$184	per facility	1	\$184.0
New Aquatic Facility - South End	\$950	per facility	1	\$950.0
New Indoor Turf Facility	\$375	per facility	1	\$375.0
Additional Indoor Recreation Facilities	\$483	per facility	1	\$482.8
Outdoor Recreation				\$859.6
RBJ Schlegel Park	\$454	per facility	1	\$454.0
Other New Park and Trail Development	\$0.05	per \$1.00 of new infrastrucutre		\$405.6
Public Works				\$547.9
Equipment Acquisitions and Upgrades	\$0.05	per \$1.00 of new infrastrucutre		\$547.9
Development-Related Studies	no new net tax levy expenditures			\$0.0
Sanitary Sewer	no new net tax levy expenditures			\$0.0
Roads and Related	\$50	per new household		\$609.7
Watermains	no new net tax levy expenditures			\$0.0
Engineering Studies	no new net tax levy expenditures			\$0.0
Intensification Allowance	no new net tax levy expenditures			\$0.0
Storm/Watercourse	no new net tax levy expenditures			\$0.0
TOTAL ESTIMATED OPERATING COSTS				\$8,654.5

APPENDIX F
TABLE F-6

CITY OF KITCHENER
SUMMARY OF DEVELOPMENT RELATED CAPITAL PROGRAM

General Services	Development-Related Capital Program (2022 - 2031)				Total DC Eligible Costs for Recovery (\$000)
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	DC Reserves (\$000)	Post-2031 Benefit (\$000)	
LIBRARY	\$41,337.5	\$11,115.8	\$9,847.6	\$3,077.0	\$17,297.1
FIRE PROTECTION	\$18,850.4	\$868.1	\$0.0	\$3,526.2	\$14,456.1
INDOOR RECREATION	\$141,941.0	\$156.9	\$0.0	\$11,837.0	\$129,947.1
OUTDOOR RECREATION	\$79,151.7	\$20,552.0	\$0.0	\$0.0	\$58,599.7
PUBLIC WORKS*	\$56,725.9	\$21,863.0	\$9,481.5	\$2,041.7	\$23,339.8
DEVELOPMENT-RELATED STUDIES	\$7,860.0	\$0.0	\$0.0	\$0.0	\$7,860.0
TOTAL 10 YEAR GENERAL SERVICES	\$345,866.5	\$54,555.7	\$19,329.2	\$20,481.8	\$251,499.8

* Note this service is an engineered service related to a highway but is a 10-yr capital program so it included in the table above.

Engineered Services	Development-Related Capital Program (2022 - 2036)				Total DC Eligible Costs for Recovery (\$000)
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Available DC Reserves (\$000)	Post-2036 Benefit (\$000)	
SANITARY SERVICING	\$79,731.4	\$3,544.6	\$6,000.0	\$0.0	\$70,186.7
ROADS AND RELATED	\$63,170.4	\$0.0	\$0.0	\$0.0	\$63,170.4
WATERMAINS	\$12,998.8	\$2,552.6	\$0.0	\$0.0	\$10,446.2
ENGINEERING STUDIES	\$5,418.0	\$0.0	\$0.0	\$0.0	\$5,418.0
INTENSIFICATION ALLOWANCE	\$14,500.0	\$4,833.3	\$0.0	\$0.0	\$9,666.7
STORM/WATERCOURSE	\$20,282.9	\$11,833.4	\$0.0	\$0.0	\$8,449.5
TOTAL ENGINEERED SERVICES TO 2036	\$196,101.4	\$22,763.9	\$6,000.0	\$0.0	\$167,337.5

TOTAL GENERAL & ENGINEERED SERVICES	\$541,967.9	\$77,319.6	\$25,329.2	\$20,481.8	\$418,837.3
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Appendix G

Local Service Guidelines

for Development Charge Funding for City

Infrastructure

Local Service Guidelines for Development Charge Funding for City Infrastructure

The following guidelines set out the requirements for infrastructure that is included in the City of Kitchener Development Charge Study and eligible for funding from the Development Charge Fund.

Generally:

1. The project should be listed in the most current City of Kitchener Development Charges Study.
2. Any infrastructure that does not add any additional capacity over and above the capacity requirement for that development is deemed to be the sole responsibility of the developer.

The following principles are used to identify infrastructure which is wholly or partially eligible for funding from the Development Charge Fund. All decisions will vest with the Director of Engineering.

These principles are subject to review and amendment by the City which may be independent of an amendment or update to the City's development charge by-laws.

The detailed engineering requirements for all infrastructure are governed by the City of Kitchener's Official Plan and the Kitchener Growth Management Plan. If not specified in the Official Plan, by the approved detailed engineering standards.

A. Collector Roads/ Minor Arterials

- 1.1 New local roads constructed internal to the development are the direct responsibility of the developer.

- 1.2 New collector roads constructed external to the development, but serving primarily to connect a development to the main road network are a direct responsibility of the developer.
- 1.3 When a local service road project is deemed to be oversized, to meet non-local service needs, the oversizing costs may be eligible for development charge funding. The oversizing cost is considered to be the marginal cost difference in width, from the local service need (size) to the full oversized width including but not limited to: Asphalt, Granular A, Granular B, excavation, grading.
- 1.4 Collector and minor arterial roads internal to development - direct developer responsibility under s.59 of the DCA (as a local service).
- 1.5 Collector roads external to development are a local service if the works are within the area in proximity to which the plan relates and therefore a direct developer responsibility under s.59 of the DCA. Otherwise, the works are included in DC calculation to the extent permitted under s.5(1) of the DCA (dependent on local circumstances).
- 1.6 Stream crossing road works excluding underground utilities but including all other works within lands to be dedicated to the City are included in the DC calculation to the extent permitted under s.5(1) of the DCA (dependent on local circumstances).
- 1.7 If the developer is required to provide a collector road for Official Plan requirements but serving primarily to connect a development to the main road network, the collector road is a direct responsibility of the developer.
- 1.8 Roads required to service only the proposed development or subsequent phases of the same development will not be eligible for any development charge funding.

- 1.9 New, widened, extended or upgraded collector roads that are external to specific developments, and not captured by items 1.1 to 1.8, are considered to be eligible for development charge funding.

