DEVELOPMENT FINANCE

2014 Development Charges

Background Study | April 2014

City of London

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CHAPTER 1 - EXECUTIVE SUMMARY

Development Charges provide a method for municipalities to recover cost associated with growth. In Ontario, the *Development Charges Act, 1997* governs the calculation of rates and collection of charges. The Act also dictates that a background study be completed which in general terms, demonstrates that the charges were calculated in accordance with the legislation.

The process used to calculate development charges begins with a growth forecast. How the growth forecasts were compiled is described in Appendix A.

From this growth forecast, service needs associated with growth were compiled. The service needs were projected by all service delivery departments and local boards that provide services that respond to growth needs . In most "hard service" areas, the capital needs were compiled with the help of an external consultant who produced master plans intended to meet the requirements of the Development Charges Act. Care was taken to ensure that the needs identified did not exceed existing historical standards in each service area affected by this legislative requirement.

Once the capital needs arising from projected growth were determined, the process of computing development charge rates ensued. This process included:

- Estimating costs and timing of growth needs;
- Applying statutory deductions to the estimated growth costs including:
    - deductions associated with benefits to growth that occurs beyond the planning horizon for the service in question [post period benefit],
    - benefit to existing development [non-growth share],
    - deduction for grants or other capital funding sources attributable to the growth projects,
    - deductions where service standards would be exceeded by the capital plan, and
    - the statutory 10% deduction for certain "soft services", namely Parks, Recreation, Library and Transit, Growth Studies);
- Allocating the resulting net cost amongst benefiting forms of development (residential, commercial, institutional, and industrial - RICI).

From the resulting net cost attributed to each form of development, existing reserve fund balances are taken into account and preliminary rates (excluding financing costs) are calculated.

The calculations next involve a cash flow analysis that incorporates existing reserve fund balances, projected revenues, projected fund draws, and deferral of recovery for future growth project benefits. From the cash flow analysis, financing costs associated with the growth plan are estimated, and incorporated into the rate calculations.

The objective at the outset of the study was to conduct a consultative process where information pertinent to rate calculations was freely available for scrutiny and debate. We believe that objective was met. Throughout the process described above, this study has benefited from consultation with numerous stakeholders. The External Stakeholder Committee (comprised of representatives from development industry [London Development

Institute], home construction industry [London Home Builders Association] and taxpayer interests [Urban League] met on over thirty (30) occasions during the course of the study to monitor progress, review estimates and assumptions and discuss interim observations. Subgroups met where there was a need to review data and observations in more detail. Numerous City staff in positions responsible for planning service delivery provided information necessary for calculation of existing service levels, growth forecasts and growth related capital needs.

A further objective of the study was to be consistent with the Official Plan provision that "Growth pays for Growth". With that as key guiding principle, we have calculated the most accurate development charge rate possible with regard to the growth assumptions, growth needs and requirements of the underlying statute.

This study incorporates all growth needs associated with development into one document. The scope of the engineered works in the study includes both primary facilities – arterial roads, large trunk works (sanitary and storm), sanitary treatment facilities, storm water management facilities, and water supply and distribution facilities – as well as more local works that serve community growth areas (minor road works, sewers and storm water management facilities).

The City has for several decades financed the cost of oversizing services – storm and sanitary pipes, storm water management facilities and minor roadworks – from a fund called the Urban Works Reserve Fund. The 2014 study continues a trend of narrowing the scope of "Urban Works" incorporated into this study, in favour of an approach that would see the more of these works budgeted by the City (instead of simply incorporated into subdivision and development agreements as claimable works to be built). This represents a continued shift of funding approach for certain works from "Urban Works" to "City Services". This shift is consistent with the recommendations of the Blue Ribbon panel (October, 2006), which recommended this as a means for the City to address a mounting backlog of claims against the Urban Works Reserve Fund and with decisions of Council made in July, 2013 with respect to the UWRF framework of the future.

This document (as well as the DC covering report) contains some discussion of other policy matters addressed and approved through the DC rate setting process described above. These are reflected in Chapter 3 of the study.

The details of the development charge rate calculations are contained in appendices to this study – one appendix for each DC service component. Chapter 3 provides summary level information of all capital needs, allocations to growth and non-growth, allocations to benefiting types of development and rate calculations.

This study reflects rates that are computed within the bounds of the governing statute, and resulting from significant scrutiny and review directed towards establishing their accuracy. The development charge rates reflected in this study are a reasonable representation of the anticipated costs resulting from projected growth, over the planning horizon used to predict the need.

The full calculated rates are contained in Tables 3-2 & 3-3. The recommended rates resulting from this study are summarized in the Table below.

Type of Growth	Calculated DC rate[3]	Existing rate (Jan 1 2014)[3]
Residential -Single family unit(sfu) rate	**$28,143 /unit**	**$23,716 / unit**
Commercial	**$265.94 /sq.m**	**$174.44 / sq.m.**
Institutional[2]	**$138.84 / sq.m.**	**$112.41 / sq.m.**
Industrial [1]	**$173.28 / sq.m.[1])**	**-**

(1) No Industrial rates approved in 2009 DC by-law. City policy has been to exempt Industrial development. Industrial share of growth costs borne through taxpayer financing of individual growth capital projects.
(2) In the same way as explained in (1) above, City taxpayer picked up much of the growth share of Institutional growth due to exemptions by statute and City policy.
(3) Existing rate exclude Water Supply component. The Calculated Rates above include Water Supply rate.

A public meeting to review the contents of this background study as well as the City's proposed Development Charges By-law (effective August 4, 2014) will be conducted on May 5, 2014.

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CHAPTER 2 - DEVELOPMENT CHARGES – PURPOSE AND STUDY PROCESS

Development charges have been collected in Ontario since the 1960's. Their general purpose is to provide a pool of funds to finance capital works to facilitate and to serve growth.

The facilitation of development is a fundamental aspect of municipal government. In executing this role, the City must adequately plan the financing of the significant costs associated with growth. It does so in part, through the research, calculation and adoption of development charge rates.

These rates provide a critical source of financing for engineered services (or "hard services") including road, water and sewer infrastructure, as well as the expansion of Fire, Police, Parks, Recreation, Library and Transit service capacity ("soft services"). These services are all required for urban development.

2.1 Purpose of the Development Charge Study

In Ontario, the provincial government regulates the setting of development charge rates through the *Development Charges Act, 1997.* This development charges background study has been prepared to meet the requirements of that legislation. It is intended to comprehensively explain the City of London's approach to the calculation of the rates and to otherwise meet the standards of the *Development Charges Act, 1997*.

Development Charge rates are authorized and administered under a City by-law. In order to replace the expiring by-laws in a timely manner, the City initiated a review process in 2012. The process was designed to include:

- stakeholder consultation
- the completion of the background study (which is prerequisite to adopting a new by-law),
- and a public meeting (also required by the legislation)

The process will conclude with the adoption of a new development charge by-law, replacing the existing by-law C.P. -1473-212 (as amended), and will establish new rates that are reflective of the capital requirements associated with the growth forecasts.

2.2 City of London Growth Financing Policy

Policies provide for orderly growth and development, and compatibility between the many different uses of land within the City of London. The policies also address the City's objectives with respect to financing of growth. Among the most significant of the policies in this regard are:

OP Section 2.6.2. Growth Management Principles

ix) that the implications of new development for the financial health of the municipality will be assessed and that growth related costs will be financed from revenues generated from growth;

OP 2.6.3. Growth Financing Policies

The financing requirements to service new development should not jeopardize the long term financial health of the municipality or place an undue burden on existing taxpayers. The following growth financing policies are intended to achieve these objectives:

i) Growth related capital costs will be recovered from revenues generated from new development.

iii) The City will consider, as part of the area study process, the involvement of the private sector in the development, operation, construction and financing of long term servicing infrastructure.....

v) The City may explore alternatives for the financing of oversizing costs (that portion of servicing projects that have been sized to accommodate growth beyond the planning period) until these costs and related interest carrying costs can be recovered from future development.

vi) The City will plan and budget for major infrastructure works in keeping with its financial management strategy and with regard for the balance of revenues and expenditures from its development charges funds. Infrastructure works and development approvals may be staged accordingly.

vii) The City will consider, as part of a development charges study, the use of a differential development charge to encourage intensification and infilling.

(Clauses vi) and vii) added by OPA 438 Dec. 17/09)

OP 2.6.4. Growth Servicing Policies

The City of London will plan the provision of services to accommodate growth so that servicing is timely, cost efficient, environmentally sound, consistent with long term servicing plans and within the financial means of the municipality. Servicing subject to this strategy includes physical infrastructure such as sanitary sewerage works, storm drainage works, water supply and distribution, and road works. It also includes the provision of community facilities and services including parks and recreation facilities, libraries, public transit, and fire and police services.....

A more complete compilation of the Official Plan policies as they relate to growth management and financing can be found in Appendix Q.

2.3 City of London Development Charge Policy

The table below describes types of works that are included in rate calculations as well as exempted works. The City's "Local Servicing Policy" has been provided as Appendix N.

City of London – Development Charge Policy (by Service Component) **(the reader should refer to DC by-law for complete details)**		
Recovered through DC's		***Exempted prior to 2014***
Construction of Oversized works (potentially in cooperation with local developer)	***City Construction of Growth related Capital Program***	***Works currently Exempted*** ***(L-legislative exemption; or C- City currently does not collect a DC for these, by policy)***
Minor Roadworks within & proximate to development – (eg.channelization) associated with community development	Arterial Road expansion Rural Rd upgrade to urban standard Bus Rapid Transit road network capacity improvements	
Oversized Water Mains within development	Water – trunk line pipes and supply capacity	(***C***) -Water Supply capacity provided by Lake Huron or Lake Erie joint water supply board
Sanitary Sewers – subsidy for oversizing collection pipes (pipe diameters >250mm in diameter)	Sanitary Sewers – trunk collection pipes, permanent pump stations and treatment capacity	
Storm Water – a portion of the cost of collection pipes (pipe diameters >1050mm in diameter) - eligible for subsidy upon construction	Storm Sewers – trunk collection pipes and storm water management facilities	
	Fire – stations, equipment, outfitting costs	(***L***) Cultural or Entertainment Facilities, tourism facilities, acquisition of Land for Parks, provision of Hospitals, provision for waste management services, general administrative headquarters
	Police – facilities, equipment, outfitting costs	(***L***) – 10% exemption for "Soft Services" (ie. non-infrastructure including Fire, Police, P&R, Library, Transit, Growth Studies)

City of London – Development Charge Policy (by Service Component) **(the reader should refer to DC by-law for complete details)**		
Recovered through DC's		***Exempted prior to 2014***
Construction of Oversized works (potentially in cooperation with local developer)	***City Construction of Growth related Capital Program***	***Works currently Exempted*** ***(L-legislative exemption; or C- City currently does not collect a DC for these, by policy)***
	Corporate Growth Studies – growth studies with a regional or City wide scope	(***C***) – generally services rarely included in DC by-laws including :Social Housing, Long Term Care Facilities, Public Works Maintenance Equipment (must be expected to last > 7 years to be eligible)
	Library – facilities, collections	
	Parks & Recreation Facilities, Park Development – for example neighbourhood parks, district, sports fields, major open space, ESA's, parkway extension,	
	Transit – facilities, buses	
		(***C***) – new Ops Center currently expected to be needed by 2020

In addition to the above, the City's DC rate policy had in the 2009 DC by-law, exempted the following types of development from rates (L- denotes legislative exemption; C- denotes exempted by City policy):

1) Lands owned by boards of education as defined in the Education Act (L)
2) Lands owned and used by the Corporation of the City of London including Library, Covent Garden Market, London Convention Center, London Police and London Transit (L)
3) Space added to an existing dwelling unit (L)
4) Creation of one or two additional dwelling units in an existing single detached dwelling or one additional dwelling unit in any other existing residential building, provided that the total gross floor area of the additional unit(s) does not exceed that of the existing dwelling (L)
5) Expansion of existing industrial buildings (L)
6) Parking building or structure(s) (C)
7) Structure(s) intended for seasonal use only that do not have water and sanitary facilities (C)

8) 'Temporary Garden Suite(s)" installed in accordance with the provisions of the Planning Act, as amended (C)
9) Non-residential farm buildings which support agricultural uses (C)
10) Commercial truck service establishment(s) (C)
11) New industrial buildings as defined in the by-law (C)
12) Residential unit development in defined areas of Downtown or Old East Village Areas (C)
13) For development in relation to lands, buildings, or structures used for a place of worship or the purposes of a cemetery or burial ground or other non profit organizations exempt from taxation under the Assessment Act , there is 50% exemption from City Services Reserve Fund charges (C)

The manner in which development which is currently exempted or eligible for discounts under the 2009 DC by-law underwent significant review in 2014. The outcome of that review was to opt to remove certain exemptions previously embedded in the 2009 DC by-law, and rather define the exempted development in Community Improvement Plans (CIP's), as well as define the qualifying criteria for relief from Development charge rates otherwise payable and other aspects of the DC exemption or discount.

Those CIPs are being formulated as this background study and the 2014 DC by-law are being written. To address the potential for a lag in the creation of these by-laws beyond the effective date of the new DC by-law, the new DC by-law continues with the exemption and discount rules as they exist in the current by-law until the new exemption as defined by the CIP is adopted by Council.

2.4 Development Charge History and Urban Works

The first development charges in London had their origin in the City of London Act, 1971. This private legislation provided a mechanism for the City to recover the costs of improvements to boundary roads and outlet sewers. This system provided the funds needed to reimburse developers who constructed such "urban works' that served areas beyond their own developments.

In 1991, with the advent of the *Development Charges Act, 1989*, the City continued with a charge for urban works (which provided for financing of growth related works built in conjunction with development), but also instituted a separate charge for Roads, and Sanitary Sewers. The latter charge was designed to recover a part of the growth related costs of works included in the City capital budgets.

With annexation in 1993, the City again undertook a rate study which consolidated rates in the existing City, with those of the large predominantly rural areas.

In 1997, a new act – the *Development Charges Act, 1997* – required a further review of the rates. Development charge by-laws were approved under that legislation in 1999, 2004 and 2009. An amendment to the 2009 by-law was made as a result of appeals to the Ontario Municipal Board (OMB) by-law in 2010. DC by-laws expire after five (5) years (in accordance with the legislation), and the impending expiry of the City's by-law (August 3, 2014) makes the completion of this study necessary.

2.4.1 Urban Works and the OMB

In 1999, the City struck two separate development charge by-laws:

- one for the charges recovered for large scale growth related works built by the City of London;
- another for the smaller scale works referred to as "Urban Works" for oversizing of works generally constructed in conjunction with subdivisions and site plan developments.

However in an OMB decision rendered in February, 2002 (Mistretta appeal under the Development Charges Act, s. 22(1)), the presiding member stated:

> "……, the Board finds the relationship between the City's UW By-law, its DC By-law, and the *Development Charges Act* and its regulations to be curious. The *Development Charges Act* created a uniform set of principles to be followed and applied by municipalities throughout the Province, when imposing charges on development in order to obtain contributions towards the net capital costs that are related to growth."

In concluding,

> "The Board finds that the UW By-law is a form of Development Charge By-law, which brings with it the rights, restrictions and limitations established by the Development Charges Act and the regulations....."

In July, 2003, Council agreed to continue with the operation of the fund in its current form. The rates and policies with respect to Urban Works were continued with one major difference: what were formerly two by-laws were then combined into a single by-law.

2.4.2 Blue Ribbon Panel – a new direction for funding of works from UWRF

A "Blue Ribbon Panel" of development experts was commissioned by the City to address a growing concern over the financial health of the fund and to recommend changes to address these concerns. In, October, 2006 the Panel (chaired by Lyn Townsend, LLB) tabled a report on aspects of the City's development charge policy. Their recommendations addressed many general elements of the City's existing DC policy including affordability, accuracy of cost estimates, use of DC funds collected and fund governance. They also address specific elements of the UWRF funding approach. The panel recommendations that relate to financing development and the status of each recommendation are summarized below:

Item	***Blue Ribbon Panel Recommendation***	***Status***
1)	that the UWRF should continue to exist in a modified form with the intent that sufficient funds be available to pay for the works in a reasonable time period;	The 2009 DC background study assumed continuation of UWRF with recovery of claimable costs generally over a 20 yr. period. The 2014 study continues the subsidy of some of the UWRF eligible works, but reassigns the budgeting and timing for such

Item	*Blue Ribbon Panel Recommendation*	*Status*
		works to programs within the Capital Budget.
2)	that minor growth related capital works be redefined so that more major works would become the responsibility of the City to fund under its annual Capital Budget approval process;	The 2009 DC background study assigned responsibility for major works previously financed from UWRF to CSRF (projects funded by CSRF are subject to Council approval through annual budget process) With the 2014 DC study, the City has once again reviewed the Local Servicing Policy, and slightly expanded the list of works eligible for cost sharing.
3)	that a new background study be undertaken for both the City Services and UWRF development charges by-laws;	Completion of a DC background study satisfies this requirement.
4)	that a new administrative structure be developed by the City to oversee the development of background studies for development charges, to administer the claims to the UWRF, to monitor the costs and charges being approved and to develop and administer front ending agreements arising from capital works for City Services;	The Development Finance unit has been created, headed by a Director of Development Finance. This position reports to the City Treasurer.
5)	that the City set up a program to monitor and review rates and costs to ensure that Development Charge rates are reflective of the true costs of the works and that unanticipated works and contingencies are properly taken into account in calculating the rates;	Monitoring program was initiated in 2012 with plans to expand the monitoring effort after passage of the 2014 DC by-law. This monitoring is important as DC financed debt levels rise. It may result in changes to project timing, to ensure that the pace of investments in growth are balanced with the DC collections. Monitoring may also result in a need for a DC by-law rate amendment, if actual costs vary significantly from those projected in these rate calculations.
6)	that the City review the UWRF and CSRF rate by-law where circumstances which would affect the rate (for example, significant deviations from the projects anticipated in the background study) arise in the future;	
7)	that the Development Charges Monitoring Committee be replaced	Reports will be directed to Corporate Services Committee

Item	*Blue Ribbon Panel Recommendation*	*Status*
	by administrative review and quarterly reports to Board of Control and Council, and that an ongoing working relationship with the development industry be continued to discuss emerging issues and to develop revisions to development charges where required;	or Strategic Prioirties and Policy Committee; working relationship with Development Industry is already established and will be continued.
8)	that the City consider issues of servicing costs and prematurity early on in the development process prior to proceeding to detailed studies and development conditions and that the issue of prematurity be considered by Council where there are significant servicing costs impacts on projects funded from City Services or Urban Works	Issues of prematurity are addressed by Development Finance Unit through the Growth Management Implementation Strategy (GMIS) and DC fund monitoring
9)	that the City consider utilizing front ending agreements as a mechanism for the early emplacement of infrastructure defined by the City's capital budget and funded from City Services Reserve Fund; and	Policy on Municipal Servicing Agreements was developed and approved by Council in 2013. Draft Municipal Servicing Agreement was developed in 2013 in conjunction with the process to redefine the Urban Works framework.
10)	that a detailed review be undertaken of the rules and claimable works allowed in the UWRF to limit the scope of works to site specific works with an oversizing component.	During the 2014 DC rate setting process, the City formally reviewed its Local Servicing Policy (which defines the limits of claimable works), and incorporated necessary changes in the rate calculations.

The table above indicates that recommendations of the Blue Ribbon Panel report will have been substantially fulfilled with the changes to DC policy, organization structure and monitoring efforts that have been undertaken since the tabling of its report.

2.4.3 Revisions to the Current UWRF Funding Approach

One of the primary intentions of the 2014 DC background study process was to address the recommendations of the Blue Ribbon Panel (BRP) as they relate to the operations of the Urban Works Reserve Fund. As a result of discussions undertaken through the DC policy review process, the UWRF will continue to exist, but in a significantly modified form. The following paragraphs discuss some of the key changes:

A. New rules have been developed to redefine claimable works in subdivision agreements entered after the effective date of this by-law. These generally are:

i. All SWMF facilities will be constructed according to the timing incorporated into the annual capital budget. Project timing and budget approvals are subject to amendment based on satisfactory performance of the DC reserve fund affected;
ii. Oversizing subsidy for waterlines (> 250mm and <400mm in diameter);
iii. Oversizing subsidy for sanitary sewers begins for pipes >250mm diameter (previous cut off point was >300mm diameter);
iv. Ovesizing subsidy for storm sewers remains at >1050mm

In general therefore, the scope of the UWRF works has relieved of responsibility for the timing and funding of SWM ponds while the scope of oversized pipes has been increased slightly. Council will be responsible for approving the timing of all major works (works external to subdivisions, regional SWMF's); oversizing of works internal to a subdivision would continue to be completed by the developer, with eligibility for oversizing subsidy.

B. Claims that are for completed works but are unpaid upon tabling of this background report are incorporated into the "UWRF Retirement rate calculations" at the unpaid amount. All claims for works identified as UWRF claims in agreements executed prior to the implementation of this policy, will continue to be paid on the first-in-first-paid basis, as funds allow, and subject to annual "caps" (same basis as currently exists).

C. Specific rules related to claims under both existing agreements and agreements after the effective date of the by-law are contained in schedules to the DC by-law.

2.4.4 Municipal Servicing and Financing Agreements (MSFA)

Consistent with the recommendations of the Blue Ribbon Panel, the City has developed an approach to financing growth works that will, under certain conditions, allow a developer to accelerate the construction of the works, while at the same time, allowing the City to live within acceptable limits of debt and accelerated approvals of future capital works. The policy adopted by Council is reproduced in Appendix R. A draft agreement to capture the significant elements of such a policy was also developed as part of the discussions between representatives of the development industry, City administration, and mediated by Lynda Townsend (chair of the previously cited Blue Ribbon Panel).

This policy will involve the proponent developer and City entering an agreement (MSFA). In administering this policy, the City will also consider the following:

i. ability of the City to afford (ie. the non-growth share) a project, given the current state of tax supported reserve funds and debt;
ii. the existing level of development charge supported debt and ability of the reserve fund to meet the cash flow obligations for the service to be accelerated (ie. existing debt obligations and those proposed for projects which would normally precede the project being accelerated);
iii. minimal conditions and prerequisites incorporated into the adopted MSFA policy
iv. criteria to determine whether a proposed acceleration of a growth capital project in the area is desirable (e.g. takes advantage of spare capacity in other service areas, enhances market competition, meets City strategic objectives).

Further details on the MSFA policy and draft agreement can be found in Appendix R.

2.5 Methodology for Development Charge Rate Calculation

This section briefly describes the various elements of the development charge legislation and how each has been addressed in this study.

2.5.1 Growth Forecasts

The development charge legislation requires (under s.5 (1)1.) that "The anticipated amount, type and location of development for which development charges can be imposed must be estimated". The work plan for this study therefore began with a projection of development activity (referred to as "growth forecast"). These projections are necessary for prudent planning of municipal services and facilities. They represent the base assumption from which growth needs were projected.

In 2012, Altus Group Economic Consulting prepared population, employment, housing and non-residential space projections for the City of London. These projections outlined anticipated growth for a 20+ year period to be used for planning purposes in several corporate studies, including the 2014 Development Charges Study. On October 30, 2012, Council endorsed the use of the Altus growth projections for DC Study purposes, based on a Staff recommendation. In completing the work on the DC rates, changes to commercial growth forecasts were determined to be necessary, based on a review of the "space factors" assigned to growth in commercial (Office and Retail) employees. These changes were incorporated into growth allocations to determine capital needs and DC rate calculations for all services.

Ultimately, the growth projections (as amended) become the basis for the determination of the growth-related capital needs used in the DC rate calculations.

A complete explanation of the growth forecast study methodology and its conclusions can be found in Appendix A.

2.5.2 Projecting Future Capital Needs Arising from Growth Forecasts

Assumptions about the location of the anticipated growth were prerequisite to the next phase of the development charges study, that being the determination of municipal infrastructure and facility needs that result from the anticipated growth. The determination of municipal needs answers 'what infrastructure, facility and major equipment needs arise from anticipated growth in London?'. This step is required under s.5 (1)2. of the Act.

Capital needs resulting from growth projections were identified for "soft service" categories (ie. Fire, Police, Library, Transit, Parks & Recreation, Growth Studies) by the department, board or commission responsible for service delivery. The types of expenditures that are eligible for inclusion in the cost of capital needs are specified in s.5 (3) of the Act, being:

1. Costs to acquire land or an interest in land, including a leasehold interest.
2. Costs to improve land.
3. Costs to acquire, lease, construct or improve buildings and structures.
4. Costs to acquire, lease, construct or improve facilities including,
    i. rolling stock with an estimated useful life of seven years or more,
    ii. furniture and equipment, other than computer equipment, and
    iii. materials acquired for circulation, reference or information purposes by a library board as defined in the *Public Libraries Act*.

5. Costs to undertake studies in connection with any of the matters referred to in paragraphs 1 to 4.
6. Costs of the development charge background study required under section 10.
7. Interest on money borrowed to pay for costs described in paragraphs 1 to 4.

2.5.3 Local Services to be Installed or Paid for by Owner

The Act recognizes that certain services may be required as a condition of development to be installed and paid for by the owner as a condition of approval under the *Planning Act*. This element of the legislation pertains to hard services with a local component. Accordingly, the local share of services is excluded from the development charge rate calculations. What constitutes the local share of services for the purpose of their exclusion from the development charge calculations was addressed in each of the background studies for infrastructure. The City's "Local Servicing Policy" has been provided as Appendix N.

2.5.4 Council's Intention to Meet Growth Needs

Under the legislation, Council must indicate its intention to meet the growth related capital needs through an approved official plan, capital forecast, or similar expression of Council (s.5 (1)3. and related regulations). Most of the engineered "hard service" needs were identified through the City's Growth Management Implementation Strategy which preceded the completion of this background study. The GMIS was approved by Council in February, 2014. A recommendation for approval of the capital needs identified in this background study, subject to annual review in the Capital Budget approvals process, is contained in the recommendations being tabled in relation to the DC rate approvals.

The complete details of all projected needs for each service category are contained in Appendices B through M.

2.5.5 Legislated Adjustments to Arrive at Amount Eligible for Rate Calculations

Before arriving at amounts eligible for inclusion in development charge rates, there are several adjustments that must be addressed:

1. any excess capacity in existing facilities must be taken into account in arriving at the amount of the capital needs used for development charge rate calculation purposes (s.5 (1)5.). Excess capacity is considered in planning all growth related works. Where there is excess capacity that Council has stated an intention would be paid for by new development, an exception exists. This exception pertains, for example, to "oversized services"[1] constructed in the past and which have been funded by private debt. In this case, the existing debt on the works which benefits growth in the time horizon of this study is included in rate calculations.
2. the development charge rate calculation cannot include an increase in need which benefit to existing development (s.5(1)6.). The benefit to "existing development" is also commonly referred to as the "non-growth share". The assessment of benefit to existing development is unique to each projected capital need and to when the need was identified.
3. the rate calculation must exclude anticipated capital grants, subsidies or other contributions (s.5 (2)) subject to whether the person making it expressed a clear

[1] The term "oversized services" refers to services which were designed to serve growth beyond the particular development that triggered the works.

intention that all or part of the grant, subsidy or other contribution be used to benefit existing development or new development. Where applicable, these contributions have been identified and accounted for in the rate calculations.

4. for certain service categories – namely Corporate Growth Studies, Library, Parks and Recreation, Transit, a 10% deduction from the costs otherwise determined to be eligible for inclusion in development charge rate calculations is mandated (s.5(1)8.). Where applicable, these deductions are identified, in the respective rate calculations.
5. In order to facilitate the calculation of separate residential and non-residential rates for each service, an allocation of the eligible costs to the various types of growth is made. This element of the rate calculation required judgment, and was addressed for each service component.
6. The rate calculations incorporated into this study incorporate an offset to the costs otherwise included in the rate calculations to recognize the amount of uncommitted reserve funds. These uncommitted reserve funds have been accumulated in the past, for projects that remain to be completed in the future, and are available to fund a portion of the growth needs identified in this study. They have therefore been deducted from the amounts to be collected from future growth.
7. Finally, the rate calculations include financing costs. These financing costs have been determined through a cash flow analysis that combines :
    a. the opening uncommitted balance of the Reserve Fund
    b. the projected revenues from DC rates (prior to inclusion of the financing costs in the rate)
    c. the projected drawdowns from the DC reserve funds, based on the portion eligible for DC funding
    d. the projected ending balance, which includes provision for funding the post period benefit from future growth.

    The cash flow model that simulates reserve fund activity and incorporates the above elements then produces the DC rates that include financing costs.

These are the key elements of the rate calculations as set out in the legislation. Each element has been addressed in arriving at the development charge rate eligible amount in the respective Appendices B through M.

2.5.6 Examination of Existing Levels of Service

To ensure that municipalities do not improve their existing levels of service through capital improvements funded by developer contributions, the Act provides protection under (s.5 (1)4.).

Section 5(1)4 prohibits inclusion of infrastructure and facilities in rate calculations if their inclusion would improve municipal service standards above those that existed in the ten years preceding this background study. The regulations provide additional detail on this point :

- First, the regulations provide that where existing service standards are lower than those provided by another Act, the standard of service provided under the other Act prevails. This affects the design of most engineered infrastructure. In these cases, current design standards (rather than historical standards) are used to plan all future works.

- Secondly, the regulations specify that in measuring existing service levels, both the quantity and quality of those services should be taken into account. The City interprets quality to refer to the 'nature and grade of excellence' of a service. Quantity refers to the 'number and size' of the facilities used to provide services. By assessing the existing services with respect to these two characteristics, this study has arrived at an objective measure of existing service standards (where required). By using replacement costs to compute the existing standard (as required by regulation), a rational, objective comparison can be made between:
  - the current cost estimate of planned future services and
  - the current cost equivalent (considering quality and quantity) of existing services.