B. Intersection Improvements

- 2.1 New roads (collector and arterial) and road improvements to collectors or arterial roads are included in the DC calculation to the extent permitted under s.5(1) of the DCA to limits of right of way.
- 2.2 Intersection improvements within specific developments and all works necessary to connect entrances (private and specific subdivision) to the roadway – direct developer responsibility under s.59 of DCA (as a local service).
- 2.3 Intersections with Regional roads and Provincial highways will be included in DC calculation to the extent that they are a City responsibility.
- 2.4 Intersection improvements on other roads due to development growth increasing traffic will be included in DC calculation.

For further clarification, all improvements to a road (and road-related infrastructure) to facilitate development are considered local services to be paid by the developer unless the works fall into one of the following categories:

- The improvement is designated as required for traffic flow improvement for an area greater than the development, is defined as a road improvement required by the City, and is identified through the Class Environmental Assessment process or a City Transportation Study or a Transportation Impact Statement. Such an improvement would be listed in the City's most current Development Charges Background Study.

- The improvement is designated as required by City staff to serve a greater area than the development and is identified in the capital forecast and is listed in the City's most current Development Charges Background Study.

C. Streetlights

- 3.1 Streetlights on external roads (collector/arterial) will be included in the DC calculation.
- 3.2 Streetlights within specific developments - direct developer responsibility under s.59 of DCA (as a local service).

D. Sidewalks

- 4.1 Sidewalks on Regional or City roads internal to development – direct developer responsibility under s.59 of the DCA (as a local service).
- 4.2 Sidewalks on Regional or City roads that are external to the development are included in the DC calculation.
- 4.3 New sidewalks that are external to a proposed development and which are required as a result of the development to connect to an existing sidewalk which is external to the proposed development - direct developer responsibility as a local service provision (under s.59 of DCA).

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

- 5.1 Bike lanes, within road allowance, internal to development - direct developer responsibility under s.50 of the DCA (as a local service).

- 5.2 Bike paths/multi-use trails/naturalized walkways internal to development – direct developer responsibility under s.50 of the DCA (as a local service).
- 5.3 Bike routes and bike lanes, within road allowance, external to development - include in DC road costs, consistent with the service standard provisions of the DCA, s.5(1).
- 5.4 Bike paths/multi-use trails/naturalized walkways external to development - include in DC consistent with the service standard provisions of the DCA, s.5(1).
- 5.5 Trail Bridges/Underpasses and associated works - include in area municipal DCs consistent with the service standard provisions of the DCA, s.5(1).

F. Noise Abatement Measures

- 6.1 Internal or adjacent to Development - direct developer responsibility though local service provisions (s.59 of DCA).

G. Traffic Control Systems

- 7.1 Traffic Control Systems within specific developments and all works necessary to connect entrances (private and specific subdivision) to the roadway – direct developer responsibility under s.59 of DCA (as a local service).
- 7.2 Traffic Control Systems on roads due to development growth necessitating revised traffic control - include in DC calculation.

H. Land Acquisition for Road Allowances

- 8.1 Land acquisition for arterial or collector roads, to the minimum widths required is achieved through dedications under the Planning Act.
- 8.2 Land acquisition for collector/minor arterial roads - dedication under the Planning Act subdivision provision (s.51) through development lands (up to 30 metre right-of-way); in areas with limited or no development, include in area municipal DC (to the extent eligible).
- 8.3 Land acquisition for arterial roads - dedication under the Planning Act subdivision provisions (s.51) through development lands; in areas with limited or no developments include in City DC (to the extent eligible).
- 8.4 Land acquisition for grade separations (beyond normal dedication requirements) - Include in the DC to the extent eligible.

I. Storm Water Management

- 9.1 Quality, quantity and water retention works internal to the development or required due to the development are direct developer responsibility through local service provisions (s. 59 of DCA).
- 9.2 Storm sewers 1200 mm and under are deemed to be a local service and are a direct funding responsibility of the developer.
- 9.3 Storm Sewers within the development that are larger than 1200 mm are to be included in the development charge calculation. The amount of DC cost contribution for storm sewers within a development shall be calculated using tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 1200 mm pipe diameter including a 10% engineering fee.

- 9.4 Volume control measures are required on all linear projects (roads) without restrictions, that create 0.5 or greater hectares of new and/or fully reconstructed impervious surface. The first 6.25mm of runoff from the new impervious surface must be capture. If the new or upgraded road is external to the development then it will be included in the DC calculation. If the road is internal to the development then its direct developer responsibility through local service provisions (s. 59 of DCA).

J. Water

- 10.1 Watermains 300 mm and under are deemed to be a local service and are a direct funding responsibility of the developer.
- 10.2 Watermains within the development that are larger than 300 mm are to be included in the development charge calculation. The amount of DC cost contribution for watermains within a development shall be calculated using tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 300 mm pipe diameter including a 10% engineering fee. Only watermain and valves will be included in the calculation.
- 10.3 Connections to trunk mains and pumping stations to service specific areas are to be a direct developer responsibility.
- 10.4 Trunk watermains, generally outside the development area, identified by a Class Environmental Assessment, Servicing Study or by City staff will be included in the development charge calculation. Such works would be listed in the City's most current Development Charges Background Study.

K. Sanitary Sewer

- 11.1 Sanitary sewer collectors less than 375 mm are deemed to be a local service and are a direct funding responsibility of the developer.
- 11.2 For sanitary sewers 375mm or larger and internal to a development and which require upsizing to accommodate upstream flows, the amount of DC cost contribution for sanitary sewers within a development shall be calculated using tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 375 mm pipe diameter including a 10% engineering fee.
- 11.3 Sanitary trunk sewers, 375mm or larger, external to the development will be included in the development charge calculation. These services will be identified through a Class Environmental assessment and will be noted as a project in the DC Background Study.
- 11.4 Private pumping stations servicing a small localized area (potentially one or more developments) are a local service and a direct developer responsibility under s.59 of the DCA.
- 11.5 Pumping stations that are municipally owned and service more than one property shall be included in the DC calculations. Pumping stations are those required by the City, and is identified through the Class Environmental Assessment process. The pumping stations will be included in the City's most current Development Charges Background Study.
- 11.6 Incremental capacity upgrades for municipal pumping stations are to be included in the DC calculation and identified in the City's most current Development Charges Background Study.

L. Retaining Walls

- 12.1 Retaining walls are not DC eligible and once constructed becomes the developers' responsibility for maintenance and upkeep for the life of said retaining wall.

Appendix H

2022 DC By-law

BY-LAW NUMBER 2022-071
OF THE
CORPORATION OF THE CITY OF KITCHENER

*Being a by-law to establish development charges
for the City of Kitchener and to repeal By-law 2019-086*

WHEREAS subsection 2(1) of the *Development Charges Act, 1997*, c. 27 (the Act") authorizes the council of a municipality to pass By-laws for the imposition of 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 the Council of The Corporation of the City of Kitchener ("City of Kitchener") has given Notice in accordance with Section 12 of the Act of its intention to pass a by-law under Section 2 of the said Act;

AND WHEREAS the Council of the City of Kitchener has heard all persons who applied to be heard no matter whether in objection to, or in support of, the development charge proposal at a public meeting held on April 25, 2022;

AND WHEREAS the Council of the City of Kitchener had before it a report entitled Development Charges Background Study dated March 31, 2022 (the "Study") prepared by Hemson Consulting Ltd., wherein it is indicated that the development of any land within the City of Kitchener will increase the need for services as defined herein;

AND WHEREAS copies of the background study were made available on March 31, 2022 and copies of the proposed development charges by-law were made available on April 11, 2022 to the public in accordance with Section 12 of the Act;

AND WHEREAS the Council of the City of Kitchener on May 30, 2022 approved the applicable Development Charges Background Study, dated March 31, 2022, in which certain recommendations were made relating to the establishment of a development charge policy for the City of Kitchener pursuant to the *Development Charges Act, 1997*;

AND WHEREAS by resolution adopted by Council of The Corporation of the City of Kitchener on May 30, 2022, Council determined that the increase in the need for services attributable to the anticipated development as contemplated in the Development Charges Background Study dated March 31, 2022, as amended including any capital costs, will be met by updating the capital budget and forecast for the City, where appropriate.

AND WHEREAS by Resolution adopted by Council on May 30, 2022, Council approved the Study and determined that no further public meetings were required under Section 12 of the Act;

AND WHEREAS by resolution adopted by Council of The Corporation of the City of Kitchener on May 30, 2022, Council determined that the future excess capacity identified in the Development Charges Background Study dated March 31, 2022 shall be paid for by the development charges contemplated in the said Development Charges Background Study, or other similar charges;

AND WHEREAS the Council has given consideration of the use of more than one development charge by-law to reflect different needs for services in different areas, also known as area rating or area specific DCs, and has determined that for the services, and associated infrastructure proposed to be funded by DCs under this by-law, that it is fair and reasonable that the charges be calculated on a municipal-wide and area-specific basis;

AND WHEREAS the Development Charges Background Study dated March 31, 2022 includes an Asset Management Plan that deals with all assets whose capital costs are intended to be funded under the development charge by-law and that such assets are considered to be financially sustainable over their full life-cycle.

AND WHEREAS the Council of the City of Kitchener will give consideration to incorporate the asset management plan outlined in the Development Charges Background Study within the City of Kitchener's ongoing practices and corporate asset management strategy.

NOW THEREFORE the Council of The Corporation of the City of Kitchener enacts as follows:

SECTION 1 INTERPRETATION

Definitions

1.1 In this by-law:

"accessory use" means a use, including a building, which is commonly incidental, subordinate and exclusively devoted to the main use or main building situate on the same lot;

"agricultural use" means the use of land and buildings for apiaries, fish farming, animal husbandry or the cultivation of trees, shrubs, flowers, grains, sod, fruits, vegetables and other crops or ornamental plants ("agricultural products") but shall not include any building or structure where agricultural products are displayed for

sale in more than twenty-five per cent of the gross floor area of such building or structure;

"capital cost" has the same meaning it has pursuant to the Act,

"development" means any activity or proposed activity in respect of land that requires one or more of the actions referred to in Section 2.3, and includes redevelopment;

"development charge" means a development charge imposed pursuant to this By-law.

"duplex" means a dwelling or residential building divided predominantly horizontally into two dwelling units;

"dwelling unit" means a room or suite of rooms which:

- (a) is located in a building (including a non-residential building),
- (b) is occupied or designed to be occupied by a household as a single, independent and separate housekeeping establishment,
- (c) contains both a kitchen and bathroom for the exclusive common use of the occupants thereof, and
- (d) has a private entrance leading directly from outside the building or from a common hallway or stairway inside the building;

"excess capacity" means uncommitted excess capacity but excludes uncommitted excess capacity if, either before or at the time the excess capacity was created, the Council of the City expressed a clear intention that the excess capacity would be paid for by development charges or other similar charges;

"existing industrial building" means an industrial building or buildings that existed on July 1, 2022 or the first building or buildings constructed and occupied on a vacant site pursuant to a site plan approval under section 41 of the Planning Act subsequent to July 1, 2022 for which full development charges were paid.

"floor area" means the area of floors of a building or structure measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of party walls, and in the case of a dwelling unit includes only those floor areas above grade. This shall not include any area which is specifically designed for parking and is not being used for the repair or sale of vehicles;

"grade" means the average level of finished ground adjoining a dwelling unit at all exterior walls;

"gross floor area" means the total floor area of a building or structure;

"growth-related net capital cost" means the portion of the net capital cost of services that is reasonably attributable to the need for such net capital cost that results or will result from the anticipated development in all or a defined part of the City less the City's excess capacity and the extent to which an increase in service to meet the increased need will benefit existing development within the City;

"home business" means a vocational use, as permitted by the applicable City zoning by-law, conducted in a dwelling unit which is secondary to the use of the dwelling unit as a private residence;

"hospital" means a hospital as defined in the *Public Hospitals Act*, R.S.O. 1990, c. P.40;

"household" means one or more persons living together as a single non-profit, housekeeping unit, sharing all areas of the dwelling unit and may, in addition, be designed to accommodate lodging units containing less than four residents;

"industrial building" means a building used in connection with:

- (a) manufacturing, producing, processing, storing (but only where the storage is ancillary to related manufacturing, production, processing or distribution) or distributing something;
- (b) research or development in connection with manufacturing, producing or processing something;
- (c) retail sales by a manufacturer, producer or processor of something they manufactured, produced or processed, if the retail sales are at the site where the manufacturing, production or processing takes place; or,
- (d) office or administrative purposes, if they are,
 - i. carried out with respect to manufacturing, producing, processing, storage or distributing of something, and,
 - ii. in or attached to the building or structure used for that manufacturing, producing, processing, storage or distribution.