Analysis of existing levels of service are included in the Appendices where applicable.

2.5.7 Review of Long Term Capital and Operating Costs

The Act also requires that the background study contain "an examination, for each service to which the development charge by-law would relate, of the long term capital and operating costs for capital infrastructure required for the service" (s.10(c)). This examination appears in Appendix O.

2.5.8 Calculation of Development Charge Rates

The forecast of growth provides the basis for the growth needs calculation. The needs that result from the forecasted growth have been determined. The cost of each identified need was estimated, along with its expected timing. Through attention to the various exclusions required by the legislation (see above), an amount eligible for inclusion in the development charge rate calculation has been determined.

Development charge rates are ultimately calculated by dividing:

The 'development charge rate eligible capital needs'
by
The growth forecast that gave rise to the capital needs.

Key elements of the development charge rate setting process described in the preceding sections are depicted in Figure 2-1 below.

FIGURE 2-1 – Illustration of Development Charge Rate Calculation Steps

City of London

Development Charge Rate Calculation

Legislation

- *5 (1)1. The anticipated amount, type and location of development, for which development charges can be imposed, must be estimated.*
- *5 (1)2. The increase in the need for service attributable to the anticipated development must be estimated for each service to which the development charge by-law would relate.*
- *5 (1)4. The estimate under paragraph 2 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 required under section 10.*
- *5 (1)3. The estimate under paragraph 2 may include an increase in need only if the council of the municipality has indicated that it intends to ensure that such an increase in need will be met. The determination as to whether a council has indicated such an intention may be governed by the regulations.*
  - *Regulations*
  - *3. 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. O. Reg. 82/98, s. 3.*
- *5 (1)5. The increase in the need for service attributable to the anticipated development must be reduced by the part of that increase that can be met using the municipality's excess capacity, other than excess capacity that the council of the municipality has indicated an intention would be paid for by new development.*
  - *Regulations*
  - *5. For the purposes of paragraph 5 of subsection 5 (1) of the Act, excess capacity is uncommitted excess capacity unless, either before or at the time the excess capacity was created, the council of the municipality expressed a clear intention that the excess capacity would be paid for by development charges or other similar charges. O. Reg. 82/98, s. 5.*
- *5 (1)6. The increase in the need for service must be reduced by the extent to which an increase in service to meet the increased need would benefit existing development.*

Process

Existing Service Standards assessed

Expression of intention to meet need

project cost of services required to serve anticipated growth ("increased need")

Allocation of costs Growth

Allocation of costs Non-Growth

Allocation of costs Residential growth population

Allocation of costs Non-Residential growth

Estimate population and non-residential space to be served

Background Studies

- Growth Forecast
- For “soft services” measure existing service standards

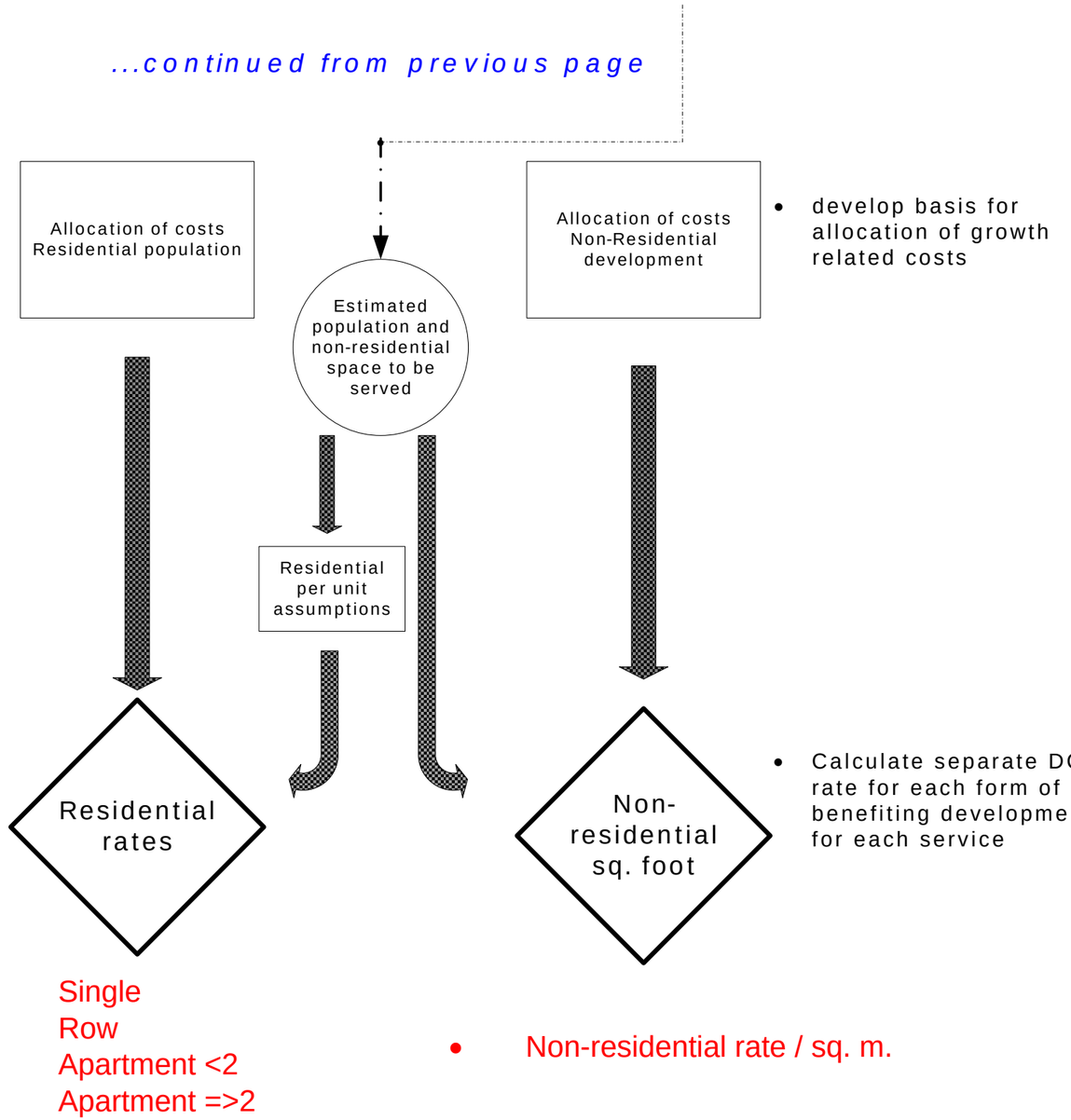
- complete Master Planning studies based on growth projections (including gross cost of service needs)
- incorporate existing fund obligations, other anticipated funding contributions

- Consider existing capacity in facilities ?
- consider amount of area which benefits from the works, and which requires remedial works
- consider whether area has contributed to development charges for this component
- Consider whether future growth benefits from the works

FIGURE 2-1 – Illustration of Development Charge Rate Calculation Steps (continued)

- *4. (1) For the purposes of paragraph 4 of subsection 5 (1) of the Act, both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service. O. Reg. 82/98, s. 4 (1).*
- *(1.1) In determining the quality of a service under subsection (1), the replacement cost of municipal capital works, exclusive of any allowance for depreciation, shall be used*
- *(2) A geographic area of the municipality may be excluded in determining the service and average level of service if,*
- *(a) the service is not provided in the excluded geographic area; and*
- *(b) the excluded geographic area is identified in the by-law. O. Reg. 82/98, s. 4 (2).*
- *(3) If the average level of service determined is lower than the standard level of service required under another Act, the standard level of service required under the other Act may be deemed for the purposes of paragraph 4 of subsection 5 (1) of the Act to be the average level of service. O. Reg. 82/98, s. 4 (3).*
- *(4) Subject to subsection (2), if a development charge by-law applies to a part of the municipality, the level of service and average level of service cannot exceed that which would be determined if the by-law applied to the whole municipality. O. Reg. 82/98, s. 4 (4).*
  - *Regulations*
  - *8. A development charge background study under section 10 of the Act shall set out the following for each service to which the development charge relates:*
    - *1. The total of the estimated capital costs relating to the service.*
    - *2. The allocation of the costs referred to in paragraph 1 between costs that would benefit new development and costs that would benefit existing development.*
    - *3. The total of the estimated capital costs relating to the service that will be incurred during the term of the proposed development charge by-law.*
    - *4. The allocation of the costs referred to in paragraph 3 between costs that would benefit new development and costs that would benefit existing development.*
    - *5. The estimated and actual value of credits that are being carried forward relating to the service. O. Reg. 82/98, s. 8.*

S:DC Project 2008\DC rate steps - conceptual diagram



2.5.9 Public Review Process and Stakeholder Consultation

The public review process provides the opportunity for interested parties to make representations on the proposed by-law. The legislation prescribes:

- that Council conduct a public meeting
- that at least 20 days notice of the meeting be provided
- that the background study and proposed by-law be made available at least two weeks prior to the meeting, and
- that any person who attends the public meeting be allowed to make representations concerning the proposed by-law

The City of London also undertook, at the outset of the process to include various stakeholder groups. The group collectively was referred to as the External Stakeholder Committee. Constituted by a report to Council in April, 2012, the group was comprised of the following representatives:

> **Development and Home Building Industry**:
> London Development Institute (Jim Kennedy, Craig Linton); Dick Brouwer, independent developer; London Home Builders Association (LHBA) (Lois Langdon and Toby Stolee)
>
> **Property Taxpayer Association**:
> Urban League (Sandy Levin, Gloria McGinn-McTeer)

The group and technical subgroups of this committee met regularly beginning in August, 2012 and on at least two dozen occasions since, for the purpose of discussing and compiling DC policies and all the rate calculations included in this background study as they developed.

Numerous further meetings were conducted “off line” between representatives of the City’s Engineering Department, the Development Finance Division and either the London Development Institute, LHBA or Urban League, to discuss various issues in more depth than the formal consultation process allowed.

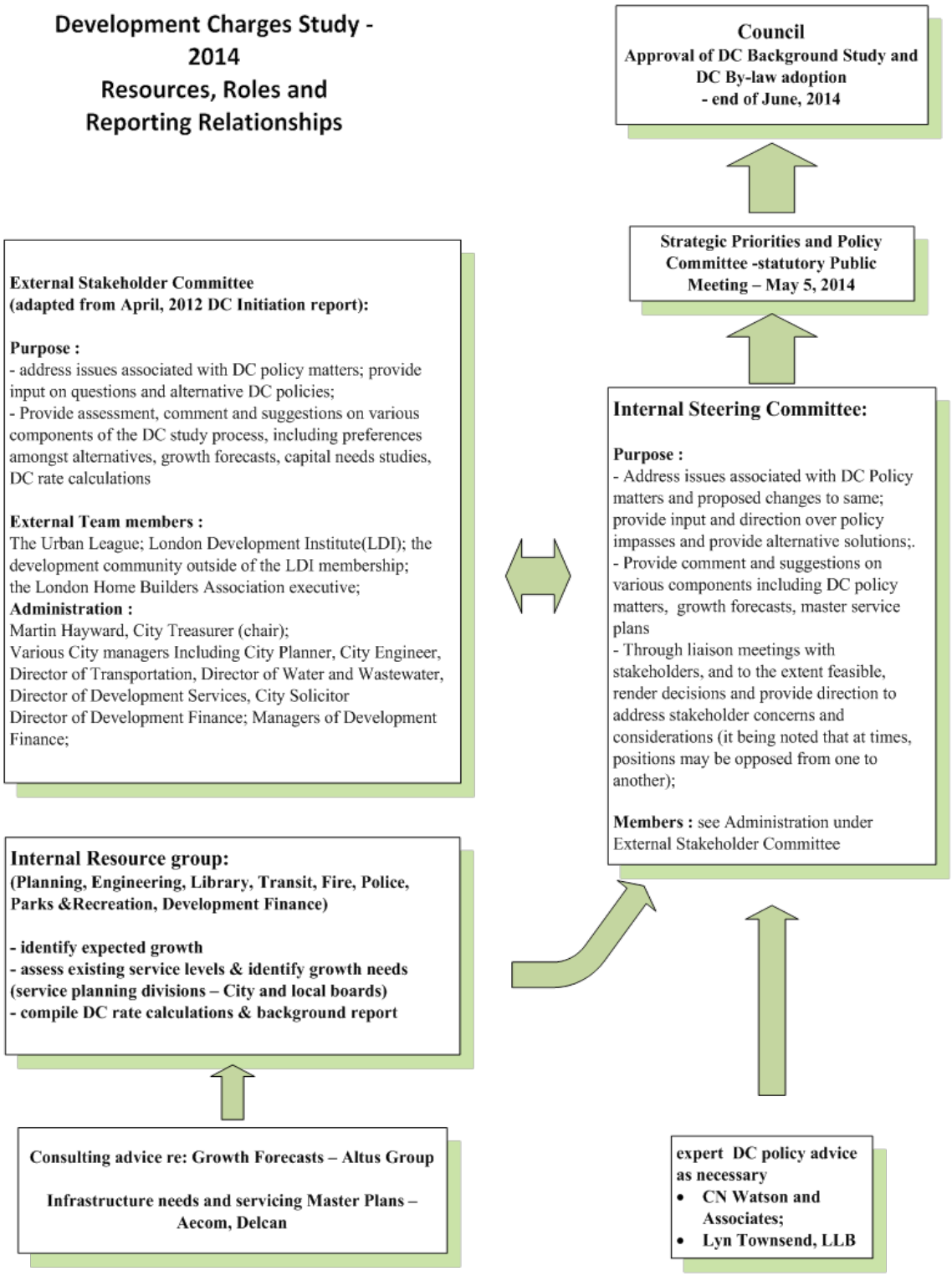
The Committee was also involved in the preparation of various reports to Council including:

i. Growth Forecasts
ii. DC Policy issues including Special Area DC rates, the Local Service Policy, the UWRF Framework for the future, DC Exemptions and Discount Policy, and
iii. the Growth Management Implementation Strategy (various),
iv. draft DC rate calculations (February, 2014)

The City attempted to thoroughly canvas the respective interests of the development community and the taxpayer throughout the process.

The Roles and Responsibilities are illustrated in Figure 2-2. The Terms of Reference for External Stakeholders and Internal Steering Committee are reproduced in Appendix P

FIGURE 2-2 – REPORTING ROLES AND RELATIONSHIPS



CHAPTER 3 - CALCULATION OF THE DEVELOPMENT CHARGE RATE

This chapter discusses various aspects of the City's development charge rate policy.

3.1 Area Wide Versus Specific Area Rate

The Development Charges Act provides flexibility to recover growth costs through rates levied equally across the entire municipality, or only part of it.

The City of London has historically, and continues currently:

1. to assess development charges essentially on a city-wide basis (with certain exceptions noted below); and,
2. to exempt development which occurs outside the Urban Growth Area[2], from charges for water, sanitary & storm sewers, storm water management facilities and minor road works (i.e., urban services) while collecting for all other services;

This development charge study remains consistent with existing City policy which computes rates on an area wide basis and reflects only separate rates for areas outside of the UGB. Calculation of area rates requires separation of growth costs and growth forecasts for each area and each service to be area rated. The decision to area rate should be made at the outset of the process in order to provide the necessary information.

In May, 2013, a report was tabled with the Strategic Priorities and Policy Committee regarding area rating options for the 2014 Development Charges Study. The report contained an assessment of the merits of creating differential rates for each of the hard services constructed within the Urban Growth Area. From the Staff review, stormwater management facilities were judged to have grounds for reduced development charge rate for the area of the City covered by the Central Thames watershed, as stormwater management facilities are not required for a large portion of the central area of the City. Council referred the report back to Staff for further dialogue with the development industry. As a result of the further dialogue which occurred in connection with the future UWRF Framework, it was decided that policy issues related to area rating will be examined in greater detail following the completion of the 2014 Development Charges Background Study for reconsideration with the next DC Study.

3.2 Planning Period

The service needs of the City have been planned on varying time horizons. The Development Charges Act(DCA) limits, for the purpose of development charge rate calculations, the planning period of certain services to ten (10) years (see DCA s. 5(1)4.). Consistent with this provision, the planning period for Fire, Police, Library, Parks and Recreation, Transit, and Corporate Growth Studies is limited to ten (10) years. The planning horizon for other services (Roads, Water, Sanitary, Storm Sewers,) are not similarly limited and have been planned over a 20 year time horizon. The planning period for the UWRF

[2] The Urban Growth Area (identified in the City's Official Plan) is an area within which the City will entertain development of an urban nature.

Grandfathered works (see Appendix I) is seven (7) years, which is based on the approximate benefiting period for the remaining infrastructure in that service component.
The planning horizon employed for each service is cited in the individual Appendix in which the DC rate calculations for that service are discussed.

The key in creating a proper charge is not in how long the growth forecast period is. Rather, it is most important that the capital needs identified are a consequence of the growth forecast for the period selected, and properly reflect benefits for that population growth.

3.3 Services not included in DC Rate Structure

There are certain services that are statutorily ineligible under the Development Charges Act. These include charges for cultural or entertainment facilities, tourism facilities, land for parks (but not a reasonable amount of land needed to support recreational facilities), hospitals, waste management services, and headquarters for general administration of the municipality.

For the 2014 Development Charges Study, Council requested that Staff review services that are eligible for cost recovery through development charges that have not been historically collected for by the City of London. In November, 2012, the City's DC consultant, Watson & Associates, presented to the Development Charges External Stakeholders Committee the results of a survey of service components being collected by other municipalities that were not being collected in London. The survey identified two services most common: public works/operations and ambulance.

For Council consideration, Staff reviewed and prepared growth-related capital needs associated with future North London Operations Centre, along with the associated service standard calculation. A total of $5.1 million in net eligible costs were identified, with a calculated rate of $229/single family unit. In March 2014, Council determined that no rate would be collected for Operations Centres and that this rate component would be re-considered with the next development charge study.

Since the 1999 Development Charges Background Study, a DC rate has been calculated for Water Supply (i.e., growth-related capital needs associated with both the Lake Huron and Lake Erie Water Supply Boards). At the time of writing this background study document, Council has yet to decide upon the inclusion or exclusion of the Water Supply rate component in the 2014 Development Charges rate structure. Information on the calculation of this rate component is provided in Appendix K.

In the coming years, Staff will continue to review additional potential services for DC recovery (e.g., ambulance, affordable housing, parking, etc.) in preparation for Council consideration at the time of the next development charges study.

3.4 Exemptions & Discounts from Development Charge Rates

Exemptions and discounts from development charges apply to various types of development.

The Development Charges Act exempts:

- land owned and used by a municipality or school board.
    - In this regard, the City's DC by-law definition of "municipal" has been clarified to include the London Public Library Board, The Covent Garden

Market Corporation, The London Convention Center Corporation, The London Transit Commission, and the London Police Service.

- Industrial additions of up to 50% of existing floor area of building. Where the addition exceeds 50% of the floor area, the portion in excess of 50% may be subjected to development charges.
- Residential development that results only in the enlargement of an existing dwelling unit, or that results in the creation of up to two additional units.

Like many Ontario municipalities, the City of London has frequently availed of the provisions of the Development Charges Act to exempt other forms of development beyond the statutory requirements. In the spring of 2013, Staff began discussions with the DC External Stakeholder Committee regarding previously exempt uses and policy changes associated with DC exemptions. In August, 2013 Staff recommended to the Strategic Priorities and Policy Committee that future DC exemptions would only be associated with development that has negligible impact on municipal services (e.g., parking structures, farm buildings, etc.) Council's historical DC exemptions and discounts for new industrial buildings, residential units within the Downtown and Old East Village areas, and 50% of the City Services Reserve Fund charge for select institutional uses were deemed to be incentive programs that were better addressed through the use of Community Improvement Plans (CIP) under the Planning Act. This approach permits the Development Charges By-law to focus on the recovery of growth costs, while providing Council with strategic documents for incentive programs that outline goals, measures and program parameters.

At the time of writing this document, the Planning Division is progressing towards completion of the CIPs providing incentive programs to replace the former DC exemptions in the following areas :

- Residential DC incentives in specific areas of the downtown
- New Industrial development DC incentives
- Institutional development DC incentives.

To provide for flexibility in timing of completion of the CIPs, the 2014 Development Charges By-law will retain the DC exemptions in these areas for new industrial buildings, residential units in the Downtown and Old East Village, and the 50% CSRF institutional discount until such time as they are replaced by a CIP.

3.4.1 Non-Statutory Exemptions

In addition to the statutory exemptions mentioned above, the City's policy also exempts:

1. one dwelling unit contained within an accessory building per parcel if the gross floor area of the additional dwelling unit does not exceed the gross floor area of the primary dwelling unit located on the parcel;
2. a parking building or structure;
3. a bona-fide non-residential farm building;
4. a structure intended for seasonal use;
5. a commercial truck service establishment;
6. a temporary garden suite installed as per the provisions of the Planning Act;
7. air-supported indoor recreation facilities operated by non-profit organizations; and
8. floor space "below grade."

Items 2, 3, 4, 6, 7 and 8 remain unchanged from the 2009 Development Charges By-law. It

is intended that exemption for item 5 will be replaced with incentive funding under the industrial CIP. With respect to item 1, administration recommends that a limited exemption be provided for secondary units located within accessory structures (e.g., a coach house above a detached garage). Presently, the DC Act provides a statutory exemption for secondary units located within residential buildings. In 2011, Bill 140 amended the *Planning Act* to require that municipalities amend their Official Plans and zoning by-laws to permit second units as-of-right in detached secondary buildings. Staff is of the opinion that secondary units constructed in accessory buildings should receive consistent treatment; irrespective of their location on a parcel, secondary units have the same servicing demands and the exemption should be universally applied for secondary units.

In computing a development charge, the recovery of costs attributed to certain exempt forms of development from other non-exempt forms is prohibited (s.5(6)3). The costs of DC exemptions and discounts is presently :

1. in the case of Downtown DC exemptions, reflected in the budget through Transfers to the Downtown DC Residential Reserve Fund;
2. in the case of the other Industrial and Institutional exemptions, reflected in the City's capital budgets through reduced draws from DC reserve funds for funding growth related works.

For the exemptions in 1. above, the cost of the exemptions will continue to be reflected in the City's accounts as at present – with transfers from the tax supported Downtown DC Exemption Reserve fund to the DC Reserve Funds. No change is necessary in the approach to accounting for the costs of this program, since this from of exemption already follows a transparent accounting approach. This approach will continue in the future, as long as the City has an exemption program for this form of development.

With the introduction of the CIPs (see discussion above), incentives for Downtown/Old East Village residential, institutional and industrial buildings will switch from a DC By-law exemption to a CIP grant. How the cost of Industrial and Institutional exemptions/grants are accounted for will also change :

1. <u>from</u> an exemption, the cost of which is reflected in the funding of individual capital projects that benefit Industrial and Institutional development;
2. <u>to</u> grants reflected in tax supported transfers to the reserve funds to be defined in the CIPs.

The various DC exemptions and discounts are explored in greater detail below.

3.5 <u>Demolition and Conversion Credits</u>

Where a building previously existed on a site, it is traditionally considered to have paid for municipal services and is not liable for payment of the same services upon redevelopment. This logic basically establishes a "reservation of capacity" for all buildings that have been or will in future be demolished.

The requirement to extend demolition credits in London has historically been subject to the following considerations:

i. There is a requirement of the Development Charges Act that dictates that, in computing a development charge, the municipality must take into account any excess system capacity before calculating its capital needs arising from development. The "reserved capacity" mentioned above is in effect, absorbed by this opposing requirement. Effectively, there is no "reserved capacity" available to properties that involve demolished buildings because the legislation requires that the excess capacity be "taken into account" in identifying increased service needs resulting from

growth. Should the City be compelled to provide Demolition Credits for an unlimited period, it would also be prudent for it to provide "reserve capacity" for such developments when it identifies its growth related capital needs.

ii. It may be true that there are no water lines, sanitary sewer pipes or perhaps storm sewer pipes that need to be built to serve a redeveloped site but the development charge does not incorporate costs that have been funded in the past, but only those required in the future. The redevelopment may not trigger a need for new pipes, but does contribute to the need for sanitary treatment and water supply capacity, road expansions, recreation facilities, libraries, fire suppression and policing (to name a few). That is, development on these sites will generally contribute to an increased need for virtually every service.

iii. Until 1999, the City provided a "demolition credit" where lawful demolition of the existing building was completed within the preceding five years to permit a new building. Through an appeal of the 1999 by-law, the City was directed, by OMB decision, to provide a demolition credit where lawful demolition of the building occurred any time between April 6, 1973 and the expiry date of the by-law. This meant that any lawful demolition occurring in the last 30 years would earn a demolition credit. This was an onerous and unusual step. In reviewing its policy in 2004, the City reverted to a standard ten year life for demolition credits and twenty year life, for developments in designated areas of the Downtown.

iv. If a demolished building was of a use previously subject to a DC exemption or discount (eg Industrial or Institutional), the value of the demolition credit would be reduced by the amount of the exemption/discount. For example, in the case of a demolished industrial building, no demolition credit would have been available for successor buildings constructed on the parcel.

Historically, the City had similar provisions for conversion credits associated with a change of use from one form of development to another (e.g., a former industrial building converted to a commercial use).

In the fall of 2013, Council approved changes to DC demolition and conversion credit policies. Going forward, a demolition or conversion credit will be applied on re-development no matter what use existed in the former building and whether or not the building on that site had benefited from a DC exemption. Therefore, the gross floor area associated with the former building being converted or demolished will be multiplied by the existing DC rate for that use to determine the value of the DC credit to be applied to the development charges payable for the successor building.

This policy change will provide greater consistency and fairness for the application of demolition and conversion credits and will remove potential financial barriers to the re-development of built areas of the City, for the life of the credit.

The policy maintains the current provision that the life of a demolition credit is limited to ten(10) years (20 years in the areas of the downtown eligible for DC residential exemptions). This limitation recognizes the expiry of "reserve capacity" and is consistent with the requirement to take into account "reserve capacity" in determining new capital needs.

3.6 Retirement of the Urban Works Reserve Fund

During the summer months of 2013, Staff met with development community and taxpayer

stakeholders to discuss retiring the Urban Works Reserve Fund (UWRF) as a method of financing costs associated with oversizing works that benefit more than one development. Over the past decade, concerns regarding the future sustainability of the UWRF had been articulated by the members of the Blue Ribbon Panel formed to examine the future of the UWRF, and it was generally agreed to by Council, stakeholder and City Staff that changes were required to the UWRF.

Discussions between stakeholders and Staff were facilitated by Lyn Townsend, one of the members of the former Blue Ribbon Panel. Considerable dialogue produced an agreement amongst participating parties that the UWRF should be wound down, with no future claims being permitted beyond those in existing agreements at the time of the passage of the 2014 DC By-law. In future, certain UWRF type works (mainly pipe oversizing internal to a development, or minor road works triggered by development, will be budgeted through capital programs in the annual capital budget, and subject to Council annual capital budget approval process.

In light of the UWRF retirement, Staff committed to providing a mechanism for developers to accelerate works outside of the present timing of works within capital budgets (with specific conditions, as described in Appendix R) and to improvements to the Growth Management Implementation Strategy (GMIS) process. The UWRF retirement "package" was approved by Council on July 30, 2013.

The calculated charge for the retirement of the UWRF is based on the payment of claims over an estimated 7 year period (based on cost estimates for works and anticipated growth over the seven years). Once outstanding claims have been paid, the City will close reserve fund accounts associated with the UWRF and remove UWRF provisions from the DC By-law.

Minor clarifications have been made to the UWRF "rules" as outlined in Schedules 6 and 7 of the DC By-law. A new schedule 8 explains the process of approvals in subdivision and development agreements (for both UWRF type works triggered by the development), and the commitment of budgeted funds to these projects as they are ready for either Council, or a designated authority of Council, approval.

3.7 Rural Area Charges

Development Charges outside the Urban Growth Boundary as defined in the Official Plan are lower than those that exist for charges applied within that boundary.

The applicable charge for a residence outside the Urban Growth Boundary (UGB) in the recent past has been approximately 1/2 of the charge inside the area (for January 2014, the charge was $11,876 vs. $23,716 overall Residential rate inside UGB). This rural charge is recommended at:

- **$15,835 per single family unit.**

(a moderate increase) at the commencement of the 2014 DC By-law. Services that are "urban" in nature (sanitary sewerage, water distribution, stormwater management and Urban

Works Reserve Fund) remain not applicable to development outside of the Urban Growth Area; therefore, no policy changes have been proposed for rural area charges

3.8 Intention Not to Introduce Credits Into the System

The *Development Charges Act, 1997* provides for the potential for a municipality to provide credits for work performed relating to a service to which the development charge by-law relates.

Under the City's approach to financing growth services, work completed by a developer is either eligible for payment of a claim (according to the policies which govern the UWRF) or in some cases, eligible for payment under the terms of a specific agreement for construction of services. Generally, the payment of UWRF claims was limited to annual "caps" and also limited by funds available to pay the next claim in chronological sequence.

A system of credits that reimburses developers for work (instead of paying them as funds permit) they complete would compete with the existing system of payments under the UWRF, and is not recommended.

3.9 Potential Rate Phase-in

The costs identified in this study are current costs of growth which can be included in the City's DC rate by-law immediately at inception of the by-law.

Should Council determine that it wishes to phase-in a rate increase, the growth costs being incurred to allow for growth do not disappear. The Development Charges Act prohibits the charging of growth costs to other development upon the phase-in of a new charge (see DCA s5(6)3). Growth costs that are not recovered from growth during a period of phase-in must be recovered from some other source.

The rates computed in this study represent rates collectable under the Act. The covering report includes some additional discussion on the effect of a potential phase-in of rate increases. It is ultimately Council's decision as to whether it wishes to discount any of the rates.

3.10 Reserve Funds

A separate fund is maintained for each of the service components listed in the City's DC rate structure. For each new rate component (eg. 'Water Supply', if necessary, a new DC reserve fund will be established - see DCA s.33).

Draws from the Reserve Fund shall be made only for the purposes which form the basis of the rate calculations (see DCA s.35).

3.11 Indexing Rates

The development charge by-law provides for indexing of the charge on an annual basis to recognize changes in price levels. The indexing is completed using a prescribed index (Statistics Canada Quarterly, Construction Price Index, catalogue number 62-007). Since costs have been estimated in 2014 dollars, rates should be indexed from that point forward.

Since the intent of the index is to ensure that DC rates keep pace with municipal servicing costs, it is important that the index used be one that most closely matches those costs. For this reason, it is recommended that the Non-residential index continue to be used to adjust all DC rates in the future.

3.12 Effective Date of By-law

The new by-law is scheduled to take effect on August 4, 2014, being coincident with the expiration of the existing by-law.

This background study may only be used as the basis to amend the Development Charges By-law for up to a year from its adoption. Subsequent amendments to the DC By-law beyond this timeframe will require the completion of a new background study (DCA, s. 11).

The new by-law may be in effect for up to 5 years.

3.13 Monitoring Program

An enhanced monitoring program will be initiated following the passage of the new by-law. This program should increase the City's knowledge of how revenues from the fund measure up against those predicted by the growth forecasts. It should also provide observations of how actual costs compare with those incorporated into the rate calculations. These two improvements of the City's current system will assist in further improving the DC rate calculation methods employed in the future, and help ensure that rates are an accurate reflection of growth costs. Staff is also working towards automating the monitoring program to improve efficiencies in preparation and consistency from one report to the next.

The monitoring program is currently anticipated to be provided to Council in the form of regular Staff reports. Based on the analysis provided in the report, Staff may recommend that a DC Background Study and By-law amendment be initiated should it be deemed that the actual costs consistently exceed estimates provided in the DC Background Study, resulting in the City collecting insufficient funds through development charges to pay for growth infrastructure costs.

3.14 When a Development Charge is Payable

Consistent with section 26 (1) of the Development Charges Act, a development charge shall be payable at the time of issuance of a building permit (consistent with current practice).

3.15 Summary Development Charge Rate Calculations

3.15.1 Growth Forecast

Chapter 2 provided a summary of the legislative requirements and the general approach to calculation of development charge rates. The process began with an approximation of future growth.

The growth forecasts over time periods (2011 & beyond) were prepared by Altus Group Economic Consulting. These forecasts were adapted to fit the time period for this Development Charge Background Study (2014 & beyond). These adapted forecasts formed the basis of projecting service needs for municipal services with identifiable growth related impacts. The approach used to determine growth forecasts is detailed in Appendix A.

3.15.2 Identification of Growth Related Needs

Service needs were projected in two major categories:

1. Major City Services – these are capital works needed to facilitate growth, or respond to new demands for growth services and include Road expansion and upgrade, Sanitary Sewer Trunk Works and Treatment facilities, Water Supply and Distribution, major Storm Water Management facilities, Fire, Police, Corporate Growth Studies, Library, Parks and Recreation and Transit.
2. Oversized Works – these are capital works generally required as conditions of development, needed to facilitate growth in various urbanizing areas of the City and include Minor Roadworks, oversizing of Sanitary Sewer, Storm and Water Pipes.

The details of the capital needs are discussed in Appendices B through M of this study. In all cases, the capital needs resulted from a concentrated review of the needs arising from growth, either through internal planning or with the assistance of an external consultant.

3.15.3 Net Capital Costs Eligible for Development Charge Rate Calculations

The appendices also contain discussions of the source of gross capital costs, and deductions used to arrive at net costs eligible for Development Charge rate calculations. Finally, attribution of the net growth related costs to benefiting types of growth were made. The resulting figures are used in the calculation of rates (before the addition of financing costs) for each type of benefiting growth. These rates are referred to as the "pre-financing cost" rates.

3.15.4 Final Adjustments Prior to Rate Calculations

There are final adjustments to the rate calculations that take into account existing Reserve Fund balances, financing costs associated with the anticipated cash flows in the fund, and expected recovery from future growth. These calculations are not necessary with respect to UWRF retirement claimable projects as the financing costs associated with these costs are borne by the initiating developer.

3.15.5 Tables Summarizing Rate Calculations

The tables which follow at the end of this chapter summarize the detailed service-by-service calculations for each of the benefiting types of development. These tables summarize the information contained Appendices B through M.

Table 3-1 reflects summary information on each service component including:

- the estimated gross costs of the growth related capital expenditures;
- the statutory deductions needed to arrive at the amount eligible for DC rate calculations including grants and other contributions, non-growth share, post period benefit and where applicable, the 10% statutory deduction for "soft services"; and,
- the net amount eligible for the DC rate calculations, and the average percentage allocation of the net amount, to benefiting types of growth (Res/ICI splits).

Table 3-2 relates solely to Residential DC rate calculations. It shows the effect of existing reserve funds on the net amount eligible for DC rate calculations for each service. The right

hand columns show both the DC rate before and after inclusion on finance costs (the latter determined through a cash flow analysis. The total rate recommended from this study for a single family unit amounts to:

- **$28,143 per single family unit.**

This rate includes the Water Supply rate component:

- **$400.03 per single family unit.**

which Council has not yet determined will be included in the final rate. The charges for other types of residential development are reduced, based on density assumptions used for each unit type in the growth forecasts.

Table 3-3 summarizes DC rate calculations for Non-Residential developments (also excluding Water Supply component). In this case, the rate reported includes financing costs determined through a cash flow analysis. The total calculated rates for non-residential development (also excluding Water Supply rates) amount to:

Commercial	**$265.94**	/sq.m
Institutional	**$138.84**	/ sq.m.
Industrial	**$173.28**	/ sq.m.

The rates identified all include financing costs, where applicable.

3.15.6 Timing of Expenditures

The regulations to the Development Charges Act require that the study reflect the total of the estimated capital costs that may be incurred during the life of the by-law. Table 3-4 meets that requirement. It provides a 'summary level' look at the timing of all the capital expenditures which are reflected in Appendices B through M, as well as the allocation of the costs that benefit existing and new development within the anticipated term (5 years) of the by-law.

Table 3-4 indicates that in the five years following passage of the by- law, capital costs benefiting both growth and non-growth, in the amount of approximately $799 million are projected to be incurred. Approximately $743 million of this amount might be expected to be incurred through City Capital budgets (including consolidated boards and commissions) in the next 5 years. The remainder is either a continuation of payment of debt for previous growth expenditures intended for recovery from DC's ($29M), Urban Works expenditures largely under the timing control of the proponent developer ($26.7M), or expenditures by the Joint Water Boards related to supply capacity ($0.2M).

3.15.7 Administration of By-law

The administration of the by-law is assigned in part to the Chief Building Official, and in part to the City Treasurer (safekeeping of Reserve Funds, etc.), consistent with current practice.

3.15.8 Fund Reporting and Monitoring

There is an annual report on the activity in the Development Charges Reserve Funds required under the statute, to be filed with the Minister of Municipal Affairs. City Administration intends to monitor and report fund activities to determine whether changes to development charge rates are required (see earlier section on Monitoring Program).

2014 Development Charges Background Study

TABLE 3-1 Overall Capital Needs and DC Adjustments Summary Table

2014 Summary of Capital Costs for DC rate Calculation Purposes

City Services & Urban Works combined
(all in ,000's)

SERVICE COMPONENT	Detail	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service) Post Period Benefit (PPB)	Subtotal	Non-growth share / Benefit to Existing (BTE) %	Non-growth share / Benefit to Existing (BTE) benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL Commercial %	NON - RESIDENTIAL Commercial $	NON - RESIDENTIAL Institutional %	NON - RESIDENTIAL Institutional $	NON - RESIDENTIAL Industrial %	NON - RESIDENTIAL Industrial $
FIRE	Facilities	$4,270.0	$.0	$2,075.0	$2,195.0	$.0	$1,089.7	$1,105.3	$.0	$389.8	$.0	$715.5	$.0	$715.5	79.7%	$570.3	11.8%	$84.5	7.2%	$51.5	1.3%	$9.3
	Vehicles	$2,670.0	$.0	$.0	$2,670.0	$.0	$1,549.7	$1,120.3	$.0	$290.6	$.0	$829.8	$.0	$829.8	79.7%	$661.4	11.8%	$98.0	7.2%	$59.7	1.3%	$10.7
	Outfitting	$66.8	$.0	$.0	$66.8	$.0	$33.2	$33.6	$.0	$11.9	$.0	$21.8	$.0	$21.8	79.7%	$17.4	11.8%	$2.6	7.2%	$1.6	1.3%	$.3
	Subtotal	*$7,006.8*	*$.0*	*$2,075.0*	*$4,931.8*	54.2%	*$2,672.5*	*$2,259.3*	30.6%	*$692.2*	*$.0*	*$1,567.1*	*$.0*	*$1,567.1*		*$1,249.1*		*$185.0*		*$112.7*		*$20.3*
POLICE	Facilities	$6,677.0	$.0	$.0	$6,677.0	$.0	$.0	$6,677.0	$.0	$.0	$.0	$6,677.0	$344.6	$6,332.4	100.0%	$6,332.4	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Vehicles	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Outfitting	$413.7	$.0	$.0	$413.7	$.0	$.0	$413.7	$.0	$.0	$.0	$413.7	$.0	$413.7	79.7%	$329.7	11.8%	$48.8	7.2%	$29.8	1.3%	$5.4
	Subtotal	*$7,090.7*	*$.0*	*$.0*	*$7,090.7*	0.0%	*$.0*	*$7,090.7*	0.0%	*$.0*	*$.0*	*$7,090.7*	*$344.6*	*$6,746.1*		*$6,662.1*		*$48.8*		*$29.8*		*$5.4*
CORPORATE	Growth Studies	$21,955.0	$.0	$.0	$21,955.0	$.0	$6,543.8	$15,411.3	$.0	$5,148.2	$88.8	$10,174.2	$.0	$10,174.2	75.5%	$7,685.4	8.3%	$841.0	7.6%	$772.2	8.6%	$875.7
	Subtotal	*$21,955.0*	*$.0*	*$.0*	*$21,955.0*	29.8%	*$6,543.8*	*$15,411.3*	33.4%	*$5,148.2*	*$88.8*	*$10,174.2*	*$.0*	*$10,174.2*		*$7,685.4*		*$841.0*		*$772.2*		*$875.7*
LIBRARY	Facilities	$8,160.0	$.0	$1,500.0	$6,660.0	$.0	$2,324.9	$4,335.1	$.0	$2,036.1	$229.9	$2,069.1	$.0	$2,069.1	100.0%	$2,069.1	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Collections	$500.0	$.0	$.0	$500.0	$.0	$.0	$500.0	$.0	$.0	$50.0	$450.0	$.0	$450.0	100.0%	$450.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Subtotal	*$8,660.0*	*$.0*	*$1,500.0*	*$7,160.0*	32.5%	*$2,324.9*	*$4,835.1*	42.1%	*$2,036.1*	*$279.9*	*$2,519.1*	*$.0*	*$2,519.1*		*$2,519.1*		*$.0*		*$.0*		*$.0*
PARKS & REC.	Facilities	$93,124.5	$.0	$24,008.0	$69,116.5	$.0	$8,712.9	$60,403.6	$.0	$39,862.8	$1,258.2	$19,282.6	$.0	$19,282.6	100.0%	$19,282.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Parkland Dev.	$40,133.0	$.0	$.0	$40,133.0	$.0	$1,257.4	$38,875.6	$.0	$13,337.2	$2,553.8	$22,984.5	$3,344.4	$19,640.2	100.0%	$19,640.2	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Subtotal	*$133,257.5*	*$.0*	*$24,008.0*	*$109,249.5*	9.1%	*$9,970.3*	*$99,279.2*	53.6%	*$53,200.1*	*$3,812.1*	*$42,267.1*	*$3,344.4*	*$38,922.8*	*100.0%*	*$38,922.8*	*0.0%*	*$.0*	*0.0%*	*$.0*	*0.0%*	*$.0*
TRANSIT	Facilities	$5,000.0	$3,350.0	$.0	$1,650.0	$.0	$864.6	$785.4	$.0	$.0	$78.5	$706.9	$.0	$706.9	73.8%	$521.3	7.9%	$56.1	8.1%	$57.1	10.2%	$72.3
	Vehicles	$27,148.0	$16,582.5	$.0	$10,565.5	$.0	$.0	$10,565.5	$.0	$.0	$1,056.6	$9,509.0	$.0	$9,509.0	73.8%	$7,012.9	7.9%	$755.0	8.1%	$768.2	10.2%	$972.9
	Subtotal	*$32,148.0*	*$19,932.5*	*$.0*	*$12,215.5*	7.1%	*$864.6*	*$11,350.9*	0.0%	*$.0*	*$1,135.1*	*$10,215.8*	*$.0*	*$10,215.8*		*$7,534.2*		*$811.1*		*$825.4*		*$1,045.2*
SOFT SERVICE TOTAL		**$210,118.1**	**$19,932.5**	**$27,583.0**	**$162,602.6**	**13.8%**	**$22,376.1**	**$140,226.5**	**43.6%**	**$61,076.6**	**$5,315.9**	**$73,834.0**	**$3,689.0**	**$70,145.0**	***92.1%***	**$64,572.6**	***2.7%***	**$1,885.9**	***2.5%***	**$1,740.0**	***2.8%***	**$1,946.5**
SANITARY SEWERAGE		$203,333.2	$486.2	$30,269.0	$172,578.0	$.0	$38,747.7	$133,830.3	$.0	$3,456.6	$.0	$130,373.8	$.0	$130,373.8	75.3%	$98,222.8	5.2%	$6,758.8	2.7%	$3,577.9	16.7%	$21,814.2
	Subtotal	*$203,333.2*	*$486.2*	*$30,269.0*	*$172,578.0*	*$.0*	*$38,747.7*	*$133,830.3*	*$.0*	*$3,456.6*	*$.0*	*$130,373.8*	*$.0*	*$130,373.8*		*$98,222.8*		*$6,758.8*		*$3,577.9*		*$21,814.2*
WATER DISTRIBUTION		$111,497.4	$968.2	$3,553.8	$106,975.3	$.0	$13,668.0	$93,307.3	$.0	$14,039.7	$.0	$79,267.6	$.0	$79,267.6	$.0	$45,672.0	$.0	$3,775.1	$.0	$1,737.1	$.0	$28,083.4
	Subtotal	*$111,497.4*	*$968.2*	*$3,553.8*	*$106,975.3*	12.8%	*$13,668.0*	*$93,307.3*	15.0%	*$14,039.7*	*$.0*	*$79,267.6*	*$.0*	*$79,267.6*	57.6%	*$45,672.0*	4.8%	*$3,775.1*	2.2%	*$1,737.1*	35.4%	*$28,083.4*
WATER SUPPLY		$85,400.0	$33,102.6	$.0	$52,297.4	$.0	$39,325.8	$12,971.6	$.0	$.0	$.0	$12,971.6	$.0	$12,971.6	$.0	$7,917.5	$.0	$465.2	$.0	$858.0	$.0	$3,730.8
	Subtotal	*$85,400.0*	*$33,102.6*	*$.0*	*$52,297.4*	75.2%	*$39,325.8*	*$12,971.6*	0.0%	*$.0*	*$.0*	*$12,971.6*	*$.0*	*$12,971.6*	61.0%	*$7,917.5*	3.6%	*$465.2*	6.6%	*$858.0*	28.8%	*$3,730.8*
STORMWATER MANAGEMENT		$254,365.1	$968.2	$2,433.0	$214,367.1	$.0	$17,317.3	$233,646.5	$.0	$22,594.3	$.0	$211,052.2	$.0	$211,052.2	$.0	$149,516.8	$.0	$18,859.8	$.0	$12,902.3	$.0	$29,773.2
	Subtotal	*$254,365.1*	*$968.2*	*$2,433.0*	*$214,367.1*	8.1%	*$17,317.3*	*$233,646.5*	9.7%	*$22,594.3*	*$.0*	*$211,052.2*	*$.0*	*$211,052.2*	*70.8%*	*$149,516.8*	*8.9%*	*$18,859.8*	*6.1%*	*$12,902.3*	*14.1%*	*$29,773.2*
ROADS SERVICES		$1,098,641.4	$201,109.5	$18,398.0	$879,133.8	$.0	$217,835.4	$661,298.5	$.0	$85,050.4	$.0	$576,248.0	$.0	$576,248.0	$.0	$399,453.3	$.0	$65,122.3	$.0	$48,383.4	$.0	$63,289.1
	Subtotal	*$1,098,641.4*	*$201,109.5*	*$18,398.0*	*$879,133.8*	*24.8%*	*$217,835.4*	*$661,298.5*	*#REF!*	*$85,050.4*	*$.0*	*$576,248.0*	*$.0*	*$576,248.0*	*69.3%*	*$399,453.3*	*11.3%*	*$65,122.3*	*8.4%*	*$48,383.4*	*11.0%*	*$63,289.1*
URBAN WORKS RESERVE FUND																					
	UWRF General	$21,845.2	$.0	$.0	$21,845.2	$.0	$.0	$21,845.2	$.0	$.0	$.0	$21,845.2	$.0	$21,845.2	$.0	$17,462.2	$.0	$2,206.8	$.0	$1,027.1	$.0	$1,149.1
	UWRF SWM	$15,606.9	$.0	$.0	$15,606.9	$.0	$.0	$15,606.9	$.0	$.0	$.0	$15,606.9	$.0	$15,606.9	$.0	$12,797.7	$.0	$1,872.8	$.0	$936.4	$.0	$.0
	Subtotal	*$37,452.1*	*$.0*	*$.0*	*$37,452.1*	*0.0%*	*$.0*	*$37,452.1*	*0.0%*	*$.0*	*$.0*	*$37,452.1*	*$.0*	*$37,452.1*	*80.8%*	*$30,259.9*	*10.9%*	*$4,079.6*	*5.2%*	*$1,963.5*	*3.1%*	*$1,149.1*
HARD SERVICE TOTAL		**$1,790,689.1**	**$236,634.8**	**$54,653.8**	**$1,462,803.7**	**$0**	**$326,894.2**	**$1,172,506.3**	**$0**	**$125,141.1**	**$0**	**$1,047,365.2**	**$0**	**$1,047,365.2**	***69.8%***	**$731,042.4**	***9.5%***	**$99,060.9**	***6.6%***	**$69,422.2**	***14.1%***	**$147,839.7**
GRAND TOTAL		**$2,000,807.2**	**$256,567.3**	**$82,236.8**	**$1,625,406.3**	***21.5%***	**$349,270.3**	**$1,312,732.8**	***14.2%***	**$186,217.7**	**$5,315.9**	**$1,121,199.3**	**$3,689.0**	**$1,117,510.3**	***71.2%***	**$795,615.0**	***9.0%***	**$100,946.8**	***6.4%***	**$71,162.3**	***13.4%***	**$149,786.2**

TABLE 3-2 -- Residential DC Rate Calculations Summary

Summary of Development Charge Rates
Residential

City Services and Urban Works Combined

											PRE-FINANCE DC RATE				**FINAL CALCULATED DC RATE**
											CHARGE PER UNIT (EXCLUDING OPENING FUND BALANCE AND FINANCING CHARGES)				CHARGE PER UNIT TAKING INTO ACCOUNT OPENING FUND BALANCE AND FINANCING CHARGES
Service	Sub-Component	Residential Amount Eligible For DC Rate Calculation	Portion Of Works Collected In Prior Years(uncommitted reserve funds)	Total Residential Net Cost Eligible For DC Rate Calculation Purposes (in, 000's)	Allocation on Gross (%)	Allocation on Net (%)	Gross Population	Per Capita	Density Factor	Single & Semi-Detached (Prefinance costs)	Single & Semi-Detached (includes finance costs)	Multiple Unit (includes finance costs)	Apartment <2 bdrm (includes finance costs)	Apartment ≥2 bdrm (includes finance costs)
											$22.49	***per capita***		
FIRE											***3.09***	***2.20***	***1.40***	***1.91***
	Facilities	$570.3	$256.8	$313.5	79.7%	77.9%	55,191	$ 5.68	3.09	$ 17.55				
	Vehicles	$661.4	$37.9	$623.5	79.7%	79.6%	55,191	$ 11.30	3.09	$ 34.91				
	Outfitting	$17.4	$.0	$17.4	79.7%	79.7%	55,191	$ 0.31	3.09	$ 0.97				
Subtotal		$1,249.1	$294.7	$954.4				$ 17.29		$ 53.43	**$69**	**$49**	**$31**	**$43**
											$103.02	***per capita***		
POLICE											*3.09*	*2.20*	*1.40*	*1.91*
	Facilities	$6,332.4	$1,539.7	$4,792.6	100.0%	100.0%	55,191	$ 86.84	3.09	$ 268.33				
	Vehicles	$.0	$.0	$.0	0.0%	0.0%	55,191	$ -	3.09	$ -				
	Outfitting	$329.7	$66.4	$263.4	79.7%	76.1%	55,191	$ 4.77	3.09	$ 14.75				
Subtotal		$6,662.1	$1,606.1	$5,056.0				$ 91.61		$ 283.07	**$318**	**$227**	**$144**	**$197**
											$152.92	***per capita***		
CORPORATE SERVICES											*3.09*	*2.20*	*1.40*	*1.91*
	Growth Studies	$7,685.4	$93.5	$7,591.9	75.5%	75.4%	55,191	$ 137.56	3.09	$ 425.05				
Subtotal		$7,685.4	$93.5	$7,591.9				$ 137.56		$ 425.05	**$473**	**$336**	**$214**	**$292**
											$0.00	***per capita***		
LIBRARY											*3.09*	*2.20*	*1.40*	*1.91*
	Facilities	$2,069.1	$2,069.1	$.0	100.0%	100.0%	55,191	$ 0.00	3.09	$ -				
	Collections	$450.0	$450.0	$.0	100.0%	100.0%	55,191	$ 0.00	3.09	$ -				
Subtotal		$2,519.1	$2,519.1	$.0				$ 0.00		$ -	**$0**	**$0**	**$0**	**$0**
											$645.06	***per capita***		
PARKS & RECREATION											*3.09*	*2.20*	*1.40*	*1.91*
	Facilities	$19,282.6	$2,487.1	$16,795.5	100.0%	100.0%	55,191	$ 304.31	3.09	$ 940.33				
	Parkland Dev.	$19,640.2	$1,057.6	$18,582.6	100.0%	100.0%	55,191	$ 336.69	3.09	$ 1,040.38				
Subtotal		$38,922.8	$3,544.7	$35,378.1				$ 641.01		$ 1,980.71	**$1,993**	**$1,419**	**$903**	**$1,232**
											$99.24	***per capita***		
TRANSIT											*3.09*	*2.20*	*1.40*	*1.91*
	Facilities	$521.3	$108.6	$412.7	73.8%	72.1%	55,191	$ 7.48	3.09	$ 23.10				
	Vehicles	$7,012.9	$1,737.5	$5,275.4	73.8%	71.7%	55,191	$ 95.58	3.09	$ 295.35				
Subtotal		$7,534.2	$1,846.1	$5,688.1				$ 103.06		$ 318.46	**$307**	**$218**	**$139**	**$190**
											$1,000.25	***per capita***		
SOFT SERVICE TOTAL		**$64,572.6**	**$9,904.1**	**$54,668.4**				**$ 990.52**		**$ 3,060.72**	**$3,160**	**$2,250**	**$1,432**	**$1,953**
											$1,116.07	***per capita***		
SANITARY SEWER											*3.02*	*2.28*	*1.41*	*1.90*
		$98,222.8	$5,414.5	$92,808.3	75.3%	74.6%	104,829	$ 885.33	3.02	$ 2,673.70				
Subtotal		$98,222.8	$5,414.5	$92,808.3				$ 885.33		$ 2,673.70	**$3,371**	**$2,545**	**$1,574**	**$2,121**
											$363.15	***per capita***		
WATER DISTRIBUTION											*3.02*	*2.28*	*1.41*	*1.90*
		$45,672.0	$8,127.2	$37,544.9	57.6%	53.3%	104,829	$ 358.15	3.02	$ 1,081.63				
Subtotal		$45,672.0	$8,127.2	$37,544.9				$ 358.15		$ 1,081.63	**$1,097**	**$828**	**$512**	**$690**
											$132	***per capita***		
WATER SUPPLY											*3.02*	*2.28*	*1.41*	*1.90*
		$7,917.5	$.0	$7,917.5	61.0%	61.0%	104,829	$ 75.53	3.02	$ 228.10				
Subtotal		$7,917.5	$.0	$7,917.5				$ 75.53		$ 228.10	**$400**	**$302**	**$187**	**$252**
											$1,711.67	***per capita***		
STORMWATER MANAGEMENT											*3.02*	*2.28*	*1.41*	*1.90*
		$149,516.8	$1,229.9	$148,286.9	70.8%	70.8%	104,829	$ 1,414.56	3.02	$ 4,271.98				
Subtotal		$149,516.8	$1,229.9	$148,286.9				$ 1,414.56		$ 4,271.98	**$5,169**	**$3,903**	**$2,413**	**$3,252**
											$4,197.03	***per capita***		
ROADS SERVICES											*3.02*	*2.28*	*1.41*	*1.90*
		$399,453.3	$9,669.6	$389,783.7	69.3%	69.1%	104,829	$ 3,718.29	3.02	$ 11,229.23				
Subtotal		$399,453.3	$9,669.6	$389,783.7				$ 3,718.29		$ 11,229.23	**$12,675**	**$9,569**	**$5,918**	**$7,974**
											$751.98	***per capita***		
URBAN WORKS RESERVE FUND											*3.02*	*2.28*	*1.41*	*1.90*
	UWRF General	$17,462.2	$10.9	$17,451.3	79.9%	79.9%	38,636	$ 451.69	3.02	$ 1,364.11				
	UWRF SWM	$12,797.7	$1,195.9	$11,601.8	82.0%	82.0%	38,636	$ 300.29	3.02	$ 906.87				
Subtotal		$30,259.9	$1,206.8	$29,053.1				$ 751.98		$ 2,270.97	**$2,271**	**$1,715**	**$1,060**	**$1,429**
											$8,272.35	***per capita***		
HARD SERVICE TOTAL		**$731,042.4**	**$25,648.0**	**$705,394.4**				**7,203.84**		**$ 21,755.60**	**$24,982**	**$18,861**	**$11,664**	**$15,717**
											$9,024.33	***per capita***		
GRAND TOTAL		**$795,615.0**	**$35,552.1**	**$760,062.8**				**8,194.37**		**$ 24,816.32**	**$28,143**	**$21,111**	**$13,096**	**$17,671**
										Jan 1/14 DC rates in effect (which exclude Water Supply)	**$23,716**	**$17,013**	**$10,094**	**$14,143**