"local board" means a municipal service board, transportation commission, public library board, board of health, police services board, planning board or any other board, commission, committee, body or local authority established or exercising any power under any Act with respect to any of the affairs or purposes of the City or the Regional Municipality of Waterloo (the "Region") or any part or parts thereof, excluding a school board, a conservation authority and any other board excluded under any general or special Act;

"local services" means 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, or as a condition of approval under section 53 of the Planning Act;

"lodging house" means a dwelling or residential building containing one or more lodging units designed to accommodate four or more residents. The residents

may share common areas of the dwelling other than the lodging units, and do not appear to function as a household. This shall not include a group home, nursing home, hospital or any residential care facility licensed, approved, or supervised under any general or specific Act, or a hotel or motel. This shall include but not be limited to student residences, convents, unlicensed nursing homes and tourist homes;

"lodging unit" means a room or set of rooms located in a lodging house designed or intended to be used for sleeping and living accommodation, which:

- (a) is designed for the exclusive use of the resident or residents of the unit;
- (b) is not normally accessible to persons other than the resident or residents of the unit; and
- (c) may contain either a bathroom or kitchen but does not contain both for the exclusive use of the resident or residents of the unit,

but does not include a unit or room in a hotel, motel, nursing or retirement home, group home, or hostel designed for human habitation;

"multiple dwelling" means a dwelling or residential building containing three or more dwelling units, but shall not include townhouse or row dwellings;

"net capital cost" means the capital cost less capital grants, subsidies and other contributions made to the City or that the Council of the City anticipates will be made but only to the extent that the grant, subsidy or other contribution is clearly intended by the person making it to benefit new development and includes conveyances or payments under sections 42, 51.1 and 53 of the Planning Act, in respect of the capital cost;

"non-residential use" means the use of land, building or structures for a use other than residential use, including all commercial, industrial and institutional uses and excluding agricultural uses;

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

"residential use" means the use of land, buildings or structures for one or more single detached, semi-detached, townhouse, row dwelling, multiple dwelling or duplex dwelling units and lodging houses;

"semi-detached dwelling" means a dwelling or residential building divided predominantly vertically into two dwelling units;

"services" means services designated in Schedule "A" attached to this by-law;

"single-detached dwelling" means a dwelling or residential building consisting of one dwelling unit and not attached to another residential structure, and shall include a mobile home located on a foundation;

"site" means a parcel of land which can be legally conveyed pursuant to section 50 of the Planning Act and includes a development having two or more lots consolidated under one identical ownership;

"townhouse or row dwelling" means a dwelling or residential building divided predominantly vertically into three or more attached dwelling units, each of which has a separate entrance from the outside; and

Interpretation

1.2 This By-law shall be construed in accordance with the Act and the regulations thereunder, and the definitions in Section 1.1 shall be read with any necessary modifications as may be required in order to comply with the Act and the Regulation, or any successor legislation, as amended from time to time. Subject to the foregoing, undefined words in this By-law for which definitions exist within the applicable Zoning By-law of the City of Kitchener shall be interpreted and applied in accordance with the said Zoning By-law. The intention of this By-law is that it shall be interpreted and applied in a manner so that there is consistency between the Act, any regulations passed thereunder, and the applicable Zoning By-law of the City.

Declaration

1.3 It is hereby declared by the Council that all development of land within the City will increase the need for services.

Statutory Contents of By-law

1.4 For purpose of complying with section 6 of the Act, rules have been developed as follows:

Rule	Location Reference
The rules for determining if a development charge is payable in any particular case and for determining the amount of the charge	Section 2.3 and Schedule "B"
The rules for determining the exemptions to development charges	Section 2.2
The rules for determining the indexing of development charges	Sections 7.2 and 7.3
The rules respecting the redevelopment of land	Section 6.8 to 6.10
The area of the municipality to which this By-law Relates	Section 2.1

SECTION 2 APPLICATION AND EXEMPTIONS

Geographic Application

- 2.1 Subject to section 2.2, this by-law applies to all lands within the City of Kitchener and any lands outside the City of Kitchener to which services are provided by the City, whether or not the land or use thereof is exempt from taxation under section 3 of the Assessment Act, R.S.O. 1990, c.A.31.

Exceptions

- 2.2 This by-law does not apply to land owned by and used for the purposes of:
- (a) a board of education as defined by subsection 1(1) of the Education Act, R.S.O. 1990, c.E.2;
 - (b) the City of Kitchener or any local board thereof;
 - (c) the Region or any local board thereof;
 - (d) any area municipality within the Region; and
 - (e) the Crown in right of Ontario or the Crown in right of Canada.

Imposition of Development Charges

- 2.3 Subject to sections 2.4 to 2.9 inclusive, development charges shall apply on land to be developed for residential and non-residential use, where the development or redevelopment requires one or more of the following approvals:
- (a) the passing of a zoning by-law or of an amendment thereto under section 34 of the Planning Act, R.S.O. 1990, c. P. 13;
 - (b) the approval of a minor variance under section 45 of the Planning Act, R.S.O. 1990, c. P. 13;
 - (c) a conveyance of land to which a by-law passed under subsection 50(7) of the Planning Act, R.S.O. 1990, c. P. 13 applies;
 - (d) the approval of a plan of subdivision under section 51 of the Planning Act, R.S.O. 1990, c. P. 13;
 - (e) a consent under section 53 of the Planning Act, R.S.O. 1990, c. P. 13;

(f) the approval of a description under section 9 of the Condominium Act, S.O. 1998, c. 19; or

(g) the issuing of a permit under the Building Code Act, 1992, S.O. 1992, c.23 (the "Building Code"), in relation to a building or structure.