2014 Development Charges Background Study

TABLE 3-3 -- Non-Residential DC Rate Calculations Summary

Summary of Development Charge Rates
Non-Residential

City Services and Urban Works Combined

Service	Sub-Component	COMMERCIAL						INSTITUTIONAL						INDUSTRIAL					
		Allocation on Gross (%)	Allocation on Net (%)	Portion Of Works Collected In Prior Years	Total Net Cost Eligible For DC Rate Calculation Purposes (in, $000's)	Sq. M.	Final Calculated DC Rate/m²	Allocation on Gross (%)	Allocation on Net (%)	Portion Of Works Collected In Prior Years	Total Net Cost Eligible For DC Rate Calculation Purposes (in, $000's)	Sq. M.	Final Calculated DC Rate/m²	Allocation on Gross (%)	Allocation on Net (%)	Portion Of Works Collected In Prior Years	Total Net Cost Eligible For DC Rate Calculation Purposes (in, $000's)	Sq. M.	Final Calculated DC Rate/m²
FIRE																			
	Facilities	11.8%	12.7%	$33.5	$51.0	167,034		7.2%	7.1%	$22.7	$28.7	279,258		1.3%	2.3%	$.0	$9.3	456,510	
	Vehicles	11.8%	11.9%	$4.9	$93.0	167,034		7.2%	7.2%	$3.4	$56.3	279,258		1.3%	1.4%	$.0	$10.7	456,510	
	Outfitting	11.8%	11.8%	$.0	$2.6	167,034		7.2%	7.2%	$.0	$1.6	279,258		1.3%	1.3%	$.0	$.3	456,510	
Subtotal							$ 1.14						$ 0.40						$ 0.06
POLICE																			
	Facilities	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
	Vehicles	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
	Outfitting	11.8%	13.9%	$.7	$48.2	167,034		7.2%	8.5%	$.5	$29.3	279,258		1.3%	1.5%	$.0	$5.4	456,510	
Subtotal							$ 0.32						$ 0.12						$ 0.01
CORPORATE SERVICES																			
	Growth Studies	8.3%	8.2%	$12.3	$828.7	167,034		7.6%	7.6%	$4.2	$768.1	279,258		8.6%	8.7%	$.0	$875.7	456,510	
Subtotal							$ 5.52						$ 3.06						$ 2.13
LIBRARY																			
	Facilities	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
	Collections	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
Subtotal							$ -						$ -						$ -
PARKS & REC.																			
	Facilities	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
	Parkland Dev.	0.0%	0.0%	$.0	$.0	167,034		0.0%	0.0%	$.0	$.0	279,258		0.0%	0.0%	$.0	$.0	456,510	
Subtotal							$ -						$ -						$ -
TRANSIT																			
	Facilities	7.9%	6.6%	$18.6	$37.5	167,034		8.1%	8.7%	$7.1	$50.0	279,258		10.2%	12.6%	$.0	$72.3	456,510	
	Vehicles	7.9%	6.2%	$297.3	$457.6	167,034		8.1%	8.9%	$113.7	$654.6	279,258		10.2%	13.2%	$.0	$972.9	456,510	
Subtotal							$ 2.85						$ 2.43						$ 2.20
SOFT SERVICE TOTAL							$ 9.84						$ 6.01						$ 4.41
SANITARY SEWERAGE																			
		5.2%	5.1%	$364.3	$6,394.5	480,293		2.7%	2.7%	$214.0	$3,363.9	607,381		16.7%	17.5%	$.0	$21,814.2	1,028,402	
Subtotal							$ 16.78						$ 6.98						$ 26.74
WATER DISTRIBUTION																			
		4.8%	4.9%	$324.4	$3,450.8	480,293		2.2%	2.0%	$350.5	$1,386.6	607,381		35.4%	39.9%	$.0	$28,083.4	1,028,402	
Subtotal							$ 7.28						$ 2.31						$ 27.69
WATER SUPPLY																			
		3.6%	3.6%	$.0	$465.2	480,293		6.6%	6.6%	$.0	$858.0	607,381		28.8%	28.8%	$.0	$3,730.8	1,028,402	
Subtotal							$ 1.70						$ 2.48						$ 6.36
STORMWATER MANAGEMENT																			
		8.9%	8.9%	$221.4	$18,638.4	480,293		6.1%	6.1%	$119.4	$12,782.9	607,381		14.1%	14.2%	$.0	$29,773.2	1,028,402	
Subtotal							$ 46.96						$ 25.47						$ 35.03
ROADS SERVICES																			
		11.3%	11.4%	$1,103.9	$64,018.4	480,293		8.4%	8.3%	$1,499.5	$46,883.9	607,381		11.0%	11.2%	$.0	$63,289.1	1,028,402	
Subtotal							$ 150.45						$ 87.13						$ 69.46
URBAN WORKS RESERVE FUND																			
	UWRF General	10.1%	10.1%	$1.4	$2,205.4	118,540		4.7%	4.7%	$.6	$1,026.5	221,177		5.3%	5.3%	$.7	$1,148.4	320,170	
	UWRF SWM	12.0%	12.0%	$175.0	$1,697.8	118,540		6.0%	6.0%	$87.5	$848.9	221,177		0.0%	0.0%	$.0	$.0	320,170	
Subtotal							$ 32.93						$ 8.48						$ 3.59
HARD SERVICE TOTAL							$ 256.10						$ 132.85						$ 168.87
TOTALS- CALCULATED RATE				$2,557.7	$98,389.1		$265.94			$2,423.0	$68,739.3		$138.86			$.7	$149,785.5		$173.28
CALCULATED DC RATES							$265.94						$138.86						$173.28
Jan 1/14 DC rates in effect (which exclude Water Supply)							$174.44						$112.41						$0.00

TABLE 3-4 -- Summary of Timing of Expenditures

2014 DC Study -- SUMMARY BY SERVICE		Timeframe for Growth Needs Capital Expenditures			Funding for Portion to be incurred within 5 year term of by-law		
Component	**Gross Capital Cost**	**Expenditure expected within 5 yrs (2018 & prior)**	**Expenditure expected within 5-10 yrs (2019 - 2023)**	**Expenditure expected beyond 10 yrs (2024 & beyond)**	**Total Benefit to existing development incurred in planning horizon)**	**Total grants, contributions and prior funding**	**Total Benefit to NEW development incurred in planning horizon)**
Fire	$7,006,820	$5,201,820	$1,805,000	$0	$1,102,647	$2,075,000	$2,024,173
Police	$7,090,700	$2,848,271	$3,097,991	$1,144,438	$136,336	$0	$2,711,935
Corporate Studies	$21,955,000	$14,005,014	$7,949,986	$0	$4,770,607	$0	$9,234,407
Library	$8,660,000	$4,330,000	$4,330,000	$0	$798,494	$750,000	$2,781,506
Parks and Recreation	$133,257,549	$108,181,198	$23,220,423	$1,855,928	$57,853,560	$24,008,000	$26,319,638
Transit	$32,148,000	$6,438,800	$25,709,200	$0	$222,420	$3,350,000	$2,866,380
Total Soft Services	$210,118,069	$141,005,103	$66,112,600	$3,000,366	$64,884,065	$30,183,000	$45,938,038
Roads	$1,098,641,391	$358,104,391	$361,700,699	$378,836,301	$27,649,210	$115,710,133	$214,745,048
Sanitary	$203,333,182	$111,216,632	$34,012,935	$58,103,616	$3,302,921	$30,390,523	$77,523,187
Stormwater Management	$254,365,071	$144,247,211	$56,440,602	$53,673,598	$21,951,621	$2,675,057	$120,620,532
Water Distribution	$111,497,365	$17,222,058	$36,434,397	$57,840,910	$3,989,781	$3,153,536	$10,078,742
Water Supply	$85,400,000	$200,000	$85,200,000	$0	$0	$60,900	$139,100
Urban Works Reserve Fund	$37,452,124	$25,680,089	$10,272,036	$0	$0	$0	$25,680,089
Total Hard Services	$1,753,237,008	$630,990,291	$573,788,632	$548,454,425	$56,893,533	$151,990,150	$423,106,609
Grand Total	**$2,000,807,202**	**$798,746,912**	**$650,601,840**	**$551,454,791**	**$121,777,598**	**$182,173,150**	**$495,796,164**
		40%	33%	28%	15%	23%	62%

SUMMARY -- Funding Responsibilities					Funding for Portion to be incurred within 5 year term of by-law		
CAPITAL EXPENDITURE SUMMARY	**Gross Capital Cost**	**Expenditure expected within 5 yrs (2018 & prior)**	**Expenditure expected within 5-10 yrs (2019 - 2023)**	**Expenditure expected beyond 10 yrs (2024 & beyond)**	**Total Benefit to existing development incurred in planning horizon)**	**Total grants, contributions and prior funding**	**Total Benefit to NEW development incurred in planning horizon)**
City Services	$1,792,700,524	$742,730,799	$515,456,565	$534,513,159	$121,641,261	$182,112,250	$439,977,288
Urban Works	$37,452,124	$26,751,517	$10,700,607	$0	$0	$0	$26,751,517
Debt re prior growth	$85,254,554	$29,064,595	$39,244,667	$16,941,632	$136,336	$0	$28,928,259
Joint Water Boards (excluding debt)	$85,400,000	$200,000	$85,200,000	$0	$0	$60,900	$139,100
Grand Total	**$2,000,807,202**	**$798,746,912**	**$650,601,840**	**$551,454,791**	**$121,777,598**	**$182,173,150**	**$495,796,164**
		40%	33%	28%	15%	23%	62%

Notes

1 Some of the cost estimates above a gross estimates of the total cost to be incurred by a development proponent.
2 The timing of Urban Works expenditures cannot be determined with any certainty as they depend on construction by each development proponent. The estimates have been spread evenly over the 7 year retirement period.

CHAPTER 4 – THE DEVELOPMENT CHARGE BY-LAW

The Development Charges By-law incorporates a number of changes which were discussed in the previous chapters and in the covering report that accompanies the tabling of this study.

4.1 Calculated Rates

The draft by-law also incorporates the full calculated rates as reflected in the summary tables in chapter 3. For ease of reference, the calculated rates are also provided in Table 4-1 (at the end of this chapter).

4.2 Comparison to Existing Rates

The proposed rates are compared to the schedule of rates under the existing by-law on a component by component basis in Table 4-2 (at the end of this chapter). The proposed change in the residential rates (increase of $4,427) can be summarized as follows :

- Increase in Road component - $2,965
- Increase in Major SWM component - $1,608
- Decrease in UWRF component - <$1,134>
- Inclusion of Water supply in proposed rates, not included in current rate - $400
- Other miscellaneous increases – $588

Some observations about the differences in the calculated rates compared to existing rates follow (see also, discussion of changes to rates in DC covering report tabled April 14, 2014):

(a) General increase to DC rates due to escalating infrastructure costs that exceed cost indices used to annually adjust DC rates;
(b) Increase in CSRF rates for Roads, Sanitary and Major SWM works as a result of continued shift in responsibility for funding from the UWRF, as recommended by the Blue Ribbon Panel Report (2006). The scope of future funding from the UWRF has narrowed while previously UWRF funded works will in future years be funded from CSRF. This results in a “gradual migration” of DC rate from UWRF to CSRF components.
(c) Proposed rates include a Water Supply component ($400/sfu). Existing rates do not include that component.
(d) Proposed rates are reflecting a higher financing cost, as projected cash flows compared to draws require more projects to be debt financed.

4.3 Implementation of New Rates

The revised by-law is recommended to be effective August 4, 2014, coincident with the expiry of the existing by-law.

TABLE 4-1 – PROPOSED DC RATES – effective August 4, 2014

	Service Component:	Single & Semi Detached (per dwelling unit)	Rowhousing (per dwelling unit)	Apartments with < 2 bedrooms (per dwelling unit)	Apartments with > = 2 bedrooms (per dwelling unit)	Commercial (per sq. m. of gross floor area)	Institutional (per sq. m. of gross floor area)	Industrial (per sq. m. of gross floor area)
City Services	Fire Services	$ 69.48	$ 49.47	$ 31.48	$ 42.95	$ 1.14	$ 0.40	$ 0.06
	Police Services	$ 318.35	$ 226.65	$ 144.23	$ 196.78	$ 0.32	$ 0.10	$ 0.01
	Growth Studies	$ 472.54	$ 336.43	$ 214.09	$ 292.09	$ 5.52	$ 3.06	$ 2.13
	Library Services	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ -	$ -	$ -
	Parks & Recreation	$ 1,993.24	$ 1,419.14	$ 903.09	$ 1,232.07	$ -	$ -	$ -
	Transit Services	$ 306.64	$ 218.32	$ 138.93	$ 189.54	$ 2.85	$ 2.43	$ 2.20
	Roads Services	$ 12,675.02	$ 9,569.22	$ 5,917.81	$ 7,974.35	$ 150.45	$ 87.13	$ 69.46
	Sanitary Sewerage	$ 3,370.54	$ 2,544.65	$ 1,573.66	$ 2,120.54	$ 16.78	$ 6.98	$ 26.74
	Water Supply	$ 400.03	$ 302.01	$ 186.77	$ 251.68	$ 1.70	$ 2.48	$ 6.36
	Water Distribution	$ 1,096.70	$ 827.97	$ 512.04	$ 689.98	$ 7.28	$ 2.31	$ 27.69
	Major SWM	$ 5,169.23	$ 3,902.60	$ 2,413.45	$ 3,252.17	$ 46.96	$ 25.47	$ 35.03
Urban Works	Minor Roadworks	$ 651.10	$ 491.56	$ 303.99	$ 409.63	$ 8.88	$ 2.22	$ 1.71
	Minor Sanitary Sewers	$ 400.20	$ 302.14	$ 186.85	$ 251.78	$ 5.46	$ 1.36	$ 1.05
	Minor Storm Sewers	$ 312.81	$ 236.16	$ 146.05	$ 196.80	$ 4.27	$ 1.06	$ 0.82
	Minor SWM	$ 906.87	$ 684.65	$ 423.40	$ 570.55	$ 14.32	$ 3.84	$ -
Total Rates	**TOTAL RATE - City Services and Urban Works**	**$ 28,142.75**	**$ 21,110.98**	**$ 13,095.84**	**$ 17,670.89**	**$ 265.94**	**$ 138.84**	**$ 173.28**
	TOTAL RATE - City Services (Rural Rate)	**$ 15,835.27**	**$ 11,819.24**	**$ 7,349.64**	**$ 9,927.78**	**$ 160.29**	**$ 93.12**	**$ 73.87**

TABLE 4-2 – COMPARISON OF PROPOSED RATES WITH EXISTING RATES

		Existing DC Rates - effective January 1, 2014			Change in existing rates		
					Increase or <Decrease>		
		Single & Semi Detached (per dwelling unit)	Commercial (per sq. m. of gross floor area)	Institutional (per sq. m. of gross floor area)	Single & Semi Detached (per dwelling unit)	Commercial (per sq. m. of gross floor area)	Institutional (per sq. m. of gross floor area)
City Services	Fire Services	$ 37.25	$ 1.71	$ 1.28	$ 32.23	$ (0.57)	$ (0.88)
	Police Services	$ 136.58	$ 0.12	$ 0.09	$ 181.77	$ 0.20	$ 0.01
	Growth Studies	$ 261.78	$ 2.74	$ 1.03	$ 210.76	$ 2.77	$ 2.02
	Library Services	$ 35.18	$ -	$ -	$ (35.18)	$ -	$ -
	Parks & Recreation	$ 1,451.68	$ -	$ -	$ 541.57	$ -	$ -
	Transit Services	$ 243.15	$ 4.19	$ 1.77	$ 63.49	$ (1.34)	$ 0.66
	Roads Services	$ 9,710.56	$ 79.71	$ 52.85	$ 2,964.46	$ 70.74	$ 34.28
	Sanitary Sewerage	$ 3,892.52	$ 16.29	$ 13.12	$ (521.98)	$ 0.50	$ (6.14)
	Water Supply				$ 400.03	$ 1.70	$ 2.48
	Water Distribution	$ 980.89	$ 4.20	$ 2.80	$ 115.81	$ 3.08	$ (0.49)
Urban Works	Major SWM	$ 3,561.42	$ 34.22	$ 21.10	$ 1,607.81	$ 12.74	$ 4.37
	Minor Roadworks	$ 1,349.06	$ 13.16	$ 7.35	$ (697.96)	$ (4.28)	$ (5.13)
	Minor Sanitary Sewers	$ 569.08	$ 2.78	$ 1.54	$ (168.88)	$ 2.67	$ (0.18)
	Minor Storm Sewers	$ 439.74	$ 4.22	$ 2.60	$ (126.94)	$ 0.04	$ (1.53)
	Minor SWM	$ 1,047.11	$ 11.09	$ 6.87	$ (140.24)	$ 3.23	$ (3.03)
Total Rates	**TOTAL RATE - City Services and Urban Works**	$ 23,716.00	$ 174.44	$ 112.41	$ 4,426.75	$ 91.50	$ 26.43
	Existing DC rates - January 1, 2014				$ 23,716.00	$ 174.44	$ 112.41
	Proposed DC rates - August 4, 2014				**$ 28,142.75**	**$ 265.94**	**$ 138.84**

There is no Industrial DC rate in the current by-law, so no comparison to current rates is possible

APPENDIX A - GROWTH FORECASTS

A.1 Growth Forecast

In October, 2012, Altus Group Economic Consulting completed on behalf of the City, an update of the 30 year growth projection prepared in 2006. The report, entitled "Employment, Population, Housing and Non-residential Construction Projections, 2011 Update" contained growth forecasts that were used for both the 2014 Development Charges Background Study and the ReThink London Land Needs Study.

Altus Group Economic Consulting (Altus) has extensive experience in preparing growth forecasts for a multitude of municipalities, developers, agencies and other levels of government over the past three decades.

In October, 2012, the Altus study was finalized and presented to Council. The forecasts were endorsed for use in the 2014 DC Study. Subsequently, Altus provided City Staff with a customized interpolation of the endorsed growth projections to align with DC Study years (2014-2019, 2019-2024, 2024-2029, 2029-2034). These projections were allocated by Staff to geographic areas of the city (as described in Section A.4 below). For residential, industrial and institutional, the 2012 Altus projection forms the basis of the forecasts used to project growth-related capital needs in the DC Study and provided the quantum of growth over which costs were spread and DC rates were calculated. Following further review of their original 2012 commercial space projection, Altus provided revised space factors and net commercial space. The revised commercial projection was used to determine growth needs and to calculate DC rates. A memo pertaining to the revised commercial projections was submitted to Strategic Priorities and Policy Committee for endorsement at the April 14, 2014 meeting as part of the DC Study covering report.

This Appendix describes, in condensed form, the contents and conclusions of the study that are pertinent to the development charge rate setting process. It contains the following sections:

- A.2 Growth Forecast Methodology
- A.3 DC Study Growth Projections
- A.4 Distribution of Growth Projections
- A.5 Growth Projections Summary

A.2 Growth Forecast Methodology

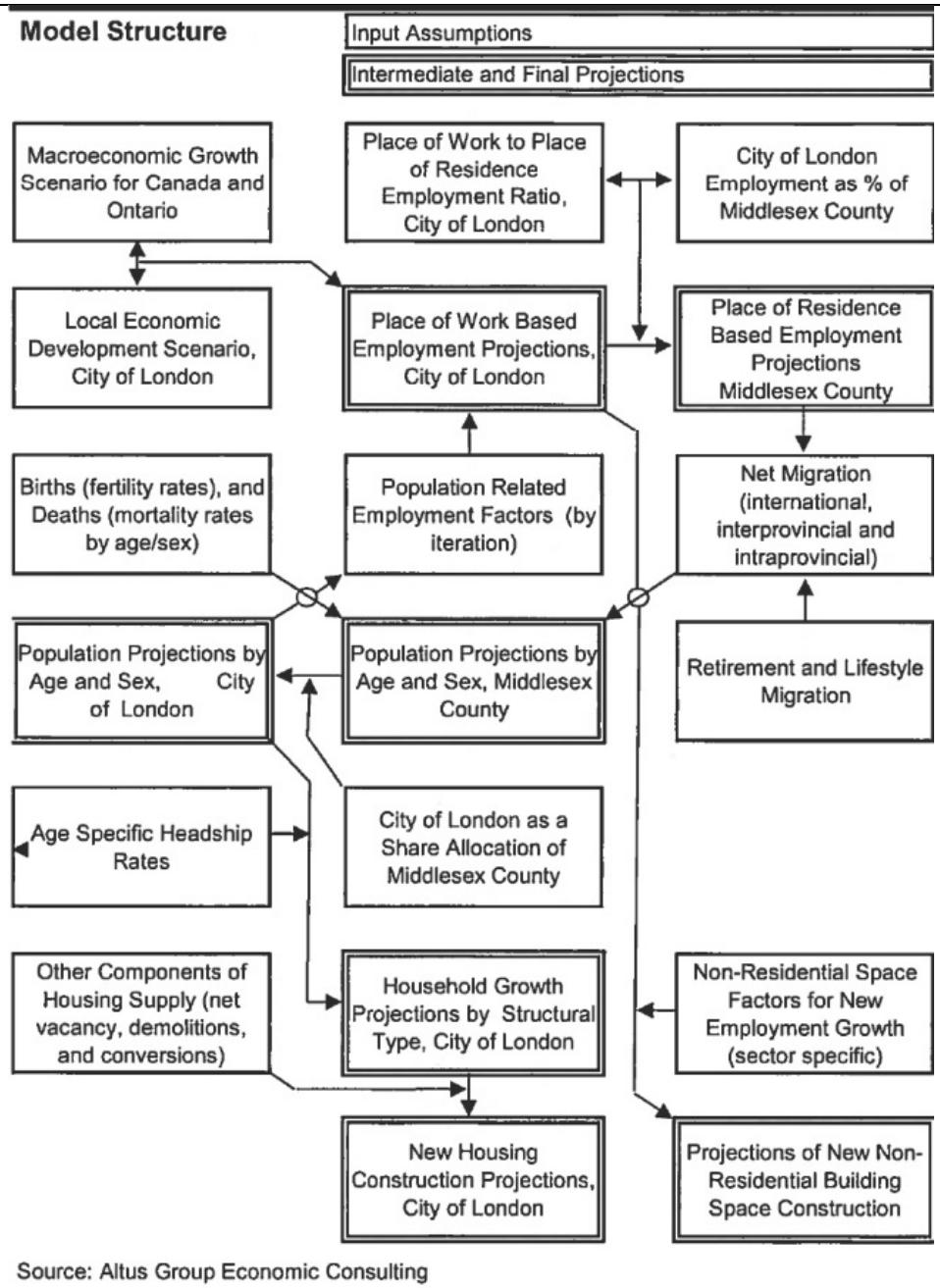
The methodology applied to the growth forecast is reviewed in detail in chapter 2 of the 2012 Altus report. The study involved several phases to arrive at the ultimate forecasts of housing and non-residential construction activity including:

1. Projections of employment, taking into account the macroeconomic environment for Canada and Ontario as well as the economic development scenario for the City of London.
2. Population projections by age and sex using a standard cohort survival model. This model recognizes births and deaths and derives net migration as a function of the employment growth forecasts described above (i.e.. the model recognizes that people move to London (net migration) as employment opportunities grow in London).

3. A housing model projects the anticipated household growth associated with the population projections. This model relies on assumptions regarding headship rates (the propensity of persons within an age group to head up a household).
4. A non-residential building space model produced projections based largely on employment growth projections presented in the economic model (see 1. above).

The process and inputs for the Altus model are described graphically in Table 1.

Table 1



Source: Altus Group Economic Consulting

A.3. DC Study Growth Projections

The report prepared by Altus provides a full account of historical employment, population, housing and Industrial, Commercial & Institutional (ICI) floor space growth in London, in addition to forecasted growth. The following sections provide excerpts of this information.

A.3.1 Employment Projection

Table 2

Employment, Ontario and City of London, 2001-2041

	Actual		Estimate	Projection			Annual Percent Growth			
	2001	2006	2011	2021	2031	2041	2001-2011	2011-2021	2021-2031	2031-2041
	Number of Persons Employed (000s)						*Percent*			
Ontario[1]										
Primary	118.7	138.1	129.1	131.5	133.5	137.0	0.84	0.19	0.15	0.26
Manufacturing	1,067.3	1,000.5	794.9	863.1	912.5	997.5	(2.90)	0.83	0.56	0.89
Construction	333.8	402.9	442.5	540.0	608.2	725.9	2.86	2.01	1.20	1.78
Transport., storage, comm.	630.2	658.5	722.6	835.8	917.7	1,058.7	1.38	1.47	0.94	1.44
Trade	932.2	1,006.1	992.4	1,128.8	1,224.1	1,388.3	0.63	1.30	0.81	1.27
FIRE	386.6	474.1	501.3	575.8	629.6	722.4	2.63	1.40	0.90	1.38
Educational services	354.5	444.3	478.7	552.8	606.3	698.6	3.05	1.45	0.93	1.43
Health care services	560.7	634.7	766.4	870.4	949.8	1,086.8	3.17	1.28	0.88	1.36
Public Admin.	282.6	311.7	389.7	405.7	418.1	439.5	3.27	0.40	0.30	0.50
Other services	1,253.8	1,377.9	1,513.7	1,752.8	1,925.7	2,223.4	1.90	1.48	0.94	1.45
Total	**5,920.4**	**6,448.8**	**6,731.3**	**7,656.7**	**8,325.6**	**9,478.0**	**1.29**	**1.30**	**0.84**	**1.30**
London[2]										
Primary	1.7	1.6	1.5	1.5	1.5	1.5	(1.37)	(0.05)	0.15	0.26
Manufacturing	23.3	22.5	19.3	20.3	21.5	23.5	(1.85)	0.50	0.56	0.89
Construction	8.9	10.2	10.8	10.8	11.7	12.7	1.96	(0.04)	0.79	0.84
Transport., storage, comm.	12.2	12.1	12.2	14.7	16.1	18.6	0.04	1.84	0.94	1.44
Trade	30.0	31.9	29.0	32.7	36.0	40.3	(0.35)	1.23	0.95	1.13
FIRE	14.7	15.9	16.8	18.1	18.9	20.2	1.32	0.77	0.41	0.69
Educational services	14.7	16.8	15.8	18.3	19.4	22.1	0.75	1.48	0.59	1.33
Health care services	24.9	27.0	28.4	32.5	35.9	41.6	1.32	1.36	1.01	1.49
Public Admin.	6.5	7.3	7.5	7.5	7.7	8.1	1.38	0.05	0.30	0.50
Other services	42.5	48.3	48.4	55.3	60.7	70.9	1.32	1.33	0.94	1.57
Total	**179.4**	**193.5**	**189.7**	**211.6**	**229.3**	**259.6**	**0.56**	**1.10**	**0.81**	**1.25**

[1] Place of residence basis;[2] Place of work basis

Source: Forecasts: Altus Economics, Historical: Statistics Canada

Table 2 (above) shows employment growth, by sector, for Ontario and the City of London. It shows London's top five sectors (Other services, Trade, Health Care, Manufacturing, and Finance, Insurance and Real Estate) experiencing growth and generally maintaining their share of total employment, city-wide. Over the course of the period 2011-2031, Transportation, storage and communications is anticipated to experience the highest rate of growth (32%), followed by Health Care (26%) and Other Services (25%). Total employment growth for the City of London during the projection period is 39,700, for an average annual growth rate of 1%.

A.3.2 Population Projection

Population growth is a function of several variables. Birth, death and net migration assumptions were applied to existing populations to project forecast population by age group. Table 3 shows both historical and projected population by age group (cohorts).

Table 3

Population by Age Group by Development Charge Cycle Years, City of London, 1996-2039

	Census				Projections							
	1996	2001	2006	2011	2012	2013	2014	2019	2024	2029	2034	2039
Age Groups	*Number of Persons*				*Number of Persons*							
0-4	22,665	19,235	18,475	19,990	20,172	20,354	20,536	21,680	22,680	23,180	23,480	24,080
5-9	22,245	22,330	19,540	19,005	19,104	19,203	19,302	20,340	21,620	22,640	23,120	23,380
10-14	21,670	22,600	22,830	20,365	20,132	19,899	19,666	19,920	21,240	22,520	23,540	24,140
15-19	20,525	22,720	24,405	24,715	24,652	24,589	24,526	23,980	24,600	26,040	27,500	28,820
20-24	24,515	25,880	28,195	28,920	29,496	30,072	30,648	30,540	29,460	30,200	31,880	33,800
25-29	25,850	23,360	25,070	26,990	27,272	27,554	27,836	30,380	30,440	29,420	30,260	31,980
30-34	29,285	24,025	22,755	23,835	24,588	25,341	26,094	28,140	30,480	30,540	29,640	30,620
35-39	27,685	27,975	23,805	22,530	22,964	23,398	23,832	26,440	28,140	30,420	30,560	29,740
40-44	25,175	27,390	28,210	24,235	24,108	23,981	23,854	24,860	27,560	29,280	31,580	31,940
45-49	22,710	25,015	27,860	28,495	27,476	26,457	25,438	23,100	24,160	26,860	28,640	30,920
50-54	16,865	22,295	24,890	27,835	27,748	27,661	27,574	24,940	23,060	24,160	26,920	28,740
55-59	13,620	16,530	21,915	24,265	24,752	25,239	25,726	26,760	24,400	22,620	23,760	26,460
60-64	12,345	13,140	16,080	21,255	21,704	22,153	22,602	24,880	25,920	23,720	22,020	23,160
65-69	11,910	11,955	12,715	15,540	16,492	17,444	18,396	21,800	24,180	25,280	23,240	21,680
70-74	11,355	11,215	11,280	11,950	12,560	13,170	13,780	17,760	21,160	23,520	24,640	22,820
75-79	7,965	9,995	10,025	10,070	10,296	10,522	10,748	12,700	16,280	19,440	21,660	22,800
80-84	5,255	6,155	8,150	8,035	8,068	8,101	8,134	8,740	10,420	13,460	16,160	18,200
85+	4,000	4,715	6,195	8,030	8,304	8,578	8,852	9,880	10,920	12,780	16,100	20,100
Total	325,640	336,530	352,395	366,151	369,941	373,731	377,520	396,800	416,720	436,020	454,660	473,380
Average Annual Growth	1996-01	2001-06	2006-11		2011-12	2012-13	2013-14	2014-19	2019-24	2024-29	2029-34	2034-39
Persons	2,178	3,173	2,751		3,790	3,790	3,790	3,856	3,984	3,860	3,728	3,744
Growth Rate	0.66%	0.93%	0.77%		1.04%	1.02%	1.01%	1.00%	0.98%	0.91%	0.84%	0.81%

Totals may not add due to rounding

Source: Altus Economics

For DC Study purposes, both 10 year net population growth (2014-2024) and 20 year net population growth (2014-2034) are calculated. To determine growth-related capital needs requirements, 10 year projections are utilized by “soft services” and 20 year projections are applicable to “hard services.”

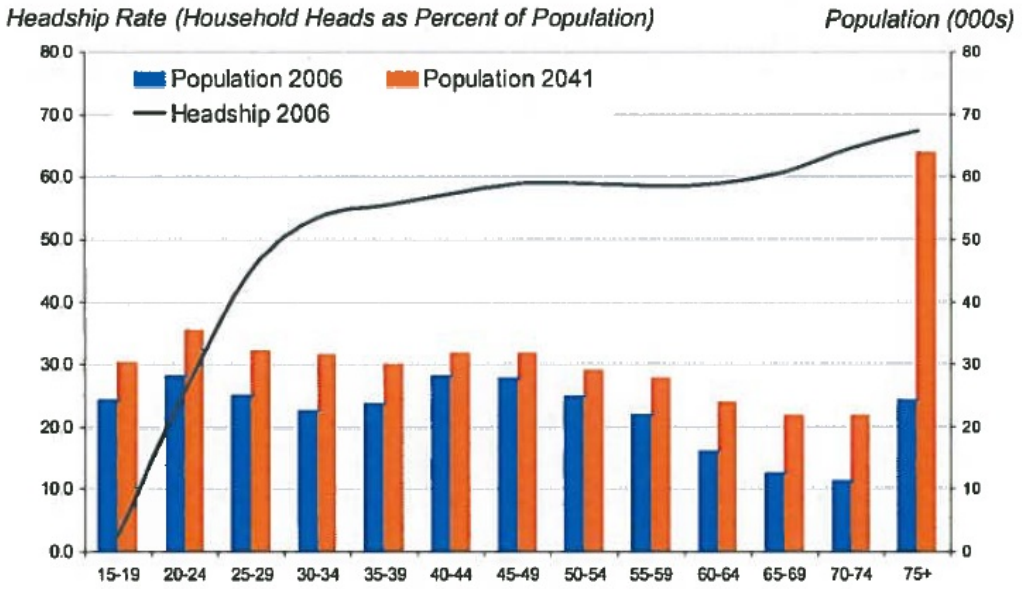
During the 10 year period of 2014-2024, net population growth is projected to be 39,200 persons (approximately 1% per year). Net population growth over the 20 year period 2014-2034 is 77,140 persons (approximately 0.9% per year).

A.3.3 Housing Projection

Headship rates measure the proportion of the population in a specific age cohort that is head of a household. Headship rates are low among teen aged population and rise rapidly in the 20-30 year old cohorts. The highest headship rates are in the 'over 50' crowd. The headship rates reflect the reality that the growth in households in London will come from both overall population growth, and growth in cohorts that display the highest headship rate. Headship rates inform the household forecast as well as required housing construction. Table 4 shows headship rates by age cohort and their relationship to the population forecast by cohort.

Table 4

Headship Rates and Population, City of London 2006-2041



Source: Altus Group Economic Consulting based on data from Statistics Canada

Housing mix was another important factor used to prepare the forecasts. Table 5 shows the housing mix of historical housing construction and provides the forecasted mix. Over the projection period, the housing mix is anticipated to remain relatively constant. A total of 8353 new housing units are anticipated to be constructed between 2014 and 2034.

Table 5

Annual Housing Construction Requirements by Development Charge Cycle Years, City of London, 2006-2039

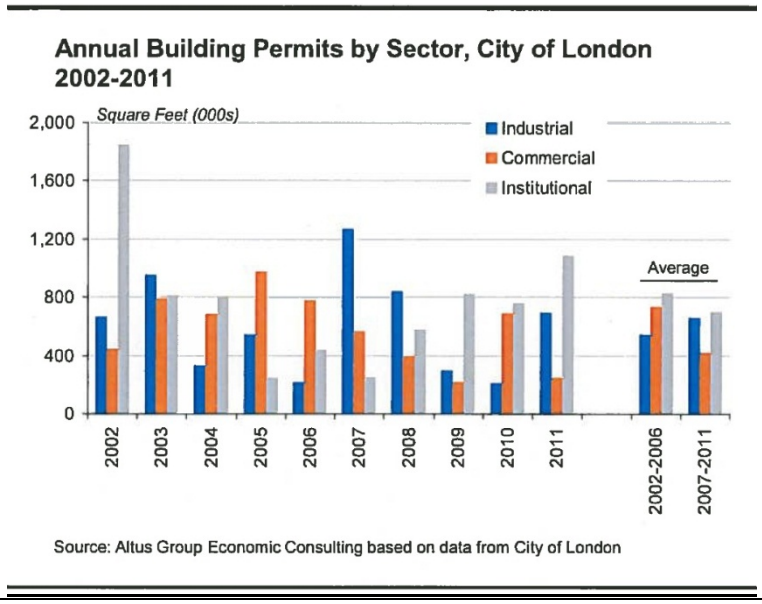
Census Periods		Single and Semis	Row	Apartments and Other	Total
			Occupied Dwelling Units		
2006-2011	*a*	1,103	238	793	2,134
2011-2012	*a*	948	122	239	1,309
2012-2013	*f*	1,244	395	605	2,244
2013-2014	*f*	1,244	395	605	2,244
2014-2019	*f*	1,176	364	636	2,175
2019-2024	*f*	1,158	364	668	2,191
2024-2029	*f*	1,118	333	620	2,070
2029-2034	*f*	1,068	300	548	1,916
2034-2039	*f*	1,023	291	562	1,877
Census Periods			*Percent Distribution*		
2006-2011	*a*	52	11	37	100
2011-2012	*a*	72	9	18	100
2012-2013	*f*	55	18	27	100
2013-2014	*f*	55	18	27	100
2014-2019	*f*	54	17	29	100
2019-2024	*f*	53	17	30	100
2024-2029	*f*	54	16	30	100
2029-2034	*f*	56	16	29	100
2034-2039	*f*	55	16	30	100

Totals may not add due to rounding
Source: Altus Economics

A. 3.4 Non-Residential Building Space Projection

Table 6 shows annual average non-residential construction activity in London by year from 2002-2011.

Table 6



Source: Altus Group Economic Consulting based on data from City of London

Table 7

Space Factors Applied to Employment by Industry

	Industrial	Commercial		Institutional
		Office	Retail/Other	
	Sq. Ft. per Employee			
2011-2016 *f*	900	240	460	700
2016-2021 *f*	900	240	460	700
2021-2026 *f*	910	240	460	700
2026-2031 *f*	910	240	460	700
2031-2036 *f*	910	240	460	700
2036-2041 *f*	910	240	460	700

Source: Altus Group Economic Consulting

In order to determine required non-residential space, Altus uses assumptions for the number of square feet per employee. These "space factors" are applied to net employment growth by general categories (industrial, commercial [office and retail], institutional). Table 7 provides the space factors utilized in the 2014 DC Study. The commercial space factors reflect those provided by the Altus revised commercial projection in March, 2014.

Table 8 provides required non-residential space for 2014-2034. In their review of employment for the 2006-2011 period, Altus determined that employment losses in the industrial and retail sectors provided surplus space to be absorbed by future employment growth. As a result, required industrial and retail space for the 2014-2019 and 2019-2024 periods was reduced to account for the surplus space, producing net non-residential space requirements. These net space requirements and their associated employees produce demands for new servicing and were used for growth allocations and rate calculation purposes. For commercial development, the space requirements represent the revised commercial projection provided by Altus in March, 2014.

Table 8

Net Non-Residential Space Requirements by Development Charge Cycle Years
City of London, 2014-2039

			Commercial		Institutional	Total
		Industrial	Office	Retail/Other		
Required New Supply				*Square Feet (000s)*		
2014-2019	*f*	2,468	326	602	1,964	5,360
2019-2024	*f*	2,446	152	718	1,042	4,358
2024-2029	*f*	2,778	190	1,256	1,118	5,342
2029-2034	*f*	3,378	352	1,574	2,414	7,718
2034-2039	*f*	3,878	444	1,914	2,850	9,086
2014-2039	f	14,948	1,464	6,064	9,388	31,864

Source: Altus Group Economic Consulting

For the projection period of 2014-2034, demand for ICI space is as follows:

- Industrial: 11,070,000 square feet (1,028,403 square metres)
- Commercial: 5,170,000 square feet (480,293 square metres)
- Institutional: 6,538,000 square feet (607,380 square metres)

The twenty year ICI split is 49%/23%/29%.

The Altus report formed the basis of the residential, industrial and institutional final growth forecasts used in this study. Commercial forecasts were taken from the Altus March, 2014 memo.

The final growth forecasts used in this study are summarized in Table A-1 at the end of this section. The table reflects both residential population growth projections and growth in non-residential space projections, in five year increments, beginning in 2014 and ending in 2034. The figures differ from the Altus forecasts adopted by Council only to the extent that they have been interpolated to match the timeframe used to forecast capital needs for DC Study purposes and that they incorporate the revised commercial space projections.

A.4 Distribution of Growth Projections

Growth results in different demands for infrastructure and services depending upon where it occurs. To forecast capital needs, it was necessary to distribute the growth projections into smaller geographic areas.

In general, this allocation was completed employing certain assumptions regarding the timing of development relative to each vacant land parcel's status in the planning approvals process, GMIS infrastructure timelines, contiguity of development and service outlets, previous build-out in the general area (as a proxy for market demand) and a reasonable allocation of growth to differing regions and market segments within the City. Assumptions were also made relating to infill and intensification. The Growth Management Implementation Strategy (approved by Council in June, 2008), confirmed the assumptions used by Administration in distributing growth and forecasting infrastructure needs.

Having allocated the population, unit, employment and space projections, the allocated population, unit employment and space forecasts were re-aggregated using land segmentation that was meaningful for each municipal service being planned. For example, projections of growth into traffic zones allowed for the City's consulting engineers to forecast road capacity expansion needs, growth by library district for Library capital needs, etc..

Capital needs planning based on population projections ensures that the DC study process complies with sections 5(1)1. and 5(1)2. of the *Development Charges Act, 1997*.

A.5 Growth Projections Summary

Growth projections for use in the 2014 Development Charges Study were prepared by Altus Group Economic Consulting, and were adopted by Council in 2012. Revisions to the commercial space forecast was provided to City staff in March, 2014, and the revisions have been submitted for Council approval at the same time as the approval of the DC Background Study. Using the Altus projections, City Staff allocated growth to geographic areas throughout the City to determine capital needs for DC recoverable services, consistent with the requirements of the Development Charges Act. The growth projections and methodology described in this appendix were reviewed and discussed with the Development Charges External Stakeholder Committee.

Table A-1: City of London - Growth Forecasts - 2014 DC Study

Residential Growth Forecasts (1):

Population, Residential units, and Growth Forecasts					Allocation of Total Unit Growth to Housing types					
	Population	Net Pop. Growth	Res. Units	Unit Growth Forecast	Total of Units per allocation at right	Low	Med	High Density Apts ≤ 1 bedroom	High Density Apts ≥ 2 bedroom	Total High Density Apartments
2011	366,151		169,355							
2014	377,520		174,360							
2019	396,800	19,280	185,240	10,880	10,880	5,880	1,820	1,272	1,908	3,180
2024	416,720	19,920	196,190	10,950	10,950	5,790	1,820	1,336	2,004	3,340
2029	436,020	19,300	206,545	10,355	10,355	5,590	1,665	1,240	1,860	3,100
2034	454,660	18,640	216,125	9,580	9,580	5,340	1,500	1,096	1,644	2,740
2039	473,380	18,720	225,505	9,380	9,380	5,115	1,455	1,124	1,686	2,810
		95,860		51,145	51,145	27,715	8,260	6,068	9,102	15,170
10 yr. 2014-2024	Net pop'n growth :	39,200		21,830	*21,830*	*11,670*	*3,640*	*2,608*	*3,912*	*6,520*
	Gross pop'n growth in new units (note 2):	**55,191**	(Note 2)		*density:*	*3.09*	*2.20*	*1.40*	*1.91*	*1.70*
20 yr. 2014-2034	Net pop'n growth :	77,140		41,765	*41,765*	*22,600*	*6,805*	*4,944*	*7,416*	*12,360*
	Gross pop'n growth in new units (note 2):	**104,829**	(Note 2)		*density:*	*3.02*	*2.28*	*1.41*	*1.90*	*1.70*

Industrial/Commercial/Institutional Forecasts :

	Growth of Space - 2014-2034 (4)				Employment Growth - 2014-2034 (3)					Total Place of Work (POW) Employment
	Industrial (sq.m)	Commercial (sq.m)	Institutional (sq.m.)	Total (sq. m.)	Industrial Emp.	Commercial Emp.	Institutional Emp.	At Home/Other	Total Empl't	Total
										197,800
2014-2019	229,277	86,211	182,456	497,944	2,739	2,222	2,806	280	8,047	205,847
2019-2024	227,233	80,823	96,802	404,858	2,699	1,998	1,489	895	7,081	212,927
2024-2029	258,076	134,333	103,862	496,271	3,053	3,529	1,597	1,305	9,484	222,411
2029-2034	313,816	178,925	224,261	717,002	3,712	4,898	3,449	1,029	13,088	235,499
Total	1,028,402	480,293	607,381	2,116,076	12,203	12,647	9,340	3,509	37,699	
10 yr. 2014-2024	456,510	167,034	279,258	902,802	5,438	4,220	4,294	1,175	15,127	
	50.6%	18.5%	30.9%	100.0%						
20 yr. 2024-2034	1,028,402	480,293	607,381	2,116,076	12,203	12,647	9,340	3,509	37,699	
	48.6%	22.7%	28.7%	100.0%						
Floor Area Ratio (5)	23.0%	30.0%	42.0%							

	Land Needs associated with Growth of Space forecast 2008-2028 (6)		
	Industrial (ha)	Commercial (ha)	Institutional (ha)
2014-2019	100	29	43
2019-2024	99	27	23
2024-2029	112	45	25
2029-2034	136	60	53
Total	447	160	145

Notes:

(1) 'Population growth' , 'Unit growth' and 'Density assumptions' provided by Altus Group Economic Consulting, adjusted for the DC Study periods

(2) Gross population in new units derived from multiplying unit forecasts (italicized above) by unit density figures (italicized).

(3) Employment growth forecast by Altus Group Economic Consulting, adjusted by Altus for the DC Study periods

(4) Floor space conversions based on Altus space factors by ICI category

(5) Floor area ratio calculations based on City of London 2011 Land Needs Background Study.

(6) Conversion based on floor area ratio assumptions

APPENDIX B – FIRE SERVICES

Existing Service Levels

The City of London Fire Department (herein referred to as the LFD), which is organized into seven (7) divisions, provides proactive and reactive services including, but not limited to: Fire Fighting; Communications; Fire Prevention; Apparatus, Training, Stores and Administration. At peak staffing, the LFD employs over 415 people.

In 2013, the Fire Fighting Division's 360 firefighters responded to 8,314 calls for emergency calls, 1,801 of which were pre-hospital medical emergencies (defibrillator and CPR). Working a 24-hour shift schedule based on a four-platoon system, emergency personnel respond from fourteen (14) fire stations strategically located across the City.

In order to measure the existing service standard in a way that would make it useful for comparison to standards for new stations, the City undertook a detailed inventory of its assets used in delivery of Fire services. The inventory includes valuation of all existing facilities (based on their size, quality and nature of construction, land value, and estimated building contents), Fire service vehicles, and Firefighter outfitting equipment. A per capita measure of Fire services was calculated. That measure combines the quality and the quantity of assets used for delivery of fire services.

By applying these existing service levels to the projected future population increase, a theoretical value of expenditure over which the City would be enhancing Fire services beyond historical service levels was calculated. This level serves as a "cap" for the maximum amount of money recoverable through development charge fees. The rate calculations provide that the growth related capital needs projected by the Fire Department and included in the development charge rate calculations will result in no increase over the existing service standard (a legislative requirement).

Approach to Planning Fire Services

With respect to the delivery of front line fire apparatus and staff, the adequacy of fire and emergency service levels is measured in two ways. The first key indicator, which is 'response time of the first Engine Company', is a measure of the elapsed time from when the vehicle begins to respond to an alarm and when it arrives on scene. The measure looks at the geography covered within a set time frame, as well as the risks within the same. Concerning the latter, if the area is not populated or very sparsely populated, there is no need to add a fire station; however, that need increases as the area is populated. Furthermore, for planning purposes the industry standard is to use a vehicle speed of approximately 50 kph, which results in the fire apparatus travelling 3.3 km to meet the 4 minute response time discussed below.

The second is also time sensitive, albeit it refers to when the balance of the necessary vehicles and fire fighters arrive on scene, which is defined as the 'weight of the response'. Both are critical components with respect to the Fire Department's primary goals: saving lives, preserving property, the conservation of the environment. When engine company response times exceed accepted industry norms, the need for a new station is triggered. An additional vehicle with staffing may also be necessary if the Department is unable to maintain an acceptable 'response weight' based on industry norms.

In planning services for new areas, the Department relies upon industry standards and guidelines to establish levels of service. These standards and guidelines include:

- **Public Fire Safety Guideline PFSG 04-08-10 Operational Planning: An Official Guide to Matching Resource Deployment and Risk**

  The Ministry of Community Safety and Correctional Services, through the Ontario Fire Marshal's (OFM) Office, is responsible for creating fire service guidelines for municipalities within the Province of Ontario. Public Fire Safety Guideline *PFSG 04-08-10: Operational Planning: An Official Guide to Matching Resource Deployment and Risk* outlines the Province's expectations with respect to analyzing risk and providing response capability and fire ground staffing. It replaces PFSG 04-08-12.

  PFSG 04-08-12 required that a minimum of four (4) firefighters arrive at the scene of a fire virtually simultaneously. The guideline also required that a minimum of ten (10) firefighters arrive within ten (10) minutes, 90% of the time. The ten (10) minutes is broken down as follows: one (1) minute to dispatch the call, one (1) minute for the crew to turnout and eight (8) minutes to travel to the scene. It should be noted that only firefighting or rescue but not both could be achieved with this staffing level. Additional staff is required to perform both tasks safely and efficiently. A municipality the size of London was expected to provide both simultaneously.

  The new guideline PFSG 04-08-10 has been introduced to assist municipalities in meeting their obligations as set out in Section 2 of the Fire Protection and Prevention Act, 1997 (FPPA). Section 2 identifies that *"Every municipality shall (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention and (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances".* Where the previous guideline focused on the response to a single family dwelling the new guideline provides an evaluation system that looks at the overall structural fire risk in a community and the need to plan for it,

  Based on the critical tasks from the incident management system the guideline includes a five step process that offers a systematic and logical process of assessment, planning and implementation. The intent of the process is to identify the risks within the community and identify the fire departments ability to respond to those risks. Unlike the previous guideline there is no reference to the time to respond but rather the staffing required to adequately respond to structural fire events.

  The LFD is currently conducting a Service Review of the Department's response capabilities and will reporting to Council with those results. In the absence of a standard from the OFM with respect to response time the department will be looking to NFPA 1710 for guidance.

- **NFPA 1710**

  The National Fire Protection Association(NFPA), an international standard setting body, uses NFPA 1710 to define the service levels for urban communities which use career fire fighters. It defines fire service response times, vehicle staffing requirements, and speaks to a broad range of fire service issues including, but not limited to, "*minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by substantially all career fire departments*". Components of that standard define acceptable response times, as well as fire ground staffing.

  With respect to the response time to a fire in a 2,000 ft^2 single family house with no basement, NFPA states that the first arriving Engine Company be "on-scene" within four (4) minutes of leaving the station. Further, every other piece of fire apparatus deemed necessary on an initial dispatch arrive within eight (8) minutes with a minimum of 14 fire fighters on-site, 15 if an aerial truck is in use. These requirements must be achieved 90% of the time. The use of city-wide averages is unacceptable; instead, the results must be reported by geographic service area. Higher risk building types such as, but not limited to, high-rise, multi-residential occupancies, propane facilities, manufacturing and processing plants, hospitals, long term care homes, etc., require a greater number of staff, as well as the type of fire apparatus dispatched. The number of fire fighters required could easiliy reach 30 to 60 depending on the type of occupancy, the perceived risk and the extent of the fire.

LFD data demonstrates that its performance for the first 'engine company' is consistent with the standard of the international standard setting body (i.e. four minutes). With the implementation of the Business Intelligence tool the LFD is further able to identify response by area of the City.

At the time of preparation of the 2014 Development Charges Study, the London Fire Department is reviewing future staffing and associated capital needs. The LFD study findings have yet to be considered by Council, and therefore cannot be included in this Background Study. Identified capital needs in the 2014 DC study are therefore based on a review of growth allocations, projects identified in the previous Fire master study, and previously approved reports to Council regarding anticipated London Fire Department needs. That being said, the LFD can state that its current coverage is aimed at servicing the populated areas within the Urban Growth Boundary and, to an extent, some areas that are not yet built up.

Capital Needs Identified

With the four minute response standard in mind, and using the 10 year growth forecasts (see Appendix A), the Fire Department undertook a capital needs forecast to update the capital needs identified in the 2009 Development Charges Background Study. This forecast identified the location and timing of fire station construction, with the intention of providing four minute response times, 90% of the time (NFPA standard). Once location of a station was known, it employed modeling software, that incorporates arterial road patterns and traveling speeds from which the service area of the new station was delineated.

The result of the process suggests that there are some significant capital challenges the City will face as a result of the anticipated growth and its geographic distribution. Below are some of the implications resulting from the capital needs forecast:

- Subject to the speed of growth in the southeast area of the City, there is a need for one new station in the 10 year time horizon (Station #15 – Southeast). A Quint vehicle to equip this station and to provide the best overall coverage for the City has been identified. Firefighting gear needed to outfit firefighters to provide service at the new station was also identified. The capital needs for Station #15 and its associated vehicle and outfitting are carried forward from the 2009 Development Charges Study.
- A second facility – the relocation of Station #11 - will be needed to adequately serve growth now occurring in the southwest, as well as to maintain existing service coverage to the Lambeth area. No new equipment is anticipated for this station and it has been fully funded as of 2013. There are no new net recoverable costs associated with this facility for the 2014 Development Charges Study.
- Growth allocations have supported the identified need for an Aerial Company to address the increasing number of high rise buildings being constructed in the central part of the City. This fire vehicle will be located at Fire Station 1, but it will provide support to other areas of the City as backup to existing aerial vehicles (and vice-versa). Buildings requiring the dispatch of an aerial company for fire suppression generally require two aerial vehicles to respond

Portion of Capital Needs Eligible for Development Charge Rate Calculations

Growth associated with Station #15 and the Aerial Company will benefit beyond the forecast period. A provision has been made in the determination of the growth amount for the purposes of rate calculations, to recognize a benefit to growth occurring beyond the ten (10) year horizon.

The determination of the amount eligible for inclusion in the development charge rate calculations also includes provision for the benefit to existing development (as required by section 5(1)6. of the Act). For Station #15 and its associated vehicle and outfitting, the non-growth share reflects existing development as of 1999 (the year the project was first identified). The benefit to existing allocation for the Aerial Company recognizes that the vehicle will provide service for existing properties in the central part of the City, albeit the need is being driven by the number of new high rises being added to the core area.

The tables also reflect:

a) A portion of the costs collected in previous years but as yet unspent (i.e., the uncommitted balance in the DC Fire Reserve Fund) is removed from the current rate calculation, leaving only the balance that benefits growth in the planning horizon under review (2014-2023) in the rate calculations.

b) An allocation of the growth costs amongst the different types of growth which benefit (i.e. between residential and non-residential). In this case, the benefit of Fire services has been apportioned on the basis of city-wide assessed property values by category.

c) An extrapolation of the existing service standard (see discussion in previous section) using the 10 year net growth projections to determine the maximum amount eligible for the Development Charge Rate calculations.

Together, these calculations and cost allocations produce a pre-financing cost DC rate calculation. The rate calculation tables provide a detailed account of how the pre-financing cost DC rate has been determined.

Outstanding debt on previously approved growth related projects has also been factored into the rate calculations, where it exists. Presently, there is no debt associated with Fire Services.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the calculation table has been provided. This table simulates the cash flows in this component of the DC funds:

a) It begins with the 2014 opening balance– in this case, a balance of $359,200. This takes into account the opening uncommitted funds on hand at December 31, 2013;

b) It provides for projected DC revenues and drawdowns for the growth share of projects being completed in the upcoming period;

c) It incorporates an estimate of annual interest revenues and expenses that can be expected to be earned/incurred throughout the planning horizon.

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service.

Long Term Operating Costs

An examination of the long term operating costs for growth needs for Fire Services (DC) is included in Appendix O.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been determined by a concentrated internal review. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

2014 Development Charges Background Study
TABLE B-1 - Fire Services - Measure of Existing Service Standard

SERVICE: FIRE COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.
No. 1	300 Horton Street	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	$299
No. 2 (Note 1)	1101 Florence St		24,700	24,700	24,700	24,700	24,700	24,700	24,700	24,700	24,700	$308
No. 2 (DEMOLISHED)	1103 Florence St	8,628										$263
Garage/Machine shop (DEMOLISHED)	1105 Florence St	6,080										$235
No. 3	550 Commissioners Rd W	8,052	8,052	8,052	8,052	8,052	8,052	8,052	8,052	8,052	8,052	$338
No. 4	807 Colborne St	4,418	4,418	4,418	4,418	4,418	4,418	4,418	4,418	4,418	4,418	$297
No. 5	751 Deveron Cr	8,120	8,120	8,120	8,120	8,120	8,120	8,120	8,120	8,120	8,120	$423
No. 6	590 Oxford St E	8,490	8,490	8,490	8,490	8,490	8,490	8,490	8,490	8,490	9,666	$364
No. 7	1192 Highbury Ave	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	$337
No. 8	1565 Western Rd.	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	6,594	$346
No. 9	746 Wellington Rd S	15,388	15,388	15,388	15,388	15,388	15,388	15,388	15,388	15,388	15,388	$420
Training tower	746 Wellington Rd S	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220	$135
Storage garage	746 Wellington Rd S	240	240	240	240	240	240	240	240	240	240	$30
No. 10	2125 Trafalgar St	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	9,063	$323
No. 11	7109 Westminster Dr	10,187	10,187	10,187	10,187	10,187	10,187	10,187	10,187	10,187	10,187	$181
No. 12	275 Boler Road	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	$338
No. 13 (Note 2)	790 Fanshawe Park Rd E			4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	$308
No. 14 (Note 2)	2225 Hyde Park Road							8,429	8,429	8,429	8,429	$237
N/E Communications Tower (Note 2)	1795 Oxford St. E						300	300	300	300	300	$855
	Total	141,011	151,003	155,403	155,403	155,403	155,703	164,132	164,132	164,132	165,308	
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Level of Service		0.407489	0.432398	0.440991	0.437570	0.434208	0.431729	0.451657	0.448264	0.443672	0.442319	

10 year average	0.437030
Quantity Standard per Capita	

Source : Building square footage measures provided by City of London Facility Services. Land values provided by Realty Services.

NOTES:
1) Station No.2 and garage/machine shop were demolished in 2004 and replaced with a new station No.2 in 2005.
2) Station No.13 was built in 2006, Station No. 14 was built in 2010 and the N/E Communications Tower was built in 2009.

2014 Development Charges Background Study

TABLE B-1 - Fire Services - Measure of Existing Service Standard

SERVICE: FIRE COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
No. 1	300 Horton Street	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2	$9,848.2
No. 2	1101 Florence St	$0.0	$7,607.6	$7,607.6	$7,607.6	$7,607.6	$7,607.6	$7,607.6	$7,607.6	$7,607.6	$7,607.6
No. 2 (DEMOLISHED)	1103 Florence St	$2,269.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Garage/Machine shop (DEMOLISHED)	1105 Florence St	$1,428.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
No. 3	550 Commissioners Rd W	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6	$2,721.6
No. 4	807 Colborne St	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1	$1,312.1
No. 5	751 Deveron Cr	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8	$3,434.8
No. 6	590 Oxford St E	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,090.4	$3,518.4
No. 7	1192 Highbury Ave	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2	$2,222.2
No. 8	1565 Western Rd.	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5	$2,281.5
No. 9	746 Wellington Rd S	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0	$6,463.0
Training tower	746 Wellington Rd S	$569.7	$569.7	$569.7	$569.7	$569.7	$569.7	$569.7	$569.7	$569.7	$569.7
Storage garage	746 Wellington Rd S	$7.2	$7.2	$7.2	$7.2	$7.2	$7.2	$7.2	$7.2	$7.2	$7.2
No. 10	2125 Trafalgar St	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3	$2,927.3
No. 11	7109 Westminster Dr	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8
No. 12	275 Boler Road	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0	$4,056.0
No. 13	790 Fanshawe Park Rd E	$0.0	$0.0	$1,355.2	$1,355.2	$1,355.2	$1,355.2	$1,355.2	$1,355.2	$1,355.2	$1,355.2
No. 14	2225 Hyde Park Road	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$1,997.7	$1,997.7	$1,997.7	$1,997.7
N/E Communications Tower	1795 Oxford St. E	$0.0	$0.0	$0.0	$0.0	$0.0	$256.5	$256.5	$256.5	$256.5	$256.5
	Total	$44,475.7	$48,385.4	$49,740.6	$49,740.6	$49,740.6	$49,997.1	$51,994.7	$51,994.7	$51,994.7	$52,422.8
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard		$128.52	$138.55	$141.15	$140.06	$138.98	$138.63	$143.08	$142.00	$140.55	$140.27

10 year average	$139.18
Service Standard per Capita	

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$139.18
DC rate eligible amount (gross)	$5,455,856

NOTES:
1) The valuations above include the 2013 replacement value of building, land, and site improvements.