2.4 Section 2.3 shall not apply in respect of,

(a) local services; or

(b) local connections to water mains, sanitary sewers and storm drainage facilities installed at the expense of the owner including amounts imposed under a by-law passed under section 326 of the Municipal Act, 2001, c. 25, as amended.

2.5 Where two or more of the actions described in section 2.3 are required before the land to which a development charge applies can be developed or redeveloped, only one development charge shall be imposed, calculated and collected in accordance with the provisions of this by-law.

2.6 Despite section 2.5, if two or more of the actions described in section 2.3 occur at different times and if the subsequent action or actions has the effect of increasing the need for services as designated in this by-law, additional development charges shall be imposed, calculated and collected in accordance with the provisions of this by-law.

2.7 Section 2.3 shall not apply to:

(a) a temporary use permitted under a zoning by-law enacted under sections 39 or 39.1 of the Planning Act, R.S.O. 1990, c.P.13;

(b) an accessory use to residential uses;

(c) a home business;

(d) an agricultural use;

(e) temporary erection of a building without foundation for a period not exceeding six consecutive months and not more than six months in any one calendar year on a site for which development charges or lot levies have previously been paid; and

(f) the enlargement of a new or existing dwelling unit or the creation of additional dwelling units as prescribed by Ontario

Regulation 82/98 and set out in Schedule "D" attached hereto, and as such Regulation may be amended from time to time, provided that:

(i) the number of dwelling units created in the renovated or enlarged residential building does not exceed the applicable maximum number of additional dwelling units set out in Schedule "D" attached hereto, and the total gross floor area of the additional dwelling units does not exceed the applicable maximum gross floor area provisions set out in Schedule "D" attached hereto; and

(ii) no more than one or two additional dwelling units, notwithstanding rental residential buildings, in accordance with this subsection may ever be created without the imposition of development charges.

2.8 Development charges as set out in Sections 3, 4, and 5 of this by-law shall apply to all lands that are developed or redeveloped for residential and non-residential use in accordance with this by-law, but only insofar as,

- (a) the growth-related net capital costs of services are attributable to residential or non-residential use, as the case may be; and,
- (b) the growth-related net capital cost of each service is attributable to the anticipated development and at standards no higher than the average level of each such service provided by the City over the ten year period immediately preceding the preparation of the Study.

SECTION 3 RESIDENTIAL DEVELOPMENT CHARGES

3.1 Development charges against land to be developed or redeveloped for residential use shall be based upon the services to be provided by the City which are designated in Schedule "A" attached hereto.

3.2 Subject to the provisions of this by-law, development charges are hereby imposed against land to be developed or redeveloped for residential use located within the Suburban Area the boundary of which is shown on Schedule "C-2" attached hereto and shall be calculated and collected at the rates set out in Schedule "B" attached hereto.

3.3 Subject to the provisions of this by-law, development charges are hereby imposed against land to be developed or redeveloped for residential use located within the Central Neighbourhoods the boundary of which is shown on Schedule "C-1" attached hereto and shall be calculated and collected at the rates set out in Schedule "B" attached hereto.

- 3.4 Subject to the provisions of this by-law, development charges against land to be developed or redeveloped for mixed residential use shall be the aggregate of the amount applicable for each dwelling unit according to its type as set forth in Schedule "B" attached hereto.
- 3.5 Where Subsection 26.2(1)(a) or (1)(b) of the Act apply to a development for the purposes of determining the amount of the development charge, interest shall be charged on the development charge in accordance with Corporate Policy, as may be amended from time to time with Council approval.

SECTION 4 NON-RESIDENTIAL DEVELOPMENT CHARGES

- 4.1 Development charges against land to be developed or redeveloped for non-residential use shall be based upon the services to be provided by the City which are designated in Schedule "A" attached hereto.
- 4.2 Subject to the provisions of this by-law, development charges are hereby imposed against land to be developed or redeveloped for non-residential use located in the Suburban Area the boundary of which is shown on Schedule "C-2" attached hereto and shall be calculated and collected at the rate set out in Schedule "B" attached hereto
- 4.3 Subject to the provisions of this by-law, development charges are hereby imposed against land to be developed or redeveloped for non-residential use in the Central Neighbourhoods the boundary of which is shown on Schedule "C-1" attached hereto and shall be calculated and collected at the rate set out in Schedule "B" attached hereto.
- 4.4 Despite anything in this by-law, there shall be an exemption from the payment of development charges for one or more enlargements of an existing industrial building on a site in accordance with the Act and the Regulation.
- 4.5 Despite anything in this by-law, there shall be an exemption from the payment of development charges in respect of any enlargement of a hospital.
- 4.6 Where Subsection 26.2(1)(a) or (1)(b) of the Act apply to a development for the purposes of determining the amount of the development charge, interest shall be charged on the development charge in accordance with Corporate Policy, as may be amended from time to time with Council approval.

SECTION 5 MIXED USE

- 5.1 Subject to the provisions of this by-law, development charges against land to be developed or redeveloped for mixed residential and non-residential use shall be the aggregate of the amount applicable to the residential component and the amount applicable to the gross floor area of the non-residential component.
- 5.2 Where Subsection 26.2(1)(a) or (1)(b) of the Act apply to a development for the purposes of determining the amount of the development charge, interest shall be charged on the development charge in accordance with Corporate Policy, as may be amended from time to time with Council approval.

SECTION 6 ADMINISTRATION

Payment

- 6.1 All development charges required to be paid to the City pursuant to this by-law shall be paid by a method acceptable to the Treasurer of the City.