2014 Development Charges Background Study
TABLE B-1 - Fire Services - Measure of Existing Service Standards

SERVICE: FIRE COMPONENT: VEHICLES

Contact person(s) Gwen Francis
Unit of measure Vehicle
Type of measure Quantity

Unit description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $value/unit
Aerial	2	2	2	2	2	2	2	2	2	2	$950,000
Platform Aerial	1	1	1	1	1	1	1	1	1	1	$1,100,000
Aerial Spare					1	1	1				$950,000
Tanker (1500 gal)	2	2	2	2	2	2	2	2	1	1	$250,000
Tanker (2500 gal)									1	1	$350,000
Tanker Spare (1500 gal)	1	1	1	1	1	1	1	1	1	1	$250,000
Engine	10	10	11	8	8	7	6	6	6	6	$525,000
Engine (spare)	3	3	3	3	3	3	3	4	4	4	$525,000
Pumper Rescue				3	3	4	4	5	5	5	$600,000
Quint	2	2	2	2	2	2	3	3	3	3	$845,000
Rescue	2	2	2	2	1	1	1	1	1	1	$550,000
Rescue Pumper					1	1	1				$600,000
Platoon Car	2	2	2	2	2	2	2	2	2	2	$60,000
Marine Vehicles	2	2	2	2	2	2	2	2	2	2	$60,000
Service Units (2, 4, 9)	3	3	3	3	3	3	3	3	3	3	$40,000
Service Units (1 - air bottle transport)	1	1	1	1	1	1	1	1	1	1	$65,000
Training Units (1, 2, 3)	3	3	3	3	3	3	3	3	3	3	$35,000
Zodiac Boat	2	2	2	2	2	2	2	2	2	2	$20,000
Zodiac Boat (spare)	1	1	1	1	1	1	1	1	1	1	$20,000
Zodiac Trailer	2	2	2	2	2	2	2	2	2	2	$3,500
Zodiac Trailer (spare)	1	1	1	1	1	1	1	1	1	1	$3,500
HAZMAT Vehicle	1	1	1	1	1	1	1	1	1	1	$900,000
Decontamination Trailer	1	1	1	1	1	1	1	1	1	1	$50,000
Air Light Vehicle	1	1	1	1	1	1	1	1	1	1	$450,000
Investigation Vehicle	1	1	1	1	1	1	1	1	1	1	$90,000
Service Vehicles (3, Stores)	2	2	2	2	2	2	2	2	2	2	$30,000
Safety House Trailer	1	1	1	1	1	1	1	1	1	1	$200,000
Fire Prevention Inspection	14	14	16	16	16	15	15	16	16	16	$25,000
Public Education	1	2	3	3	3	4	4	4	4	4	$30,000
Administration	1	1	1	1	1	1	1	1	1	1	$35,000
Total	63	64	68	68	69	69	69	70	70	70	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	0.000182	0.000183	0.000193	0.000191	0.000193	0.000191	0.000190	0.000191	0.000189	0.000187

10 year average	
Quantity Standard per Capita	0.000189

Sources: Values and quantity of vehicles taken from inventory reports maintained by Fire Administration.

2014 Development Charges Background Study

TABLE B-1 - Fire Services - Measure of Existing Service Standards

SERVICE: FIRE COMPONENT: VEHICLES

Contact person(s)	Gwen Francis
Unit of measure	2013 Replacement Value ($thousands)
Type of measure	Quality & Quantity

Unit description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Aerial	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900	$1,900
Platform Aerial	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100
Aerial Spare	$0	$0	$0	$0	$950	$950	$950	$0	$0	$0
Tanker (1500 gal)	$500	$500	$500	$500	$500	$500	$500	$500	$250	$250
Tanker (2500 gal)	$0	$0	$0	$0	$0	$0	$0	$0	$350	$350
Tanker Spare (1500 gal)	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250
Engine	$5,250	$5,250	$5,775	$4,200	$4,200	$3,675	$3,150	$3,150	$3,150	$3,150
Engine (spare)	$1,575	$1,575	$1,575	$1,575	$1,575	$1,575	$1,575	$2,100	$2,100	$2,100
Pumper Rescue	$0	$0	$0	$1,800	$1,800	$2,400	$2,400	$3,000	$3,000	$3,000
Quint	$1,690	$1,690	$1,690	$1,690	$1,690	$1,690	$2,535	$2,535	$2,535	$2,535
Rescue	$1,100	$1,100	$1,100	$1,100	$550	$550	$550	$550	$550	$550
Rescue Pumper	$0	$0	$0	$0	$600	$600	$600	$0	$0	$0
Platoon Car	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120
Marine Vehicles	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120
Service Units (2, 4, 9)	$120	$120	$120	$120	$120	$120	$120	$120	$120	$120
Service Units (1 - air bottle transport)	$65	$65	$65	$65	$65	$65	$65	$65	$65	$65
Training Units (1, 2, 3)	$105	$105	$105	$105	$105	$105	$105	$105	$105	$105
Zodiac Boat	$40	$40	$40	$40	$40	$40	$40	$40	$40	$40
Zodiac Boat (spare)	$20	$20	$20	$20	$20	$20	$20	$20	$20	$20
Zodiac Trailer	$7	$7	$7	$7	$7	$7	$7	$7	$7	$7
Zodiac Trailer (spare)	$4	$4	$4	$4	$4	$4	$4	$4	$4	$4
HAZMAT Vehicle	$900	$900	$900	$900	$900	$900	$900	$900	$900	$900
Decontamination Trailer	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50
Air Light Vehicle	$450	$450	$450	$450	$450	$450	$450	$450	$450	$450
Investigation Vehicle	$90	$90	$90	$90	$90	$90	$90	$90	$90	$90
Service Vehicles (3, Stores)	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60
Safety House Trailer	$200	$200	$200	$200	$200	$200	$200	$200	$200	$200
Fire Prevention Inspection	$350	$350	$400	$400	$400	$375	$375	$400	$400	$400
Public Education	$30	$60	$90	$90	$90	$120	$120	$120	$120	$120
Administration	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35
Total	$16,130.5	$16,160.5	$16,765.5	$16,990.5	$17,990.5	$18,070.5	$18,390.5	$17,990.5	$18,090.5	$18,090.5
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	$46.61	$46.28	$47.58	$47.84	$50.27	$50.11	$50.61	$49.13	$48.90	$48.41

10 year average	
Service Standard per Capita	$48.57

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$48.57
DC rate eligible amount (gross)	$1,903,944

2014 Development Charges Background Study
TABLE B-1 - Fire Services - Measure of Existing Service Standards

SERVICE: FIRE

COMPONENT: OUTFITTING

Contact person(s) Gwen Francis
Unit of measure Firefighter
Type of measure Quantity

Facility name - location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $value/unit
Firefighters	336	336	356	356	356	356	356	360	360	360	$3,341
Total	336	336	356	356	356	356	356	360	360	360	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	0.000971	0.000962	0.001010	0.001002	0.000995	0.000987	0.000980	0.000983	0.000973	0.000963

10 year average	
Quantity Standard per Capita	0.000983

Sources: Number of Firefighters and outfitting costs compiled by Fire Administration.

2014 Development Charges Background Study

TABLE B-1 - Fire Services - Measure of Existing Service Standards

SERVICE: FIRE COMPONENT: OUTFITTING

Contact person(s)	Gwen Francis
Unit of measure	2013 Replacement Value ($thousands)
Type of measure	Quality & Quantity

Facility name - location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Firefighters	$1,123	$1,123	$1,189	$1,189	$1,189	$1,189	$1,189	$1,203	$1,203	$1,203
Total	$1,123	$1,123	$1,189	$1,189	$1,189	$1,189	$1,189	$1,203	$1,203	$1,203
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	$3.25	$3.22	$3.37	$3.35	$3.32	$3.30	$3.27	$3.29	$3.25	$3.22

10 year average	
Service Standard per Capita	$3.28

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$3.28
DC rate eligible amount (gross)	$128,576

Table B-2: Fire Services

Service component : **Fire - Facility**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
	(all $'s in ,000's)		*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*
						(1) - sum(2,3)			*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*(7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
	Anticipated and Planned Projects		*Note 1*		*Note 2*		*Note 3*			*Note 4*							*Note 5*		*Note 5*		*Note 5*		*Note 5*
DC14-FS00001	Fire Station 15 - New Station	2015	$2,195.0			$2,195.0	49.6%	$1,089.7	$1,105.3	35.3%	$389.8	$0.0	$715.5	$0.0	$715.5	79.7%	$570.3	11.8%	$84.5	7.2%	$51.5	1.3%	$9.3
DC14-FS00002	Fire Station 11 - Lambeth Relocation	2015	$2,075.0		$2,075.0	$0.0		$0.0	$0.0		$0.0	$0.0	$0.0	$0.0	$0.0		$0.0		$0.0		$0.0		$0.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$0.0				$0.0		$0.0		$0.0		$0.0		$0.0		$0.0
TOTAL			**$4,270.0**	**$0.0**	**$2,075.0**	**$2,195.0**	**49.6%**	**$1,089.7**	**$1,105.3**	**35.3%**	**$389.8**	**$0.0**	**$715.5**	**$0.0**	**$715.5**	**79.7%**	**$570.3**	**11.8%**	**$84.5**	**7.2%**	**$51.5**	**1.3%**	**$9.3**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$139.18
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$5,455.9
Current Growth Needs	$715.5
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$313.1	82.0%	$256.8	10.7%	$33.5	7.3%	$22.7	0.0%	$0.0
Total net cost eligible for DC rate calculation purpose	$402.4	77.9%	$313.5	12.7%	$51.0	7.1%	$28.7	2.3%	$9.3
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 5.68**		**$ 0.31**		**$ 0.10**		**$ 0.02**
			/person		/sq. m.		/sq. m.		/sq. m.

Prefinancing - Calculated Residential DC Rate - financing costs to be added

		Facility	*Vehicle*	*Outfitting*	*Total*	**Existing Res. Rate with financing included** *Jan 1, 2014 rate*
Single Family Dwelling	3.09	$ 17.55	$ 34.91	$ 0.97	$ 53.43	$ 37.25
Multiple unit dwelling	2.20	$ 12.50	$ 24.85	$ 0.69	$ 38.04	$ 26.90
Apartment - bach. & 1 bed	1.40	$ 7.95	$ 15.82	$ 0.44	$ 24.21	$ 15.52
Apartment - ≥ 2 bedroom	1.91	$ 10.85	$ 21.58	$ 0.60	$ 33.03	$ 21.73

Notes:

1) Estimated costs include building fees, construction, land, furniture and equipment.
2) The Lambeth Station Relocation was originally scheduled for 2013, but has subsequently been deferred to 2015. The project was fully funded as of 2013 and does not require additional DC funding from that already provided.
3) Allocation of benefit to future growth has been based on the percentage of undeveloped hectares in the service area beyond 2023 to the total developable hectares in the service area.
4) Non-growth share reflects the percentage of developed area at the initiation of collection of DC's for the new station in relation to the total developable hectares in the service area of the new firehall.
5) Allocation between Residential and non-residential based on 2013 tax assessment roll analysis.

2014 Development Charges Background Study

Table B-2: Fire Services

Service component : **Fire - Vehicle**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
			Amount Eligible for Development Charge Rate Calculations												*Allocation of Net Amount to types of Growth*							
			(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*(7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
	Anticipated and Planned Projects		*Note 1*				*Note 2 Note 3*			*Note 4 Note 5*						*Note 6*		*Note 6*		*Note 6*		*Note 6*	
DC14-FS00003	Quint - Station 15	2015	$865.0			$865.0	49.6%	$429.4	$435.6	35.3%	$153.6	$.0	$282.0	$.0	$282.0	79.7%	$224.8	11.8%	$33.3	7.2%	$20.3	1.3%	$3.6
DC14-FS00004	Aerial Company - Central London	2020	$1,805.0			$1,805.0	62.1%	$1,120.3	$684.7	20.0%	$136.9	$.0	$547.8	$.0	$547.8	79.7%	$436.6	11.8%	$64.7	7.2%	$39.4	1.3%	$7.1
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$.0				$.0		$.0		$.0		$.0		$.0		$.0
TOTAL			**$2,670.0**	**$.0**	**$.0**	**$2,670.0**	**58.0%**	**$1,549.7**	**$1,120.3**	**25.9%**	**$290.6**	**$.0**	**$829.8**	**$.0**	**$829.8**	**79.7%**	**$661.4**	**11.8%**	**$98.0**	**7.2%**	**$59.7**	**1.3%**	**$10.7**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$48.57
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$1,903.9
Current Growth Needs	$829.8
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)		Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$46.1	82.0%	$37.9	10.7%	$4.9	7.3%	$3.4	0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$783.6	79.6%	$623.5	11.9%	$93.0	7.2%	$56.3	1.4%	$10.7
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 11.30** /person		**$ 0.56** /sq. m.		**$ 0.20** /sq. m.		**$ 0.02** /sq. m.

Pre- Financing Cost Residential Rates:

		Vehicle
Single Family Dwelling	3.09	$ 34.91
Multiple unit dwelling	2.20	$ 24.85
Apartment - bach. & 1 bed	1.40	$ 15.82
Apartment - ≥ 2 bedroom	1.91	$ 21.58

Notes:

1) Only growth related vehicle purchases are reflected on this schedule.

2) The future growth benefit for the Quint has been applied consistent with the benefit for the Station in which the vehicle will be used. Allocation of benefit to future growth has been based on the percentage of undeveloped hectares in the service area beyond 2023 to the total developable hectares in the service area.

3) Future growth for the Aerial Company is based on the following: 1) number of people per aerial company when the project was first identified in 2012 (123,313 people/vehicle), 2) 2012-2024 population growth = 46,780 people, 3) Therefore, future growth benefits for the aerial company are 62.1% (1-(46,780/123,313)).

4) The non-growth benefit for Station 15 Quint has been applied consistent with the benefit for the Station in which the vehicle will be used. Non-growth share reflects the percentage of developed area at the initiation of collection of DC's for new station in relation to total developable area in the service area of the new station.

5) The non-growth benefit for Aerial Company recognizes a benefit to existing development in the Downtown area that will be served by this vehicle.

6) Allocation between Residential and non-residential based on 2013 tax assessment roll analysis.

2014 Development Charges Background Study

Table B-2: Fire Services

Service component : **Fire - Outfitting**

Planning horizon for this component : **2014-2023**

			Amount Eligible for Development Charge Rate Calculations														***Allocation of Net Amount to types of Growth***								
										Non-growth share							RESIDENTIAL		NON - RESIDENTIAL						
																	Residential		Commercial		Institutional		Industrial		
Project #	Project Description	*Expected Year*	*Total Estimated Cost*	*Less: future capital grants, subsidies or other contributions anticipated*	*Less: Portion of Gross Project Cost Funded In Prior Years*	*Subtotal*	*Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)*		*Subtotal*	%	benefit	*Less: 10% statutory deduction (if applicable)*	*Subtotal*	*Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)*	*Net Amount Eligible for DC rate calculation*		%	$	%	$	%	$	%	$
			(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*		*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*(7) - sum(9,10)*		*(11) - (12)*			*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
	Anticipated and Planned Projects																								
DC14-FS00005	Fire Fighter Outfitting - Station 15	2015	*Note 1* $66.8			$66.8	*Note 2* 49.6%	$33.2	$33.6	*Note 3* 35.3%	$11.9	$0.0	$21.8	$0.0	$21.8		79.7%	$17.4	11.8%	$2.6	7.2%	$1.6	1.3%	$.3
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$.0				$.0		$.0			$.0		$.0		$.0		$.0
	TOTAL		**$66.8**	**$.0**	**$.0**	**$66.8**	**49.6%**	**$33.2**	**$33.6**	**35.3%**	**$11.9**	**$.0**	**$21.8**	**$.0**	**$21.8**		**79.7%**	**$17.4**	**11.8%**	**$2.6**	**7.2%**	**$1.6**	**1.3%**	**$.3**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$3.28
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$128.6
Current Growth Needs	$21.8
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)		$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
Total net cost eligible for DC rate calculation		$21.8	79.7%	$17.4	11.8%	$2.6	7.2%	$1.6	1.3%	$.3
Divided By: Total Gross Growth Projections				55,191		167,034	0	279,258	0	456,510
Calculated DC Rate - Pre-Financing				**$ 0.31** /person		**$ 0.02** /sq. m.		**$ 0.01** /sq. m.		**$ 0.00** /sq. m.

Pre- Financing Cost Residential Rates:

		Outfitting
Single Family Dwelling	3.09	$ 0.97
Multiple unit dwelling	2.20	$ 0.69
Apartment - bach. & 1 bed	1.40	$ 0.44
Apartment - ≥ 2 bedroom	1.91	$ 0.60

Notes:

1) The outfitting costs associated with Station 15 represents 20 new staff. Outfit costs represent $3341/firefighter.
2) The future growth benefit has been applied consistent with the benefit for the Station in which the vehicle will be used. Allocation of benefit to future growth has been based on the percentage of undeveloped hectares in the service area beyond 2023 to the total developable hectares in the service area.
3) The non-growth benefit has been applied consistent with the benefit for the Station in which the vehicle will be used. Non-growth share reflects percentage of developed area at the initiation of collection of DC's for new station in relation to total developable hectares in the service area of the new firehall.
4) Allocation between Residential and non-residential based on 2013 tax assessment roll analysis.

2014 Development Charges Background Study

Table B-3: Cash Flow Analysis & Final Rate Calculation Fire Service

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Fire Service**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 17.29	**$ 22.49**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)			**$ -**												
Commercial	167,034.2	$ 0.88	**$ 1.14**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258.0	$ 0.31	**$ 0.40**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	446,292.2		**$ -**		44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510.0	$ 0.04	**$ 0.06**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802.2				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$359.2	$523.9	-$1,355.5	-$1,236.7	-$1,114.4	-$988.4	-$858.7	-$2,190.7	-$2,097.0	-$2,000.5	$359.2
Revenues - Development Charge Collections															
Residential					$124.1	$124.1	$124.1	$124.1	$124.1	$124.1	$124.1	$124.1	$124.1	$124.1	$1,241.0
Non-Res.															
Commercial					$19.1	$19.1	$19.1	$19.1	$19.1	$19.1	$19.1	$19.1	$19.1	$19.1	$190.6
Institutional					$11.3	$11.3	$11.3	$11.3	$11.3	$11.3	$11.3	$11.3	$11.3	$11.3	$112.6
C/I subtotal					$30.3	$30.3	$30.3	$30.3	$30.3	$30.3	$30.3	$30.3	$30.3	$30.3	$303.2
Industrial					$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$2.6	$26.4
Total Non-Res.					$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$329.6
Total revenues					$157.1	$157.1	$157.1	$157.1	$157.1	$157.1	$157.1	$157.1	$157.1	$157.1	$1,570.6
Development Charge draws - calculated on separate page					$.0	$2,024.2	$.0	$.0	$.0	$.0	$1,444.0	$.0	$.0	$.0	$3,468.2
Closing surplus / <deficit> before interest					$516.3	-$1,343.2	-$1,198.4	-$1,079.7	-$957.3	-$831.4	-$2,145.6	-$2,033.6	-$1,939.9	-$1,843.4	-$1,538.4
Non-inflationary interest revenue /<expense>															
on savings	1.75%				$7.7										$7.7
on borrowings	3.00%					-$12.3	-$38.3	-$34.7	-$31.1	-$27.3	-$45.1	-$63.4	-$60.6	-$57.7	-$370.4
Closing surplus / <deficit>					$523.9	-$1,355.5	-$1,236.7	-$1,114.4	-$988.4	-$858.7	-$2,190.7	-$2,097.0	-$2,000.5	-$1,901.1	-$1,901.1

Target which reflects growth costs incurred in the forecast period and recoverable from future growth: -$1,901.1

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:

1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	79%	79%
Non-residential		
Commercial	12%	12%
Institutional	7%	7%
C/I subtotal	19%	19%
Industrial	2%	2%

APPENDIX C – POLICE SERVICES

Existing Service Levels

The City of London Police Service employs more than 600 sworn officers and 225 vehicles from its headquarters of over 200,000 square feet at 601 Dundas Street. Existing standards of service have been measured using capital and data employed by Police Service. These measures assisted in ensuring that the amounts included in the Police Development Charge rate calculations did not exceed existing historical standards.

Capital Needs – Facility

In past years, the London Police Service has faced significant challenges with regard to space and facility demands. A previous facility needs study concluded that:

a) Existing facilities were inadequate to house existing staff resources, and a larger facility was necessary to house existing resources
b) Larger facilities would also be needed to accommodate the expected expansion of the police service to meet growth needs.
c) The cost of the preferred solution amounted to approximately $65 M and included the renovation and expansion of Police Headquarters on its present site, as well as the addition of an offsite training facility.

In 2008, the funding was finalized for a major expansion of Police Headquarters with a total cost of $33.8 million. Construction of the new headquarters expansions was completed in 2010.

The 2010 expansion of Police headquarters was not entirely attributable to growth. Only capital needs arising from growth are eligible for inclusion in the development charge rate calculations. In the end, approximately 22% of the facility was determined to be eligible for DC funding (in accordance with 2004 DC Study cost sharing and City DC policy exemptions and discounts). The rate calculations in this study reflect the outstanding debt associated with funding the growth share of the project ($6.7 million). This growth share is entirely attributable to Residential development as Non-residential development was exempted from this service in the 2004 DC rate by-law.[3]

As noted in Appendix D, the London Police Service will undertake a new facility needs assessment in 2018. It is anticipated that this needs assessment will result in a recommendation for the expansions of the existing headquarters building, or the construction of a satellite police station. Construction of the new policy facility space is targeted for 2024 – one year past the 10 year horizon of the 2014 DC Background Study soft services recovery period. Future police facility construction costs are likely to be growth-related and will result in significant costs being included in the next Development Charges Background Study.

[3] The total amount of funding for the policy headquarters expansion was $33.8 million, with growth accounting for $8.8 million. When determining the financing for the project, Council approved that the costs associated with the institutional, commercial and industrial shares ($1.5 million) would be paid from taxpayer sources due to DC exemptions and the pre-2009 DC Study policy of police costs being 100% residential. As a result, the remaining residential portion of the headquarters expansion cost has been included for DC recovery, and attributed for recovery from residential growth, consistent with the 2009 DC Study.

Growth Needs – Equipment

Police patrol vehicles account for most of the equipment used by the police service. These vehicles are routinely disposed of on a 5 year cycle. The Development Charges Act allows the inclusion of growth related vehicles with an expected useful life of seven years or more (and makes no allowance for the fact that these vehicles are used around the clock). Police patrol vehicles are generally therefore excluded from the development charge rate calculations (though some municipalities include them on the basis of round-the-clock usage).

The London Police Service vehicle fleet does contain a number of eligible vehicles that have a lifecycle replacement period that extends beyond 7 years (e.g., motorcycles, passenger vans, R.I.D.E vehicles, emergency response units, etc.). These are identified in the Police vehicles service standard. None of these specialized vehicles have been identified as needed as a result of growth in the next ten years.

Growth Needs - Outfitting

There are significant costs involved in outfitting new officers. Based on the existing ten year average (2004-2013) of sworn officers to population (1.614 officers per 1,000 population), and with an expected net growth in population over the next 10 years of 39,200 (per Appendix A Table A-1 growth forecasts), the City might expect an additional complement of 63 officers. Each of these officers requires non-personal gear and radio (ratio of one radio per 3 officers) at a total current cost of approximately $6566 per officer. This results in a total projected capital need of $413,658 for outfitting new officers required to serve growth over the next ten years.

Allocation of Benefit to Growth

The growth costs eligible for development charge rate calculation purposes have been adjusted as follows:

a) For Police Facilities, no adjustments have been made. In the 2009 DC Background Study, an approximation of the benefit accruing to growth beyond the ten year planning horizon for the new headquarters (ie. the “future” or “post period” benefit) was made. The benefit calculation was based on the expectation that the new facility would serve the department for a period of 15 years (thus 33% of the benefit deferred for recovery in the future, leaving the appropriate share recoverable from ten (10) year growth). Given that 5 years have elapsed since the 2009 Study, an allocation for post period benefits is no longer appropriate. As a result, development charges will be recovering for the full costs of the remaining principal and interest associated with the police headquarters expansion debt.
b) Collections from prior growth have been removed through recognition of the existing reserve fund balance, which represents uncommitted contributions of earlier growth towards the projects which make up the rate calculations.

The tables also reflect an allocation of the growth costs between residential and non-residential growth. For facilities, the benefit is allocated 100% to Residential as the Non-residential benefit was funded by taxpayers (discussed above). For Police Outfitting, the benefit of Police services has been apportioned on the basis of 2013 tax assessment rolls (consistent with the approach used in the 2004 and 2009 DC Background Studies) resulting in a Residential/Non-residential split of approximately 80%/20%.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the rate calculation table has been provided. This table simulates the cash flows in this component of the DC funds:

a) It begins with the opening balance – in this case, a balance of $1.6 million which reflects the accumulation of funds from past growth for the projects identified.
b) The calculation also assumes full recovery of development charges for all types of growth.
c) Drawdowns, consistent with 'full recovery' assumption mentioned in b) above, for the growth share of projects being completed in the upcoming ten (10) year planning horizon, are also reflected in the cash flow projection.
d) An estimate of annual interest expenses that can be expected to be incurred taking into account any projected fund deficits anticipated throughout the planning horizon (10 years).

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service.

Long Term Operating Costs

An examination of the long term operating costs for growth needs for Police Services (DC) is included in Appendix O.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been determined by a concentrated internal review. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

2014 Development Charges Background Study
TABLE C-1 - Police Service - Measure of Existing Service Standards

SERVICE: POLICE

COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Building
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.	
London Police Headquarters	601 Dundas St	153,112	153,112	153,112	153,112	153,112	153,112					$299	
London Police Headquarters Expand.	601 Dundas St							207,790	207,790	207,790	207,790	$339	
Sub station (Lambeth)	Main St Lambeth	300	300	300	300	300	300	300	300	300	300	$150	*Note 2*
Court Offices/Cells	824 Dundas St.	7,983	7,983	7,983	7,983	7,983	7,983	7,983	7,983	7,983	7,983	$275	*Note 2*
Sub station (Covent Garden Market)	130 King Street	224	224	224	224	224	224	224	224	224	224	$150	*Note 2*
Communications & 911 Backup	confidential	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	2,042	$175	*Note 2*
Total		163,661	163,661	163,661	163,661	163,661	163,661	218,339	218,339	218,339	218,339		

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		0.472942	0.468645	0.464425	0.460822	0.457281	0.453795	0.600823	0.596310	0.590201	0.584216

10 year average	
Quantity Standard per Capita	0.514946

Source : Building and land measures provided by Police in cooperation with City of London Facility Services and Realty Services

Notes:
1) Land values have been excluded from the rented and non-City owned facilities.

2014 Development Charges Background Study

TABLE C-1 - Police Service - Measure of Existing Service Standards

SERVICE: POLICE COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
London Police Headquarters	601 Dundas St	$45,780.5	$45,780.5	$45,780.5	$45,780.5	$45,780.5	$45,780.5	$0.0	$0.0	$0.0	$0.0
London Police Headquarters Expand.	601 Dundas St	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$70,440.8	$70,440.8	$70,440.8	$70,440.8
Sub station (Lambeth)	Main St Lambeth	$45.0	$45.0	$45.0	$45.0	$45.0	$45.0	$45.0	$45.0	$45.0	$45.0
Court Offices/Cells	824 Dundas St.	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3	$2,195.3
Sub station (Covent Garden Market)	130 King Street	$33.6	$33.6	$33.6	$33.6	$33.6	$33.6	$33.6	$33.6	$33.6	$33.6
Communications & 911 Backup	confidential	$357.4	$357.4	$357.4	$357.4	$357.4	$357.4	$357.4	$357.4	$357.4	$357.4
Total		$48,411.8	$48,411.8	$48,411.8	$48,411.8	$48,411.8	$48,411.8	$73,072.1	$73,072.1	$73,072.1	$73,072.1
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$139.90	$138.63	$137.38	$136.31	$135.27	$134.23	$201.08	$199.57	$197.52	$195.52

10 year average	
Service Standard per Capita	$161.54

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$161.54
DC rate eligible amount (gross)	$6,332,368

Source : Building, site improvements and contents derived from information compiled by City of London - Facility Services division. Land values from information provided by Realty Services division.
Land values have been excluded from the rented and non-City owned facilities.

2014 Development Charges Background Study

TABLE C-1 - Police Service - Measure of Existing Service Standards

SERVICE: POLICE COMPONENT: VEHICLES

Contact person(s) Joe Amaral
Unit of measure Number of Vehicles
Type of measure Quantity

Unit description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/Item
Motorcycles	5	5	5	5	5	5	5	5	5	5	$28,051
Court Security Van						1	1	1	1	1	$48,615
Court Multi Prisoner Transport Vehicle	1	1	1	1	1	1	1	1	1	1	$133,234
Court Security Car	1	1	1	1							$38,400
Community Service Vehicles	8	8	8	8	8	8	8	8	8	8	$33,034
Explosive Disposal Unit Van	1	1	1	1	1	1	1	1	1	1	$361,655
Mobile Command Vehicle	1	1	1	1	1	1	1	1	1	1	$525,552
Emergency Response.Unit (Truck)	1	1	1	1	1	1	1	1	1	1	$241,890
Facilities Pickup	1	1	1	1	1	1	1	1	1	1	$33,039
Facilities Stake Truck						1	1	1	1	1	$27,339
Facilities Cube Truck	1	1	1	1	1	1	1	1	1	1	$50,556
Bicycle Recovery Pickup	1	1	1	1	1	1	1	1	1	1	$21,630
R.I.D.E. Van (used)					1						$32,200
R.I.D.E. Van	1	1	1	1	1	1	1	1	1	1	$40,600
Canine Vehicles	1	1	1	1	1						$48,600
Aluminum Boat (14')	1	1	1	1	1						$8,300
Zodiac Boat (18')	1	1	1	1	1						$91,200
Reconstruction Van	1	1	1	1	1	1	1	1	1	1	$53,709
Passenger Van - 15 passenger	2	2	2	2	2	3	3	3	3	3	$21,677
Surveillance Vehicle/Module	1	1	1	1	1	1	1	1	1	1	$141,658
Court Security Van (new style)									1	1	$137,200
ERS Response Unit (new style)									1	1	$248,300
Total	29	29	29	29	29	28	28	28	30	30	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	0.000084	0.000083	0.000082	0.000082	0.000081	0.000078	0.000077	0.000076	0.000081	0.000080

10 year average	
Quantity Standard per Capita	0.000080

Sources: Values and quantity of vehicles taken from inventory reports maintained by Police Fleet Services.

2014 Development Charges Background Study

TABLE C-1 - Police Service - Measure of Existing Service Standards

SERVICE: POLICE COMPONENT: VEHICLES

Contact person(s) Joe Amaral
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Unit description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Motorcycles	$140.0	$140.0	$140.0	$140.0	$140.0	$140.0	$140.0	$140.0	$140.0	$140.0
Court Security Van	$0.0	$0.0	$0.0	$0.0	$0.0	$49.0	$49.0	$49.0	$49.0	$49.0
Court Multi Prisoner Transport Vehicle	$133.0	$133.0	$133.0	$133.0	$133.0	$133.0	$133.0	$133.0	$133.0	$133.0
Court Security Car	$38.0	$38.0	$38.0	$38.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Community Service Vehicles	$264.0	$264.0	$264.0	$264.0	$264.0	$264.0	$264.0	$264.0	$264.0	$264.0
Explosive Disposal Unit Van	$362.0	$362.0	$362.0	$362.0	$362.0	$362.0	$362.0	$362.0	$362.0	$362.0
Mobile Command Vehicle	$526.0	$526.0	$526.0	$526.0	$526.0	$526.0	$526.0	$526.0	$526.0	$526.0
Emergency Response.Unit (Truck)	$242.0	$242.0	$242.0	$242.0	$242.0	$242.0	$242.0	$242.0	$242.0	$242.0
Facilities Pickup	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0	$33.0
Facilities Stake Truck	$0.0	$0.0	$0.0	$0.0	$0.0	$27.0	$27.0	$27.0	$27.0	$27.0
Facilities Cube Truck	$51.0	$51.0	$51.0	$51.0	$51.0	$51.0	$51.0	$51.0	$51.0	$51.0
Bicycle Recovery Pickup	$22.0	$22.0	$22.0	$22.0	$22.0	$22.0	$22.0	$22.0	$22.0	$22.0
R.I.D.E. Van (used)	$0.0	$0.0	$0.0	$0.0	$32.0	$0.0	$0.0	$0.0	$0.0	$0.0
R.I.D.E. Van	$41.0	$41.0	$41.0	$41.0	$41.0	$41.0	$41.0	$41.0	$41.0	$41.0
Canine Vehicles	$49.0	$49.0	$49.0	$49.0	$49.0	$0.0	$0.0	$0.0	$0.0	$0.0
Aluminum Boat (14')	$8.0	$8.0	$8.0	$8.0	$8.0	$0.0	$0.0	$0.0	$0.0	$0.0
Zodiac Boat (18')	$91.0	$91.0	$91.0	$91.0	$91.0	$0.0	$0.0	$0.0	$0.0	$0.0
Reconstruction Van	$54.0	$54.0	$54.0	$54.0	$54.0	$54.0	$54.0	$54.0	$54.0	$54.0
Passenger Van	$43.0	$43.0	$43.0	$43.0	$43.0	$65.0	$65.0	$65.0	$65.0	$65.0
Surveillance Vehicle/Module	$142.0	$142.0	$142.0	$142.0	$142.0	$142.0	$142.0	$142.0	$142.0	$142.0
Court Security Van (new style)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$137.0	$137.0
ERS Response Unit (new style)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$248.0	$248.0
Total	$2,239.0	$2,239.0	$2,239.0	$2,239.0	$2,233.0	$2,151.0	$2,151.0	$2,151.0	$2,536.0	$2,536.0

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$6.47	$6.41	$6.35	$6.30	$6.24	$5.96	$5.92	$5.87	$6.86	$6.79

10 year average	
Service Standard per Capita	$6.32

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$6.32
DC rate eligible amount (gross)	$247,744

2014 Development Charges Background Study
TABLE C-1 - POLICE SERVICE - MEASURE OF EXISTING SERVICE STANDARDS

SERVICE: POLICE

COMPONENT: OUTFITTING

Contact person(s) Kim Darling
Unit of measure Number of Equipped Officers
Type of measure Quantity

Type	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/Officer
Officers	536	555	578	578	579	586	586	592	606	606	$6,566
Auxiliary Officers	50	50	50	50	50	50	50	50	50	50	$429
Total	586	605	628	628	629	636	636	642	656	656	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard - Combined	0.001693	0.001732	0.001782	0.001768	0.001757	0.001763	0.001750	0.001753	0.001773	0.001755
Per Capita Standard - Officers only	0.001549	0.001589	0.001640	0.001627	0.001618	0.001625	0.001613	0.001617	0.001638	0.001621

Quantity Standard per Capita	
10 year average - Officers	0.001614
10 year average - combined	0.001753

Source: Number of Officers and Volunteers taken from personnel records maintained by Police Administration. Outfitting costs compiled by Police Administration.

Notes:
1) Outfitting costs include the cost of Officer radios.

2014 Development Charges Background Study
TABLE C-1 - POLICE SERVICE - MEASURE OF EXISTING SERVICE STANDARDS

SERVICE: POLICE COMPONENT: OUTFITTING

Contact person(s) Kim Darling
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Type	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Officers	$3,519	$3,644	$3,795	$3,795	$3,802	$3,848	$3,848	$3,887	$3,979	$3,979
Auxiliary Officers	$21	$21	$21	$21	$21	$21	$21	$21	$21	$21
Total	$3,540	$3,665	$3,816	$3,816	$3,823	$3,869	$3,869	$3,908	$4,000	$4,000
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$10.23	$10.49	$10.83	$10.74	$10.68	$10.73	$10.65	$10.67	$10.81	$10.70

10 year average- combined	
Service Standard per Capita	$10.65

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$10.65
DC rate eligible amount (gross)	$417,480

2014 Development Charges Background Study

Table C-2: Police Service

Service component : **Police - Facility**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Residential %	NON - RESIDENTIAL: Residential $	NON - RESIDENTIAL: Commercial %	NON - RESIDENTIAL: Commercial $	NON - RESIDENTIAL: Institutional %	NON - RESIDENTIAL: Institutional $	NON - RESIDENTIAL: Industrial %	NON - RESIDENTIAL: Industrial $
			Amount Eligible for Development Charge Rate Calculations												*Allocation of Net Amount to types of Growth*									
	(all $'s in ,000's)		*(1)*	*(2)*	*(3)*	*(4) (1) - sum(2,3)*	*(5)*	*(6) (4) * (5)*	*(7) (4) - (6)*	*(8)*	*(9) (7) * (8)*	*[(7) - (9)] * 10% (10)*	*(7) - sum(9,10) (11)*	*(12)*	*(13) (11) - (12)*	*(14)*	*(15) (13) * (14)*	*(16)*	*(17) (13) * (16)*	*(18)*	*(19) (13) * (18)*	*(20)*	*(21) (13) * (20)*
	Anticipated and Planned Projects		*Note 1*				*Note 2*			*Note 3*							*Note 4*		*Note 4*		*Note 4*		*Note 4*
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT - Expansion of Police Headquarters		$6,677.0			$6,677.0	0.0%	$0.0	$6,677.0				$6,677.0	$344.6	$6,332.4	100%	$6,332.4	0%	$0.0	0%	$0.0	0%	$0.0
	TOTAL		**$6,677.0**	**$0.0**	**$0.0**	**$6,677.0**	**0.0%**	**$0.0**	**$6,677.0**	**0.0%**	**$0.0**	**$0.0**	**$6,677.0**	**$344.6**	**$6,332.4**	**100.0%**	**$6,332.4**	**0.0%**	**$0.0**	**0.0%**	**$0.0**	**0.0%**	**$0.0**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$161.54
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$6,332.4
Current Growth Needs	$6,677.0
Excess Of Growth Needs Over Maximum Eligible	$344.6

	Development Charge Rate Calculation (Pre-Financing Cost)							
		Residential		**Commercial**		**Institutional**		**Industrial**
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$1,539.7	100.0%	$1,539.7	0.0%		0.0%		0.0%	
Total net cost eligible for DC rate calculation purposes	$4,792.6	100.0%	$4,792.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 86.84**		**$ -**		**$ -**		**$ -**
			/person		/sq. m.		/sq. m.		/sq. m.

Notes:

1) Represents debt principal outstanding for the expansion to the London Police Service headquarters building completed in 2010.

2) In the 2009 DC Study, the debt associated with the headquarters expansion was allocated a 33% future benefit to reflect the additional 5 years of space for growth needs beyond the 10 year period. For the 2014 DC Study, no future benefit is allocated for this capital item.

3) Consistent with the 2009 DC Study, a non-growth share has not been allocated.

4) DC recovery for this capital item is 100% residential, consistent with the 2009 DC Study. When the project was originally financed, Council determined that the non-residential costs associated with the headquarters expansion would be funded by taxpayer sources. As a result, no DC recovery is allocated for non-residential.

		Prefinancing - Calculated Residential DC Rate - financing costs to be added				**Existing Res. Rate with financing included**
		Facility	*Vehicle*	*Outfitting*	*Total*	*Jan 1, 2014 rate*
Single Family Dwelling	3.09	$268.33	$0.00	$14.75	$283.07	$136.58
Multiple unit dwelling	2.20	$191.04	$0.00	$10.50	$201.54	$97.26
Apartment - bach. & 1 bed	1.40	$121.57	$0.00	$6.68	$128.25	$57.94
Apartment - ≥ 2 bedroom	1.91	$165.86	$0.00	$9.11	$174.97	$81.74

2014 Development Charges Background Study

Table C-2: Police Service

Service component : **Police - Outfitting**

Planning horizon for this component : **2014-2023**

Amount Eligible for Development Charge Rate Calculations																***Allocation of Net Amount to types of Growth***							
																RESIDENTIAL		NON - RESIDENTIAL					
																Residential		Commercial		Institutional		Industrial	
Project #	Project Description	*Expected Year*	*Total Estimated Cost*	*Less: future capital grants, subsidies or other contributions anticipated*	*Less: Portion of Gross Project Cost Funded In Prior Years*	*Subtotal*	*Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)*	*Subtotal*	*Non-growth share*		*Less: 10% statutory deduction (if applicable)*	*Subtotal*	*Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)*	*Net Amount Eligible for DC rate calculation*		%	$	%	$	%	$	%	$
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*I(7) - (9)I * 10%*	*'7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
	Anticipated and Planned Projects		*Note 1*				*Note 2*		*Note 2*							*Note 3*		*Note 3*		*Note 3*		*Note 3*	
DC14-PS00001	Officer Outfitting (increase due to growth)	2014-2023	$413.70			$413.7	0.0%	$0.0	$413.7	0.0%	$0.0	$0.0	$413.7		$413.7	79.7%	$329.7	11.8%	$48.8	7.2%	$29.8	1.3%	$5.4
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$0.0				$0.0		$0.0		$0.0		$0.0		$0.0		$0.0
TOTAL			**$413.7**	**$0.0**	**$0.0**	**$413.7**	**0.0%**	**$0.0**	**$413.7**	**0.0%**	**$0.0**	**$0.0**	**$413.7**	**$0.0**	**$413.7**	**79.7%**	**$329.7**	**11.8%**	**$48.8**	**7.2%**	**$29.8**	**1.3%**	**$5.4**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$10.65
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$417.5
Current Growth Needs	$413.7
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$67.5	98.3%	$66.4	1.0%	$.7	0.7%	$.5	0.0%	$0.0
Total net cost eligible for DC rate calculation	$346.2	76.1%	$263.4	13.9%	$48.2	8.5%	$29.3	1.5%	$5.4
Divided By: Total Gross Growth Projections			55,191		167,034	0	279,258	0	456,510
Calculated DC Rate - Pre-Financing			**$ 4.77** /person		**$ 0.29** /sq. m.		**$ 0.10** /sq. m.		**$ 0.01** /sq. m.

Pre- Financing Cost Residential Rates:

		Outfitting
Single Family Dwelling	3.09	$ 14.75
Multiple unit dwelling	2.20	$ 10.50
Apartment - bach. & 1 bed	1.40	$ 6.68
Apartment - ≥ 2 bedroom	1.91	$ 9.11

Notes:

1) Reflects expectation of 63 new officers attributable to growth over 10 year growth period (i.e., continuation of 10 yr historical per capita standard). Outfitting costs represent $6566/officer.

2) Outfitting costs only represent needs due to growth during the 10 year period. Therefore, no future benefit or non-growth share has been allocated.

3) Allocation between Residential and non-residential based on 2013 tax assessment roll analysis.

2014 Development Charges Background Study

Table C-3: Cash Flow Analysis & Final Rate Calculation Police Service

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Police Service**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 91.61	**$ 103.02**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)															
Commercial	167,034.2	$ 0.29	**$ 0.32**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258.0	$ 0.10	**$ 0.12**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	446,292.2				44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510.0	$ 0.01	**$ 0.01**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802.2				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$1,607.2	$1,437.7	$1,260.5	$1,083.8	$910.4	$741.6	$578.3	$420.7	$271.1	$130.5	$1,607.2
Revenues - Development Charge Collections															
Residential					$568.6	$568.6	$568.6	$568.6	$568.6	$568.6	$568.6	$568.6	$568.6	$568.6	$5,686.1
Non-Res.															
Commercial					$5.4	$5.4	$5.4	$5.4	$5.4	$5.4	$5.4	$5.4	$5.4	$5.4	$54.2
Institutional					$3.3	$3.3	$3.3	$3.3	$3.3	$3.3	$3.3	$3.3	$3.3	$3.3	$32.9
C/I subtotal					$8.7	$8.7	$8.7	$8.7	$8.7	$8.7	$8.7	$8.7	$8.7	$8.7	$87.1
Industrial					$.6	$.6	$.6	$.6	$.6	$.6	$.6	$.6	$.6	$.6	$6.0
Total Non-Res.					$9.3	$9.3	$9.3	$9.3	$9.3	$9.3	$9.3	$9.3	$9.3	$9.3	$93.1
Total revenues					$577.9	$577.9	$577.9	$577.9	$577.9	$577.9	$577.9	$577.9	$577.9	$577.9	$5,779.2
Development Charge draws - calculated on separate page					$773.9	$778.5	$775.0	$768.6	$761.1	$752.6	$744.2	$733.6	$721.9	$709.6	$7,519.0
Closing surplus / <deficit> before interest					$1,411.3	$1,237.1	$1,063.5	$893.1	$727.2	$566.9	$412.1	$265.1	$127.0	-$1.1	-$132.5
Non-inflationary interest revenue /<expense>															
on savings	1.75%				$26.4	$23.4	$20.3	$17.3	$14.3	$11.4	$8.7	$6.0	$3.5	$1.1	$132.5
on borrowings	3.00%														$.0
Closing surplus / <deficit>					$1,437.7	$1,260.5	$1,083.8	$910.4	$741.6	$578.3	$420.7	$271.1	$130.5	$.0	$.0

Target which reflects growth costs incurred in the forecast period and recoverable from future growth: $.0

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:

1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	98%	98%
Non-residential		
Commercial	1%	1%
Institutional	1%	1%
C/I subtotal	2%	2%
Industrial	0%	0%

APPENDIX D – CORPORATE GROWTH STUDIES

To facilitate municipal service planning, various studies to project facility and servicing needs are completed. The *Development Charges Act, 1997* provides for the recovery through development charge rates of these growth related study costs (s. 5(3)5.). These studies may include:

- a detailed growth projection study
- detailed studies to project the infrastructure, facility and equipment needs arising from the growth projections. Infrastructure studies may be preceded by area planning studies that are necessary to appropriately plan growth and servicing strategies. They may also include master planning studies for engineered services (e.g. the Transportation Master Plan) as well as similar studies for "soft services"(e.g. Fire, Library, etc.).
- the preparation of the development charges background study document, which consolidates the information mentioned above, rationalizes the calculated charge and demonstrates compliance with the legislation.

The studies are generally necessary every five (5) years (the legislated maximum life of the Development Charge by-law).

Capital Needs Program

The forecast of needs (found on the attached tables) which follows includes projection of future studies which:

- reflect that the City undertakes the planning studies prerequisite to development in both intensification and greenfield areas;
- are necessary to facilitate planning of infrastructure;
- will be the responsibility of the City to complete (as opposed to the development community directly, or as part of a DC funded infrastructure work);
- where study scope is generally the entire City, or a large geographic segment of it (e.g. large watershed study);
- include studies formerly included with associated rate components (e.g., stormwater management environmental assessments, transportation impact assessments, etc.)

A brief description for each study incorporated in the ten year growth horizon for this service component follows:

- Stormwater Future Development Charge Studies (2019 & 2024): Two studies have been identified to provide analysis of stormwater capital needs for future DC Background Studies.
- Southwest Area Environmental Assessments: Funding is required to conduct environmental assessments associated with stormwater management facilities in the southwest area of the city.
- Assessment Addendums: In the event that changes are required to approved stormwater environmental assessments, this project will provide a source of funding.
- Wastewater Future Development Charge Studies (2019 & 2024): Two studies have been identified to fund analysis of wastewater capital needs for future DC Background Studies.
- Bio-Solids Master Plan: A master planning level study considering the handling of sanitary servicing generated bio-solids. This study will consider both bio-solids generated by the existing population and by future growth.

- London Cycling Master Plan: The Cycling Master Plan will assess future bicycle infrastructure needs and cycling networks across the City and linkages for new subdivisions.
- Complete Streets Guideline: The Complete Streets Guideline will encourage a holistic approach to roadway design in order to develop a network of roadways that are safe, attractive, comfortable and welcoming to all users. These guidelines will be used for planning, designing and constructing all categories of streets in new neighbourhoods as well as informing the design and reconstruction of streets in existing neighbourhoods.
- Network Modelling Update: An update of the current transportation network modeling to reflect major impacts to the 2030 Transportation Master Plan ($115M in road deferrals, EAs currently in progress).
- Transportation Master Plan Update: An update of the City's 2030 Transportation Master Planning study. Scheduled to begin in 2017 to be completed prior to the commencement of the 2019 Transportation Development Charge Study.
- Transportation Development Charge Studies (2019 & 2024): Two studies have been identified to provide analysis of transportation capital needs for future DC Background Studies.
- Transportation Master Plan: This project will be a major update the 2030 Transportation Master Plan.
- Long Term Corridor Protection – EA Studies: Funding for future Environmental Assessment studies related to long term transportation corridor projects.
- Traffic Impact Studies: Growth related traffic impact studies that are completed by the City's Transportation Engineering Division.
- Transportation Master Plan Monitoring: A transportation monitoring program to be completed as recommended by the Council adopted Transportation Master Plan. This monitoring program includes: comprehensive household surveys, a cordon count program, travel time surveys, and transit and active transportation surveys (Table 22, 2030 TMP). This information will serve as background data for the various Transportation Master Plans and Master Plan Updates scheduled over the 20 year growth period.
- Water Future Development Charge Studies (2019 & 2024): Two studies have been identified to fund analysis of water capital needs for future DC Background Studies.
- Water Efficiency Program/Investigations: One of the goals of the water efficiency program is to promote awareness of water usage conservation. Increasing awareness has been shown to reduce water usage and free up water distribution capacity. Existing capacity is considered first, in determining growth needs. Conservation practices provide capacity for future development and therefore provide a benefit to growth.
- Infill and Intensification Nodes Servicing Studies: Given that the City is seeking to achieve a 40% intensification target, servicing studies are required for future growth in nodes and corridors. These studies will be linked to the rapid transit village and corridor plans identified below.

- Growth-related Secondary Plans: Future secondary plans will set the context for new development. A variety of areas represent opportunities for such plans, including Near Campus Neighbourhoods, McCormick South, Hamilton Road, Byron Pits, various historic Main Streets, etc. These areas require servicing studies, environmental studies and other reviews.
- Community Improvement Plans: These plans set the context for revitalization and growth by evaluating economic barriers and establishing projects and incentives aimed at stimulating development and revitalization.
- Urban Design Guidelines – subdivisions and infill: These guidelines will set the context for appropriate built form, for private sector development, public spaces and facilities and will also provide design guidance for all planning applications.
- Comprehensive Zoning By-law: After a major 20-year review of the Official Plan, a major comprehensive review of the zoning by-law is required. The last comprehensive zoning review was in 1993.
- Infill and Intensification Guidelines: These guidelines will provide planning and design guidance for sensitive and appropriate infill and intensification within existing neighbourhoods. They will also include engagement and education strategies to address neighbour and community issues.
- Rapid Transit Village Plans: These plans will establish a detailed framework to direct growth and re-development within the planned Rapid Transit Village Areas. They will identify developable lands and anticipated timing of growth for use in servicing studies.
- Rapid Transit Corridor Plans: These plans will establish a detailed framework for infill and intensification along the rapid transit and urban corridors. They will identify developable lands and anticipated timing of growth for use in servicing studies. The studies will also establish a basis for transitioning from the existing built form to a higher density form of development and address compatibility issues.
- Official Plan Review (5 year update): The Planning Act requires that a municipality review its Official Plan every 5 years. This typically involves a new series of growth forecasts, policy analyses, public engagement, etc.
- Zoning By-law Update: After each 5 year Official Plan review, a corresponding zoning by-law update is required according to the Planning Act.
- Industrial Land Development Strategy: The Industrial Land Development Strategy will review trends, identify industrial sector targets, review supply and its adequacy to accommodate future projected demand, and will develop an acquisition, servicing and marketing plan.
- Subwatershed Studies; review and implementation update: The purpose of this study is to review subwatershed study recommendations and targets more comprehensively and document successes/challenges in meeting established targets. The findings will impact future environmental policies and natural heritage lands development.
- Parks and Recreation Master Plan (2015 & 2022): The purpose of the 2015 study is to develop a new Parks and Recreation Strategic Plan. The last full plan development was in 2003, with an update in 2008-2009. There will be a significant public engagement component to this study that was not undertaken in previous

years. The purpose of the P&R Strategic Master Plan is to provide overall direction and guidance for making decisions about parks and recreation programming, public use facilities and infrastructure, and investment in the community. It identifies facility service standards and projects future needs based on Council-approved population projections. The 2022 study is an update of the 2015 P&R Strategic Master Plan.

- Masonville Creek Subwatershed Study: Masonville Creek has unique features of both a provincially significant wetland (Gibbons wetland) as the creek source, a large mall and commercial space and parking lot covering much of the mid-watershed area, and a significant portion of lands to be developed within the subwatershed. The study would provide the opportunity to test how to improve water quality in the creek using low impact design measures and lot level improvements and to engage the neighbourhoods in stewardship opportunities in the Masonville/Upland area. This study will serve as a pilot project to identify changes related to several environmental policies and programs, as well as future natural heritage lands development.
- Urban Forestry Studies Impacted by Growth: Several Urban Forestry studies will be completed during the years identified. The studies will evaluate growth impacts and best management practices for new initiatives (e.g., street tree inventory) and updates of existing plans (e.g., urban forestry strategy). All studies will examine how future development can ensure that tree canopy cover targets are met. A minor growth share has been allocated for these studies.
- Civic Spaces Plan: The Civic Spaces Plan will identify a strategy for implementing new Civic Spaces within the urban area of London. These spaces will primarily provide local amenities for areas of infill and intensification within the City. Additionally, many of these spaces will have a city-wide benefit and help to promote and provide an identify for the City as a whole.
- Police Facilities Needs Analysis: As a result of growth in the City of London, increasing service demands and the useful life of existing facilities, a comprehensive needs analysis to quantify future facility requirements for the London Police Service is required.
- DC Process Consultant (2017 & 2022): Funding is required in both 2017 and 2022 to pay for costs associated with DC consultants assisting with the preparation of DC policy matters and Background Study preparation.

Under the current legislation, the City will complete no less than two “sets” of development charge background studies over the coming ten (10) year period. The estimated cost of completing these studies as well as the proposed allocation of costs to benefiting growth is reflected in the attached tables. The following are noteworthy aspects of the DC rate calculation for this service component:

- Expected cost of growth studies to be incurred over the period 2014 through 2023 (i.e., a ten year growth horizon) amount to approximately $22 million.
- Future (Post Period) Benefit : Approximately 30% of the overall costs have been allocated to growth in a period beyond the ten year planning horizon for Growth Studies. These costs therefore have been removed from the rate calculations and reduce the amount being collected in the ten year horizon for growth studies. The balance of the collections will be made in future years.
- Non-growth share : Studies may be directed specifically at identifying the needs resulting solely from growth (eg. Future DC studies for each service component), or may be directed at studying the needs in a certain service area as a result of both

growth and needs of the population generally (eg. Cycling Master Plan) . The DC rate calculations for Growth Studies reflect approximately 33% of the costs of this component have been identified as being of benefit to the existing population.

- Existing debt associated with previously approved growth studies which benefit the period 2014-2023 is also included in the rate calculation ($1.4 million). These costs are generally reflect the "Future Benefit" included in past DC studies.
- The net costs incorporated in the rate calculations attributed to growth in the ten year horizon are approximately $10M.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the rate calculation table has been provided. This table simulates the cash flows in this component of the DC funds :

a) It begins with the opening uncommitted balance of $110k.
b) The calculation also assumes full recovery of development charges for all types of growth.
c) Drawdowns, consistent with 'full recovery' assumption mentioned in b) above, for the growth share of projects being completed in the upcoming ten (10) year planning horizon, are also reflected in the cash flow projection.
d) An estimate of annual interest expenses that can be expected to be incurred taking into account any projected fund deficits (for future benefits recoverable from future growth) anticipated throughout the planning horizon (10 years).

As mentioned above, the calculations also recognize that some of the costs on various growth projects should be recovered from growth beyond the planning horizon. The amount to be recovered in the future is termed "post period benefit" for the purposes of these DC rate calculations, and each "post period benefit" project entails recovery of a portion of its costs from growth beyond the planning horizon for this service (10 years). The amount to be recovered from future growth is referred in the cash flow projections as a "target" amount. The spreadsheet is programmed to solve for the DC rate such that the deficit at the end of the planning horizon equates to the amount expected to be recovered from future growth (i.e., the sum of the "target" amounts).

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service.