Calculations

- 6.2 Subject to the provisions of this Section, development charges shall be calculated and payable in accordance with Section 26.1 and Section 26.2 of the Act.
- 6.3 Where subsections 26.1 and 26.2 of the Act do not apply, the development charges shall be calculated and payable in full on the date that a building permit is issued in relation to a building or structure on land to which a development charge applies.
- 6.4 Where development charges apply to land where a building permit is required, no building permit shall be issued until the development charge is paid in full in accordance with subsection 26.1 and 26.2 of the Act.
- 6.5 Notwithstanding subsections 6.3 and 6.4, developments to which Section 26.1 applies only, shall be payable in instalments in accordance with the requirements of subsection 26.1 (3), including applicable interest, or in accordance with the terms of an agreement entered into with the City pursuant to section 27 of the Act.
- 6.6 Despite section 6.2, the City may require that development charges applicable with respect to the services described in subsections 2.9 (a) to (d) inclusive of this by-law ("Engineering Services"), be calculated as set

forth in Schedule "B" hereto and payable immediately upon the execution of a subdivision agreement under section 51 of the Planning Act, R.S.O. 1990, c. P. 13. or a consent agreement under section 53 of the Planning Act, R.S.O. 1990, c. P. 13., with respect to the lands to which such agreement, as the case may be, relates.

Credits

- 6.7 The City may by agreement permit the owner of land to which development charges apply to provide services for development or redevelopment of that land in lieu of the payment of all or any portion of a development charge, including services additional to or of a greater size or capacity than is required under this by-law ("services in lieu").
- 6.8 Upon proof of the installation or construction of services in lieu to the satisfaction of the City's Engineer, a credit, without interest, shall be applied against development charges payable for an amount equal to the reasonable cost to the owner of providing services in lieu, as determined by the City's Engineer, not to exceed the total amount of the development charges otherwise payable.
- 6.9 Any unused credit may be applied, upon proof satisfactory to the City's Chief Building Official, to any subsequent development charge payable with respect to the same land as referred to in section 6.5, or transferred and applied to any development charge payable with respect to other land owned by the same owner to be developed or redeveloped with the consent of the City on terms satisfactory to the City Solicitor.

Redevelopment Allowances

- 6.10 Subject to the provisions of this section, where any redevelopment or re-use of land replaces or changes a former or existing development and, in the case of demolition upon proof of issuance of a demolition permit for the land being provided, the development charge applicable to the redevelopment or re-use shall be reduced by a redevelopment allowance, without interest, not to exceed an amount equal to the total of:
- (a) the number and types of legally established residential units in the former or existing development; and
 - (b) the legally established non-residential gross floor area of the former or existing development,
- as determined by the Chief Building Official, or his or her designate, at the rates applicable to such units or gross floor area at the time the first building permit for the re-development is issued.
- 6.11 No redevelopment allowance shall be made in excess of the development

charge payable for a redevelopment; however, the redevelopment allowance may be carried forward and applied, upon proof satisfactory to the City's Chief Building Official, to any subsequent development charge payable with respect to the same land as referred to in section 6.8.

6.12 A credit can, in no case, exceed the amount of the development charge that would otherwise be payable, and no credit is available if the existing built form is exempt under this by-law.

6.13 The availability of redevelopment allowances is time-limited, and such availability shall expire in accordance with the following:

(a) Where a demolition permit was issued after the passing of this By-law:

(i) For the redevelopment of former residential lands, redevelopment allowances shall not be available later than the fifth anniversary of the date on which a demolition permit was issued in respect of the applicable buildings or structures on the lands; and,

(ii) For redevelopment of former non-residential lands, redevelopment allowances shall not be available later than the tenth anniversary of the date on which a demolition permit was issued in respect of the applicable buildings; or structures on the lands; and,

(b) Where a demolition permit was issued prior to the passing of this By-law:

(i) For the redevelopment of former residential lands, redevelopment allowances shall not be available later than the tenth anniversary of the date on which a demolition permit was issued in respect of the applicable buildings or structures on the lands; and,

(ii) For redevelopment of former non-residential lands, redevelopment allowances shall not be available later than the twentieth anniversary of the date on which a demolition permit was issued in respect of the applicable buildings.

6.14 Despite section 6.10, where the applicable timeframes in section 6.10 have not expired, a record of site condition is required for the development of lands, and the process to obtain the record of site condition is underway and is being pursued with all due dispatch, the Chief Building Official may grant one or more extensions to the expiration dates in section 6.10 to alleviate the delay occasioned by the necessity of obtaining a record of site

condition, provided that no such extension (or the cumulative effect of multiple extensions) shall result in a total extension exceeding ten years in relation to any site.

Reserve Funds

- 6.15 Monies received from payment of development charges shall be maintained in a separate reserve fund or funds, and shall be used only to meet the growth-related net capital costs for which the development charge was imposed under this by-law.
- 6.16 Income received from investment of the development charge reserve fund or funds shall be credited to the development charge reserve fund or funds in relation to which the investment income applies.
- 6.17 Where any development charge, or part thereof, remains unpaid after the due date, the amount unpaid shall be added to the tax roll and shall be collected as taxes.
- 6.18 Where any unpaid development charges are collected as taxes under section 6.14, the monies so collected shall be credited to the development charge reserve fund or funds referred to in section 6.12.

SECTION 7 GENERAL PROVISIONS

- 7.1 This by-law shall be administered by the City's Chief Building Official and the City's Treasurer, and their respective designates.

Annual Adjustment

- 7.2 The development charges imposed pursuant to this By-law shall be adjusted annually, without amendment to this by-law, as of the 1st day of December in each year, in accordance with the index prescribed by Ontario Regulation 82/98 and as such Regulation may be amended from time to time.
- 7.3 The minimum interest rate that the City shall pay under subsection 18(3) and 25(2) of the Development Charges Act, 1997, c.27 in relation to a development charges by-law shall be the Bank of Canada interest rate on the day the by-law comes into force and thereafter as such rate is adjusted on the first business day of every January, April, July and October of each year.

SECTION 8
REPEAL – ENACTMENT

Term

- 8.1 This by-law shall come into force and effect on July 1, 2022.
- 8.2 This by-law shall continue in force and effect for a term not to exceed five years from the date of its coming in to force and effect unless it is repealed or replaced at an earlier date by a subsequent by-law.
- 8.3 Nothing in this by-law shall be construed so as to commit or require the City or it's Council to authorize or proceed with any specific capital project at any specific time.
- 8.4 Each and every provision of this by-law is severable and, if any provision or provisions of this by-law should, for any reason, be declared invalid by any court, it is the intention of Council that each and every of the then remaining provisions of this by-law shall remain in full force and effect.
- 8.5 The Clerk is hereby directed to make this by-law a part of The City of Kitchener Municipal Code as Chapter 315 by adding it to the Concordance and arranging and numbering it so as to fit within the scheme of the Code.
- 8.6 By-law No. 2019-086 and the contents of Chapter 315 of The City of Kitchener Municipal Code, as amended, are hereby repealed effective at midnight on June 30, 2022.

PASSED at the Council Chambers in the City of Kitchener this 30th day of May, A.D. 2022.

Mayor

Clerk

Schedule 'A' to Development Charge By-law

Services - Designations

SERVICES DESIGNATION

Residential/Non-residential

1. Sanitary Servicing
2. Services Related to a Highway:
 - a. Public Works
 - b. Roads and Related
3. Watermains
4. Engineering Studies
5. Storm/Watercourse
6. Intensification Allowance
7. Fire Protection
8. Growth-Related Studies

Residential

9. Library
10. Indoor Recreation
11. Outdoor Recreation

SCHEDULE 'B'
DEVELOPMENT CHARGE RATES

	Residential Charge by Unit Type				Non-Residential Charge per m2
	Singles & Semis	Townhouses	Multiples & Duplexes	Lodging Houses	
Total Suburban	\$24,733	\$17,370	\$12,505	\$7,027	\$75.75
Total Suburban Partial Services - No Sanitary Sewer	\$20,403	\$14,329	\$10,316	\$5,797	\$48.55
Total Suburban Partial Services - No Sanitary Sewer or Water	\$19,977	\$14,030	\$10,100	\$5,676	\$45.87
Total Central Neighbourhood	\$16,612	\$11,667	\$8,399	\$4,719	\$25.08

Note: 1 square metre = 10.761 square feet.

SCHEDULE 'C1'

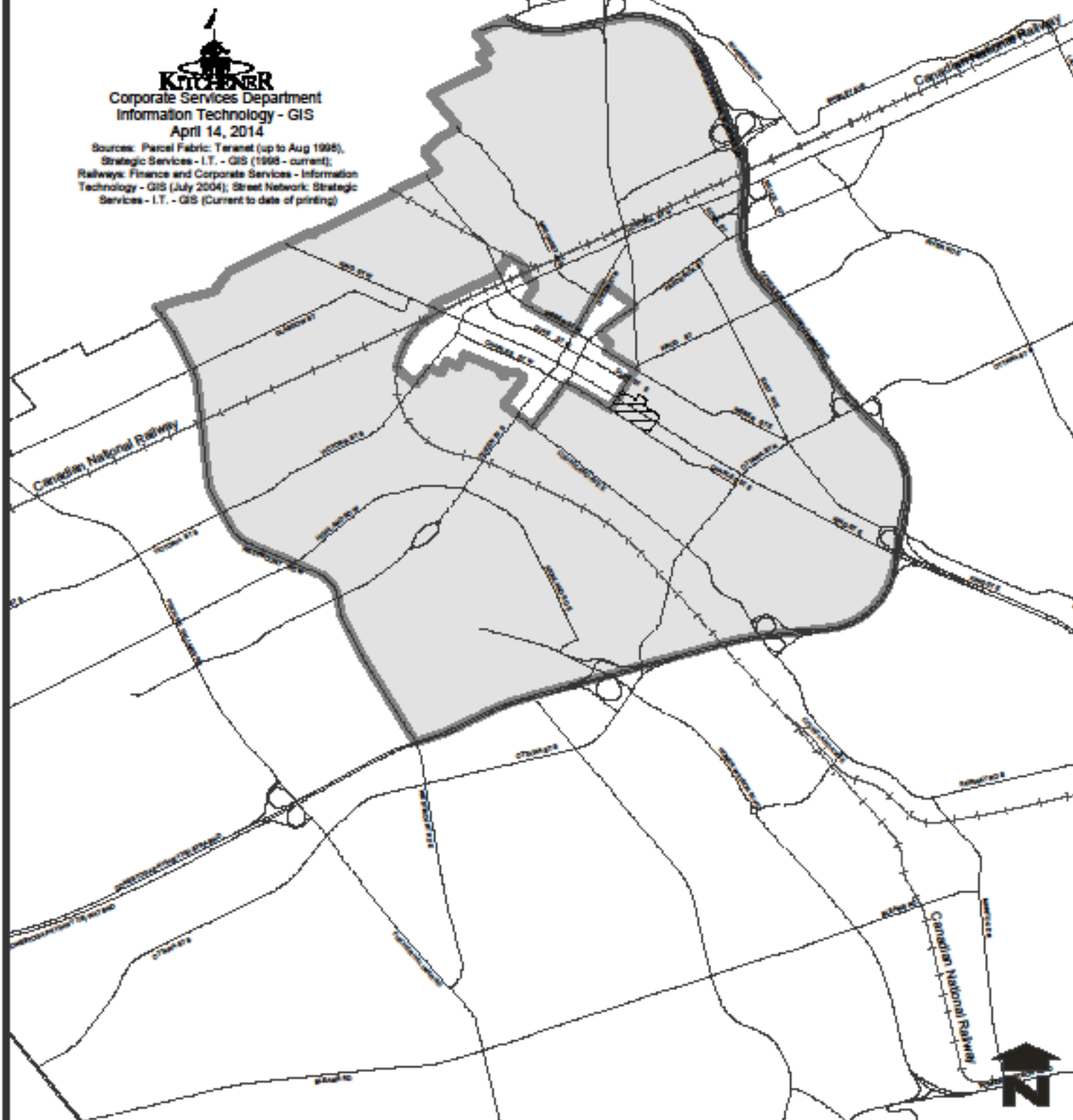
City of Kitchener Central Neighbourhoods

-  Boundary of Central Neighbourhoods
-  Area to be added to Downtown
Core Boundary (Effective July 1, 2016)



Corporate Services Department
Information Technology - GIS
April 14, 2014

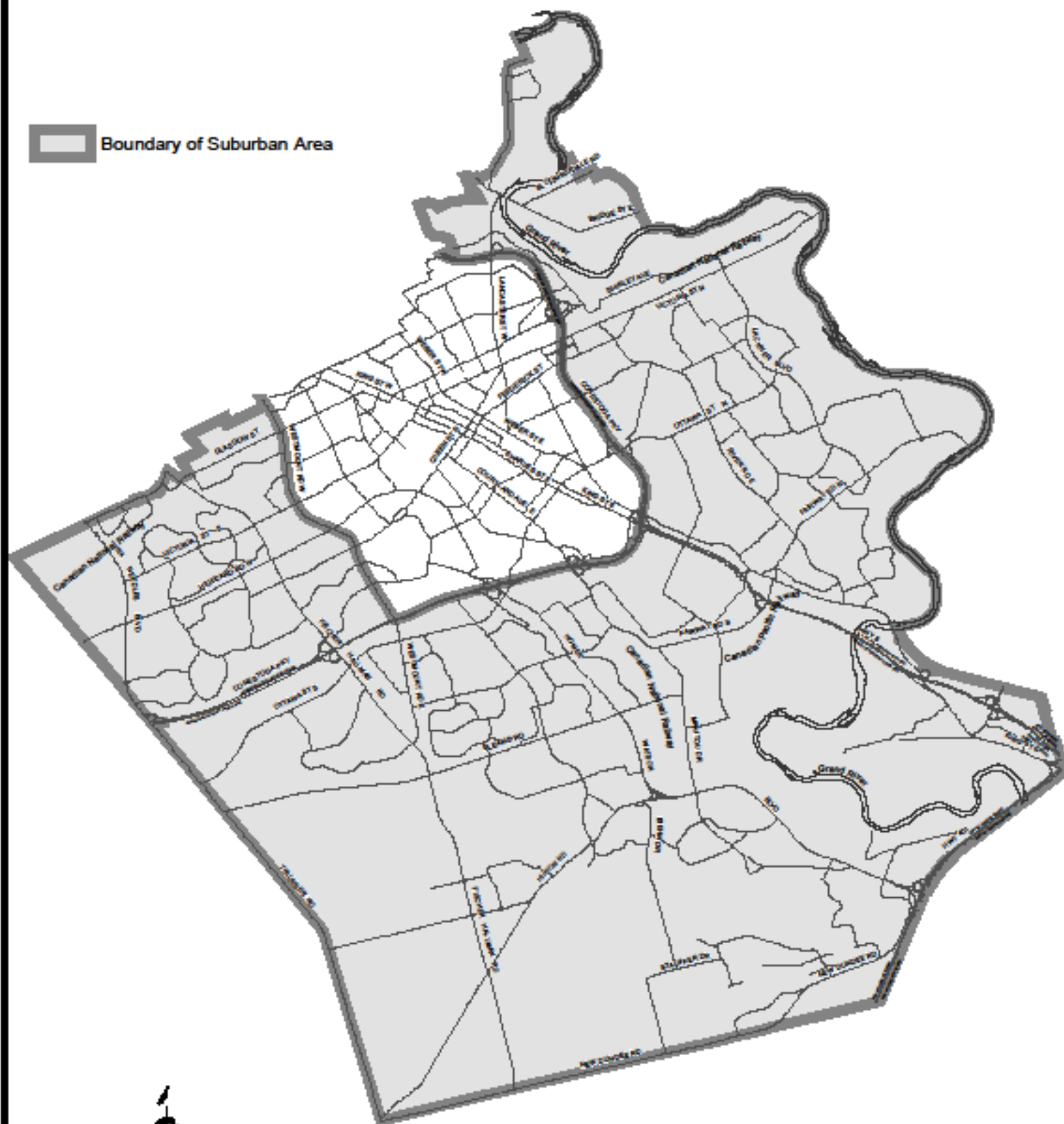
Sources: Parcel Fabric: Teranet (up to Aug 1998),
Strategic Services - I.T. - GIS (1998 - current);
Railways: Finance and Corporate Services - Information
Technology - GIS (July 2004); Street Network: Strategic
Services - I.T. - GIS (Current to date of printing)



SCHEDULE 'C2'

City of Kitchener Suburban Area

 Boundary of Suburban Area



Corporate Services Department
Information Technology - GIS
April 14, 2014

Sources: Parcel Fabric: Teranet (up to Aug 1998), Strategic Services - I.T. - GIS (1998 - current); Railways: Finance and Corporate Services - Information Technology - GIS (July 2004); Street Network: Strategic Services - I.T. - GIS (Current to date of printing)



Schedule 'D' – Classes of Development
Exception Relating to the Creation of Additional Dwelling Units in
Existing Residential Buildings

Name of Class of Existing Residential Building	Description of Class of Existing Residential Buildings	Maximum number of additional dwelling units	Restrictions
Existing single detached dwellings	Existing residential buildings, each of which contains a single dwelling unit, that are not attached to other buildings.	Two	The total gross floor area of the additional dwelling unit or units must be less than or equal to the gross floor area of the dwelling unit already in the building.
Existing semi-detached dwellings or row dwellings	Existing residential buildings, each of which contains a single dwelling unit, that have one or two vertical walls, but no other parts, attached to other buildings.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the dwelling unit already in the building.
Existing rental residential buildings	Existing residential rental buildings, each of which contains four or more dwelling units.	Greater of one and 1% of the existing units in the building	None
Other existing residential buildings	An existing residential building not in another class of residential building described in this table.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the smallest dwelling unit already in the building.

Exception Relating to the Creation of Additional Dwelling Units in New Residential Buildings

Name of Class of Proposed New Residential Buildings	Description of Class of Proposed New Residential Buildings	Restrictions
Proposed new detached dwellings	Proposed new residential buildings that would not be attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new detached dwelling must only contain two dwelling units. The proposed new detached dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
Proposed new semi-detached dwellings or row dwellings	Proposed new residential buildings that would have one or two vertical walls, but no other parts, attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new semi-detached dwelling or row dwelling must only contain two dwelling units. The proposed new semi-detached dwelling or row dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling and that are permitted to contain a single dwelling unit.	The proposed new detached dwelling, semi-detached dwelling or row dwelling, to which the proposed new residential building would be ancillary, must only contain one dwelling unit. The gross floor area of the dwelling unit in the proposed new residential building must be equal to or less than the gross floor area of the detached dwelling, semi-detached dwelling or row dwelling to which the proposed new residential building is ancillary.