Long Term Operating Costs

An examination of the long term operating costs for Corporate Growth Studies (DC) is included in Appendix O.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been determined by an internal review in consultation with managers who are responsible for providing for growth needs or growth studies in their respective department. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

2014 Development Charges Background Study

Table D-1: Corporate Growth Studies

Service component : **Corporate Growth Studies**

Planning horizon for this component : **2014-2024**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
															Residential		Commercial		Institutional		Industrial	
									%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14) Note 7	(15) (13) * (14)	(16) Note 7	(17) (13) * (16)	(18) Note 7	(19) (13) * (18)	(20) Note 7	(21) (13) * (20)
	Total Stormwater Servicing Studies (Note 1)						Note 6															
DC14-GS00001	Stormwater Future Development Charge Studies 2019	2017	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
DC14-GS00002	Stormwater Future Development Charge Studies 2024	2022	$250.0	$.0	$.0	$250.0	50.0%	$125.0	$125.0	0.0%	$.0	$.0	$125.0	$.0	$125.0	73.8%	$92.2	7.9%	$9.9	8.1%	$10.1	10.2%	$12.8
DC14-GS00005	Southwest Area Environmental Assessments	2014-2019	$1,000.0	$.0	$.0	$1,000.0	50.0%	$500.0	$500.0	0.0%	$.0	$.0	$500.0	$.0	$500.0	73.8%	$368.8	7.9%	$39.7	8.1%	$40.4	10.2%	$51.2
DC14-GS00006	Southeast Area Environmental Assessments	2022	$300.0	$.0	$.0	$300.0	50.0%	$150.0	$150.0	0.0%	$.0	$.0	$150.0	$.0	$150.0	73.8%	$110.6	7.9%	$11.9	8.1%	$12.1	10.2%	$15.3
DC14-GS00007	Stormwater Unidentified Environmental Assessments Addendums	2014-2023	$500.0	$.0	$.0	$500.0	0.0%	$.0	$500.0	0.0%	$.0	$.0	$500.0	$.0	$500.0	73.8%	$368.8	7.9%	$39.7	8.1%	$40.4	10.2%	$51.2
	SUBTOTAL		$2,300.0	$.0	$.0	$2,300.0	33.7%	$775.0	$1,525.0	0.0%	$.0	$.0	$1,525.0	$.0	$1,525.0	73.8%	$1,124.7	7.9%	$121.1	8.1%	$123.2	10.2%	$156.0
	Total Wastewater Servicing Studies (Note 1)																					
DC14-GS00008	Wastewater Future Development Charge Studies 2019	2017	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
DC14-GS00009	Wastewater Future Development Charge Studies 2024	2022	$250.0	$.0	$.0	$250.0	100.0%	$250.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	73.8%	$.0	7.9%	$.0	8.1%	$.0	10.2%	$.0
DC14-GS00027	Bio-Solids Master Plan	2019	$400.0	$.0	$.0	$400.0	75.0%	$300.0	$100.0	83.1%	$83.1	$.0	$16.9	$.0	$16.9	73.8%	$12.5	7.9%	$1.3	8.1%	$1.4	10.2%	$1.7
	SUBTOTAL		$900.0	$.0	$.0	$900.0	61.1%	$550.0	$350.0	23.7%	$83.1	$.0	$266.9	$.0	$266.9	73.8%	$196.9	7.9%	$21.2	8.1%	$21.6	10.2%	$27.3
	Total Transportation Servicing Studies (Note 1)																					
DC14-GS00042	London Cycling Master Plan	2014	$210.0	$.0	$.0	$210.0	0.0%	$.0	$210.0	50.0%	$105.0	$.0	$105.0	$.0	$105.0	73.8%	$77.4	7.9%	$8.3	8.1%	$8.5	10.2%	$10.7
DC14-GS00048	Complete Streets Guideline	2015	$100.0	$.0	$.0	$100.0	0.0%	$.0	$100.0	50.0%	$50.0	$.0	$50.0	$.0	$50.0	73.8%	$36.9	7.9%	$4.0	8.1%	$4.0	10.2%	$5.1
DC14-GS00049	Network Modelling Update	2016	$150.0	$.0	$.0	$150.0	0.0%	$.0	$150.0	0.0%	$.0	$.0	$150.0	$.0	$150.0	73.8%	$110.6	7.9%	$11.9	8.1%	$12.1	10.2%	$15.3
DC14-GS00050	Transportation Master Plan Update	2017	$100.0	$.0	$.0	$100.0	0.0%	$.0	$100.0	0.0%	$.0	$.0	$100.0	$.0	$100.0	73.8%	$73.7	7.9%	$7.9	8.1%	$8.1	10.2%	$10.2
DC14-GS00016	Transportation Future Development Charge Studies 2019	2017	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
DC14-GS00017	Transportation Master Plan	2022	$750.0	$.0	$.0	$750.0	100.0%	$750.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	73.8%	$.0	7.9%	$.0	8.1%	$.0	10.2%	$.0
DC14-GS00018	Transportation Development Charge Studies 2024	2022	$250.0	$.0	$.0	$250.0	100.0%	$250.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	73.8%	$.0	7.9%	$.0	8.1%	$.0	10.2%	$.0
DC14-GS00024	Long Term Corridor Protection - EA Studies	2014-2023	$800.0	$.0	$.0	$800.0	50.0%	$400.0	$400.0	0.0%	$.0	$.0	$400.0	$.0	$400.0	73.8%	$295.0	7.9%	$31.8	8.1%	$32.3	10.2%	$40.9
DC14-GS00025	Traffic Impact Studies	2014-2023	$1,000.0	$.0	$.0	$1,000.0	0.0%	$.0	$1,000.0	0.0%	$.0	$.0	$1,000.0	$.0	$1,000.0	73.8%	$737.5	7.9%	$79.4	8.1%	$80.8	10.2%	$102.3
DC14-GS00051	Transportation Master Plan Monitoring	2014-2023	$350.0	$.0	$.0	$350.0	0.0%	$.0	$350.0	0.0%	$.0		$350.0		$350.0	73.8%	$258.1	7.9%	$27.8	8.1%	$28.3	10.2%	$35.8
	SUBTOTAL		$3,960.0	$.0	$.0	$3,960.0	35.4%	$1,400.0	$2,560.0	6.1%	$155.0	$.0	$2,405.0	$.0	$2,405.0	73.8%	$1,773.7	7.9%	$190.9	8.1%	$194.3	10.2%	$246.1
	Total Water Servicing Studies (Note 1)																					
DC14-GS00012	Water Future Development Charge Studies 2019	2017	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
DC14-GS00013	Water Future Development Charge Studies 2024	2022	$250.0	$.0	$.0	$250.0	100.0%	$250.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	73.8%	$.0	7.9%	$.0	8.1%	$.0	10.2%	$.0
DC14-GS00022	Water Efficiency Program/Investigations	2014-2019	$3,100.0	$.0	$.0	$3,100.0	0.0%	$.0	$3,100.0	92.0%	$2,852.0	$.0	$248.0	$.0	$248.0	73.8%	$182.9	7.9%	$19.7	8.1%	$20.0	10.2%	$25.4
	SUBTOTAL		$3,600.0	$.0	$.0	$3,600.0	6.9%	$250.0	$3,350.0	85.1%	$2,852.0	$.0	$498.0	$.0	$498.0	73.8%	$367.3	7.9%	$39.5	8.1%	$40.2	10.2%	$51.0
	Total CSRF Infill and Intensification Servicing Studies (Note 1)																					
DC14-GS00023	Infill and Intensification Nodes Servicing Studies	2014-2023	$2,400.0	$.0	$.0	$2,400.0	50.0%	$1,200.0	$1,200.0	0.0%	$.0	$.0	$1,200.0	$.0	$1,200.0	73.8%	$885.0	7.9%	$95.3	8.1%	$97.0	10.2%	$122.8
	SUBTOTAL		$2,400.0	$.0	$.0	$2,400.0	50.0%	$1,200.0	$1,200.0	0.0%	$.0	$.0	$1,200.0	$.0	$1,200.0	73.8%	$885.0	7.9%	$95.3	8.1%	$97.0	10.2%	$122.8
	Total Planning and Growth Management (Note 2)																					
DC14-GS00028	Growth-related Secondary Plans (Note 8)	2014, 2016, 2018, 2020, 2022	$750.0	$.0	$.0	$750.0	25.0%	$187.5	$562.5	20.0%	$112.5	$.0	$450.0	$.0	$450.0	73.8%	$331.9	7.9%	$35.7	8.1%	$36.4	10.2%	$46.0
DC14-GS00029	Community Improvement Plans	2014, 2019	$400.0	$.0	$.0	$400.0	25.0%	$100.0	$300.0	50.0%	$150.0	$.0	$150.0	$.0	$150.0	73.8%	$110.6	7.9%	$11.9	8.1%	$12.1	10.2%	$15.3
DC14-GS00030	Urban Design Guidelines - subdivisions and infill	2014	$150.0	$.0	$.0	$150.0	0.0%	$.0	$150.0	10.0%	$15.0	$.0	$135.0	$.0	$135.0	73.8%	$99.6	7.9%	$10.7	8.1%	$10.9	10.2%	$13.8

Service component : **Corporate Growth Studies**

Planning horizon for this component : **2014-2024**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
															Residential		Commercial		Institutional		Industrial	
									%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		*(1)*	*(2)*	*(3)*	*(4) (1) - sum(2,3)*	*(5)*	*(6) (4) * (5)*	*(7) (4) - (6)*	*(8)*	*(9) (7) * (8)*	*I(7) - (9)I * 10(7) - sum(9,10)*	*(11)*	*(12)*	*(13) (11) - (12)*	*(14)*	*(15) (13) * (14)*	*(16)*	*(17) (13) * (16)*	*(18)*	*(19) (13) * (18)*	*(20)*	*(21) (13) * (20)*
																Note 7		*Note 7*		*Note 7*		*Note 7*
DC14-GS00031	Comprehensive Zoning By-law	2016	$1,000.0	$.0	$.0	$1,000.0	25.0%	$250.0	$750.0	50.0%	$375.0	$.0	$375.0	$.0	$375.0	73.8%	$276.6	7.9%	$29.8	8.1%	$30.3	10.2%	$38.4
DC14-GS00032	Infill and Intensification Guidelines	2017	$100.0	$.0	$.0	$100.0	25.0%	$25.0	$75.0	10.0%	$7.5	$.0	$67.5	$.0	$67.5	73.8%	$49.8	7.9%	$5.4	8.1%	$5.5	10.2%	$6.9
DC14-GS00033	Rapid Transit Village Plans	2018-2020	$300.0	$.0	$.0	$300.0	50.0%	$150.0	$150.0	20.0%	$30.0	$.0	$120.0	$.0	$120.0	73.8%	$88.5	7.9%	$9.5	8.1%	$9.7	10.2%	$12.3
DC14-GS00034	Rapid Transit Corridor Plans	2018-2020	$500.0	$.0	$.0	$500.0	50.0%	$250.0	$250.0	20.0%	$50.0	$.0	$200.0	$.0	$200.0	73.8%	$147.5	7.9%	$15.9	8.1%	$16.2	10.2%	$20.5
DC14-GS00035	Official Plan Review (5 Year Update)	2019	$200.0	$.0	$.0	$200.0	0.0%	$.0	$200.0	50.0%	$100.0	$.0	$100.0	$.0	$100.0	73.8%	$73.8	7.9%	$7.9	8.1%	$8.1	10.2%	$10.2
DC14-GS00036	Zoning By-law Update	2021	$250.0	$.0	$.0	$250.0	50.0%	$125.0	$125.0	20.0%	$25.0	$.0	$100.0	$.0	$100.0	73.8%	$73.8	7.9%	$7.9	8.1%	$8.1	10.2%	$10.2
DC14-GS00037	Industrial Development Strategy	2023	$100.0	$.0	$.0	$100.0	100.0%	$100.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$.0
	SUBTOTAL		$3,750.0	$.0	$.0	$3,750.0	31.7%	$1,187.5	$2,562.5	33.8%	$865.0	$.0	$1,697.5	$.0	$1,697.5	73.8%	$1,251.9	7.9%	$134.8	8.1%	$137.1	10.2%	$173.7
	Total Parks and Recreation (Note 3)																					
DC14-GS00040	Subwatershed Studies; review and implementation update (Parks & Recreation)	2014-2017	$350.0	$.0	$.0	$350.0	25.0%	$87.5	$262.5	20.0%	$52.5	$21.0	$189.0	$.0	$189.0	73.8%	$139.4	7.9%	$15.0	8.1%	$15.3	10.2%	$19.3
DC14-GS00041	Parks and Recreation Master Plan	2015	$300.0	$.0	$.0	$300.0	0.0%	$.0	$300.0	25.0%	$75.0	$22.5	$202.5	$.0	$202.5	100.0%	$202.5	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-GS00043	Masonville Creek Subwatershed Study (Parks & Recreation)	2015	$75.0	$.0	$.0	$75.0	25.0%	$18.8	$56.3	50.0%	$28.1	$2.8	$25.3	$.0	$25.3	73.8%	$18.7	7.9%	$2.0	8.1%	$2.0	10.2%	$2.6
DC14-GS00044	Urban Forestry Studies Impacted by Growth	2015, 2016, 2021	$1,250.0	$.0	$.0	$1,250.0	0.0%	$.0	$1,250.0	72.0%	$900.0	$35.0	$315.0	$.0	$315.0	73.8%	$232.3	7.9%	$25.0	8.1%	$25.4	10.2%	$32.2
DC14-GS00045	Civic Spaces Plan	2016	$75.0	$.0	$.0	$75.0	0.0%	$.0	$75.0	75.0%	$56.3	$1.9	$16.9	$.0	$16.9	100.0%	$16.9	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-GS00046	Parks and Recreation Master Plan Update	2022	$150.0	$.0	$.0	$150.0	50.0%	$75.0	$75.0	25.0%	$18.8	$5.6	$50.6	$.0	$50.6	100.0%	$50.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
	SUBTOTAL		$2,200.0	$.0	$.0	$2,200.0	8.2%	$181.3	$2,018.8	56.0%	$1,130.6	$88.8	$799.3	$.0	$799.3	82.6%	$660.4	5.3%	$42.0	5.4%	$42.8	6.8%	$54.2
	Total Police (Note 4)																					
DC14-GS00047	Police Facility Needs Analysis	2018	$500.0	$.0	$.0	$500.0	50.0%	$250.0	$250.0	25.0%	$62.5	$.0	$187.5	$.0	$187.5	73.8%	$138.3	7.9%	$14.9	8.1%	$15.1	10.2%	$19.2
	SUBTOTAL		$500.0	$.0	$.0	$500.0	50.0%	$250.0	$250.0	25.0%	$62.5	$.0	$187.5	$.0	$187.5	73.8%	$138.3	7.9%	$14.9	8.1%	$15.1	10.2%	$19.2

Service component : **Corporate Growth Studies**

Planning horizon for this component : **2014-2024**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL Residential %	RESIDENTIAL Residential $	NON - RESIDENTIAL Commercial %	NON - RESIDENTIAL Commercial $	NON - RESIDENTIAL Institutional %	NON - RESIDENTIAL Institutional $	NON - RESIDENTIAL Industrial %	NON - RESIDENTIAL Industrial $
	(all $'s in ,000's)		*(1)*	*(2)*	*(3)*	*(4) (1) - sum(2,3)*	*(5)*	*(6) (4) * (5)*	*(7) (4) - (6)*	*(8)*	*(9) (7) * (8)*	*(10) [(7) - (9)] * 10*	*(7) - sum(9,10)*	*(11)*	*(12)*	*(13) (11) - (12)*	*(14)*	*(15) (13) * (14)*	*(16)*	*(17) (13) * (16)*	*(18)*	*(19) (13) * (18)*	*(20)*	*(21) (13) * (20)*
																Note 7		*Note 7*		*Note 7*		*Note 7*	
	Finance & Corporate Services (Note 5)																						
DC14-GS00038	DC Process consultant	2017	$500.00	$.0	$.0	$500.0	50.0%	$250.0	$250.0	0.0%	$.0	$0.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
DC14-GS00039	DC Process consultant	2022	$500.00	$.0	$.0	$500.0	100.0%	$500.0	$.0	0.0%	$.0	$0.0	$.0	$.0	$.0	73.8%	$.0	7.9%	$.0	8.1%	$.0	10.2%	$.0
	SUBTOTAL		$1,000.0	$.0	$.0	$1,000.0	75.0%	$750.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	73.8%	$184.4	7.9%	$19.8	8.1%	$20.2	10.2%	$25.6
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (PRINCIPLE)		$1,345.0			$1,345.0			$1,345.0				$1,345.0		$1,345.0	82%	$1,102.9	12%	$161.4	6%	$80.7	0%	$.0
	TOTAL		**$21,955.0**	**$.0**	**$.0**	**$21,955.0**	**29.8%**	**$6,543.8**	**$15,411.3**	**33.4%**	**$5,148.2**	**$88.8**	**$10,174.2**	**$.0**	**$10,174.2**	**75.5%**	**$7,685.4**	**8.3%**	**$841.0**	**7.6%**	**$772.2**	**8.6%**	**$875.7**

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$109.9	85.0%	$93.5	11.2%	$12.3	3.8%	$4.2	0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$10,064.3	75.4%	$7,591.9	8.2%	$828.7	7.6%	$768.1	8.7%	$875.7
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 137.56**		**$ 4.96**		**$ 2.75**		**$ 1.92**
			/person		/sq. m.		/sq. m.		/sq. m.

Notes:

1) Engineering servicing studies provided by City of London Environmental and Engineering Services. Identified projects, cost, timing and non-growth share based on a review of past projects and estimates of future needs.

2) Planning and Growth Management studies provided by City of London Planning Division. Identified projects, cost, timing and non-growth share based on a review of past projects and estimates of future needs.

3) Parks and Recreation studies provided by City of London Planning Division and Community Services. Identified projects, cost, timing and non-growth share based on a review of past projects and estimates of future needs.

4) Police studies provided by London Police Services. Identified projects, cost, timing and non-growth share based on review of past projects and estimates of future needs.

5) Identified projects, cost, timing and non-growth share based on estimates of Development Finance staff for consultants to assist with future Development Charges Background Studies.

6) Future benefit allocated to growth studies based on the "shelf life" of individual study. If study expires before the end of the 10 year planning horizon, the future benefit is deemed to be 0%.

7) RICI splits are generally based on the percentage of projected population growth and employment growth over the 10 year planning horizon, with the following exceptions: Industrial Land Development Strategy 100% industrial; Parks & Recreation Master Plan and Master Plan Update 100% residential; and Civic Spaces Plan 100% residential.

8) Examples of potential "Growth-related Secondary Plans" includes the Near Campus Neighbourhood, McCormick South, Hamilton Road, Byron Pits, and various historic Main Streets.

Prefinancing - Calculated Residential DC Rate - financing costs to be added

Existing Res. Rate with financing included

		Total	*Jan 1, 2014 rate*
Single Family Dwelling	3.09	$ 425.05	$ 261.78
Multiple unit dwelling	2.20	$ 302.62	$ 187.28
Apartment - bach. & 1 bed	1.40	$ 192.58	$ 111.75
Apartment - ≥ 2 bedroom	1.91	$ 262.73	$ 156.24

2014 Development Charges Background Study

Table D-2: Cash Flow Analysis & Final Rate Calculation Corporate Growth Studies

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Corporate Growth Studies**

($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 137.56	**$ 152.92**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)															
Commercial	167,034	$ 4.96	**$ 5.52**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258	$ 2.75	**$ 3.06**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	**446,292**				44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510	$ 1.92	**$ 2.13**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$109.9	-$198.3	-$643.8	-$1,612.1	-$3,286.1	-$3,760.4	-$4,068.1	-$4,108.2	-$3,830.9	-$6,160.1	$109.9
Revenues - Development Charge Collections															
Residential					$844.0	$844.0	$844.0	$844.0	$844.0	$844.0	$844.0	$844.0	$844.0	$844.0	$8,440.1
Non-Res.															
Commercial					$92.1	$92.1	$92.1	$92.1	$92.1	$92.1	$92.1	$92.1	$92.1	$92.1	$921.3
Institutional					$85.4	$85.4	$85.4	$85.4	$85.4	$85.4	$85.4	$85.4	$85.4	$85.4	$853.9
C/I subtotal					$177.5	$177.5	$177.5	$177.5	$177.5	$177.5	$177.5	$177.5	$177.5	$177.5	$1,775.1
Industrial					$97.4	$97.4	$97.4	$97.4	$97.4	$97.4	$97.4	$97.4	$97.4	$97.4	$973.5
Total Non-Res.					$274.9	$274.9	$274.9	$274.9	$274.9	$274.9	$274.9	$274.9	$274.9	$274.9	$2,748.7
Total revenues					$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$1,118.9	$11,188.8
Development Charge draws - calculated on separate page					$1,425.6	$1,549.9	$2,048.5	$2,708.6	$1,471.9	$1,292.0	$1,018.3	$705.0	$3,276.3	$605.0	$16,101.1
Closing surplus / <deficit> before interest					-$196.8	-$629.3	-$1,573.3	-$3,201.9	-$3,639.2	-$3,933.5	-$3,967.6	-$3,694.3	-$5,988.3	-$5,646.2	-$4,802.3
Non-inflationary interest revenue /<expense>															
on savings	1.75%														$.0
on borrowings	3.50%				-$1.5	-$14.5	-$38.8	-$84.2	-$121.2	-$134.6	-$140.6	-$136.5	-$171.8	-$206.6	-$1,050.5
Closing surplus / <deficit>					-$198.3	-$643.8	-$1,612.1	-$3,286.1	-$3,760.4	-$4,068.1	-$4,108.2	-$3,830.9	-$6,160.1	-$5,852.8	-$5,852.8
															-$5,852.8

Other Information:	Pre	Post
Residential share	75%	75%
Non-residential		
Commercial	8%	8%
Institutional	8%	8%
C/I subtotal	16%	16%
Industrial	9%	9%

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:

1 Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Ra

2 Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculatior

3 Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".

APPENDIX E – LIBRARY SERVICES

Existing Service Standards

The City provides library services to its citizens through a single Central Library and fifteen (15) branch libraries.

A comprehensive "inventory" and valuation of library facilities for each of the preceding ten years was completed. As explained elsewhere in this Study, this valuation is necessary to facilitate an objective comparison of the historical service standard, with the proposed needs with the intention of demonstrating that no improvement in the historical standard is being incorporated into the development charge rate calculations.

The inventory includes valuation of all existing facilities based on the size, quality and nature of construction, land value and building contents. A separate inventory of the value of existing collections was undertaken. Both inventories reflect current replacement value of the Library assets to arrive at an average per capita historical service level.

By projecting this historical service level over the future population increase, a theoretical level of expenditure at which the City would be maintaining existing service levels results. By comparing this theoretical level with the calculated amounts eligible for the development charge rate for this component, this rate calculations demonstrate that they exclude any increase to the existing Library service standard.

Planning for Capital Needs

Each year, the Library reviews its capital building projects in preparation for the capital budget submission, based on the factors identified below. It should be noted at the outset that the Library DC rate calculations result in a net $0 residential DC rate, due to deferral of Library project plans, change in Library service areas and future benefits associated with the revised areas, and the Library DC collections of past years being sufficient to meet the net growth needs recoverable from growth for the period 2014-2023.

Growth population

The Library delineates service based on sixteen (16) service areas covering the City. Service area boundaries were modified in 2012 by the London Public Library to better align with the City of London planning districts, to reflect the construction of the new Stoney Creek library and to be more responsive to the needs of the community. For the purposes of projecting capital needs, growth allocations were prepared for the London Public Library based on population and housing construction by library service area. The growth allocations were based on the Altus population and housing projections, as outlined in Appendix A. These allocations served as the basis for projecting growth needs for 2014-2023.

Capital Needs Identified

Various factors affect the determination of need for new or redeveloped branch libraries. These include:

- anticipated population growth in an area
- socio-economic and literacy needs of a specific community
- changing demographics

Content of the collections is governed by size of population served and the borrowing needs of the patrons.

The Library examined the 'population to sq.ft.' ratios of its existing facilities, and projected future needs based on existing and projected populations in each Library planning district. A straightforward projection of the existing space standard applied to forecast population growth suggests the following:

Space needs projection using current per capita standard	
Existing standard space per capita (10 year historical average)	0.8939 sq.ft./per capita
Forecast population growth over the next 10 years	39,200
Forecast space needs based on existing design standard	35,041 sq. ft.

The above suggests that perhaps two (2) new branches (assuming approximate size of 13,000 – 17,000 sq. ft. per branch) may be necessary in the next ten years to serve growth and maintain the existing facility standard.

The London Public Library also established a population per square foot standard (2.6 population/sq.ft.) by reviewing existing libraries. This standard assists in determining service areas requiring library facilities, as well as informing the timing of project construction.

Based on a review of the population growth in each library district, the following needs were identified:

1. Sherwood Forest Northwest Branch (Library Service Area 12): This facility was previously included in the 2009 DC Study. The new branch is required to replace and expand the existing space in LSA 12. A review of population projections indicates that the population/sq.ft. standard will be exceeded by 2019. The new branch is anticipated to serve growing population needs in LSA 12 beyond the ten (10) year planning horizon of this rate study.
2. Pond Mills Southeast Branch (Library Service Area 13): The Pond Mills library was previously included in the 2009 DC Study. The new branch is required to replace and expand the existing space in LSA 13. A review of population projections indicates that the population/sq.ft. standard was exceeded in 2011. The new branch is anticipated to serve growing population needs in LSA 13 beyond the ten (10) year planning horizon of this rate study.

Collection costs have also been identified for the Sherwood Forest and Pond Mills future library branches. Each library is anticipated to require $250,000 in collections materials over the 10 year period (2014-2023). The collection materials are to meet incremental inventory needs to serve growth in the area and represent additional acquisitions beyond the existing collection materials contained at the present branches.

Design of Future Library Branches

There are a few noteworthy items that were considered in the design of new libraries:

a) Design Standards

The Building Code in Ontario contains various standards for the design of Libraries. The City's Facility Accessibility Design Standard (FADS) and the Accessibility for Ontarians with

Disabilities Act (AODA) as they relate to the Build Environment standard also have an impact on the library buildings being designed today. These standards require more space in buildings to accommodate the concept of "universal design", accommodating through design features the needs of people with ambulatory, visual and other disabilities impairments, and enable them to access services and programs in an integrated manner with other users. All of these standards are incorporated into the design of the future facility needs. Additionally, future branch libraries will be constructed to Leadership in Energy and Environmental Design (LEED) standards, with the goal of a LEED designation for the facility.

b) Campus Design

Through previous Parks and Recreation Master Planning Studies, the desirability of a "campus" design for public facilities was identified. This design would see a number of distinct municipal services incorporated into multi-use facilities in the future. For example, aquatic facilities, ice pads, community meeting space, gymnasium and library might all be incorporated into the design of future municipal facilities. The recent completion of the Stoney Creek community centre and library was constructed based on this concept. Where possible, the Library intends to incorporate future branches with other City of London community and recreational facilities, pending any new direction flowing from future Parks and Recreation Strategic Master Plan updates. Until such plans are further advanced and for the purposes of this study, the Pond Mills and Sherwood Forest library facilities have been planned on a "standalone basis".

c) Library Size

The Library Board presently leases several of its branches. As communities grow, research suggests it is most cost effective to construct and own facilities (beyond a size of 10,000 square feet), rather than continue to lease. Building designs of between 13,000-15,000 square feet represent the optimum size for both adequacy of space and geographic convenience of location. Buildings over 15,000 square feet may serve more patrons, but may also result in branches that are too far apart to provide a convenient level of service to the entire area being served.

Allocation of Costs of Growth to Growth Types

The forecasted Library facility needs are presented in the attached tables.

The costs eligible for development charge rate calculation purposes have been adjusted:

a) to remove the benefit to existing development. These reductions have been determined based on the proportion of developed area (at the time of collection for growth related libraries began in 1999) in relation to the total service area of the new library.
b) For new libraries, an approximation of the benefit accruing to growth beyond the ten year planning horizon for this service (i.e. the "future" or "post period" benefit) has also been made. The benefit calculation is based on the total service area that is expected to benefit beyond the planning horizon (i.e. beyond 2023) in relation to the total service area of the new branch. The post period benefit will be recovered from future growth that will benefit in the construction of these new libraries and those costs have been removed from the costs eligible for the ten (10) year DC rate calculations.

The resulting net amount represents only the growth costs reasonably recoverable from growth expected to occur in the 2014-2023 timeframe.

The net growth cost of providing Library services has been allocated 100% to residential growth, consistent with the 2009 DC Study. This allocation recognizes the virtually exclusive use of new libraries in growth areas of the City by residents of the surrounding community. This allocation approach is consistent with many other urban municipalities in the province.

Collections – Growth Needs Projected

The collections of new or replacement branches also require expansion to maintain service standards and provide adequate choice and variety to increasing number of patrons accessing the new branch. These additions to collections have been projected and are reflected in the attached tables. As with Library facility calculations, collections from prior growth have been removed through recognition of the existing reserve fund balance, which represents contributions of earlier growth towards the projects which make up the rate calculations.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the rate calculation table has been provided. This table simulates the cash flows in this component of the DC funds:

- It begins with the opening balance – in this case, a balance of $2.6 million which reflects the accumulation of funds from past years Library DC collections.
- Drawdowns, consistent with 'full recovery' assumption mentioned in b) above, for the growth share of projects being completed in the upcoming ten (10) year planning horizon, are also reflected in the cash flow projection.
- An estimate of annual interest expenses that can be expected to be incurred taking into account any projected fund deficits anticipated throughout the planning horizon (10 years).

As mentioned above, the calculations also recognize that some of the costs on facilities growth projects should be recovered from growth beyond the planning horizon. The amount to be recovered in the future is termed "post period benefit" for the purposes of these DC rate calculations, and each "post period benefit" project entails recovery of a portion of its costs from growth beyond the planning horizon for this service (10 years). The amount to be recovered from future growth is referred in the cash flow projections as a "target" amount. The spreadsheet is programmed to solve for the DC rate such that the deficit at the end of the planning horizon equates to the amount expected to be recovered from future growth (i.e. the "target" amount).

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service. For the 2014 Development Charges Study, the calculated rate for Library Services is $0.

Long Term Operating Costs

An examination of the long term operating costs for growth needs for Library Services (DC) is included in Appendix O.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been determined by a concentrated internal review and were approved by the London Public Library Board of Directors. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

2014 Development Charges Background Study

MAP 1: Library Service

2014 Development Charges Background Study - Draft
TABLE E-1 - Library Services - Measure of Existing Service Standards

SERVICE: LIBRARY

COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Buildings
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.
Beacock	1280 Huron St	12,560	12,560	13,232	13,232	13232	13232	13232	13232	13232	13232	$310
Byron	1295 Commissioners Rd W	12,000	12,000	12,000	12,000	12000	12000	12000	12000	12000	12000	$309
Carson	465 Quebec St	2,930	2,930	2,930	2,930	2930	2930	2930	2930	2930	2930	$323
Central Library	251 Dundas Street	188,179	188,179	188,179	188,179	188179	188179	188179	188179	188179	188179	$320
Cherryhill (formerly Westown) Leased	301 Oxford St W	10,225	10,225	10,225	10,225	10225	10225	10225	10225	10225	10225	$220
Crouch	550 Hamilton Rd	11,322	11,322	11,322	11,322	11322	11322	11322	11322	11322	11322	$294
Eastwood (leased)	1920 Dundas St E	5,868	13,000	13,000	13,000	13000						$220
East London (Note 2)	2016 Dundas St E						7642	7642	7642	7642	7642	$365
Glanworth	2950 Glanworth Dr	320	320	320	320	320	320	320	320	320	320	$369
Jalna	1119 Jalna Blvd	11,200	11,200	10,590	10,590	10590	10590	10590	10590	10590	10590	$351
Lambeth	7112 Beattie Ave	3,394	3,394	3,394	3,394	3,394	3394	3394	3394	3394	3394	$316
Landon	167 Wortley Rd	7,040	7,040	7,422	7,422	7422	7422	7422	7422	7422	7422	$305
Masonville	30 North Center	13,200	13,200	13,200	13,200	13200	13200	13200	13200	13200	13200	$348
Northridge (Leased)	1444 Glenora Dr	2,170	2,170	2,170	2,170	2170	2170	2170	2170	2170	2170	$180
Pond Mills (Leased)	1166 Commissioners Rd E	7,090	7,090	7,090	7,090	7090	7090	7090	7090	7090	7090	$180
Sherwood Forest (Leased)	1225 Wonderland Rd N	6,398	6,398	13,214	13,214	13,214	13,214	13,214	13,214	13,214	13,214	$220
Stoney Creek	920 Sunningdale Rd E							7,943	7,943	7,943	7,943	$303
Westmount	3200 Wonderland Rd	14,602	14,602	14,602	14,602	14602	14602	14602	14602	14602	14602	$356
Total		308,498	315,630	322,890	322,890	322,890	317,532	325,475	325,475	325,475	325,475	
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Level of Service		0.891486	0.903809	0.916273	0.909165	0.902179	0.880444	0.895638	0.888912	0.879805	0.870883	

10 year average	
Quantity Standard per Capita	0.893859

Source : Building measures provided by City of London Facility Services and land measures provided by City of London Realty Services . $/sq.ft. includes building replacement cost and land value expressed in terms of $/sq.f.t.

NOTES:
1) Branch expansion recorded in the next full year of operation. (eg. Beacock re-opened in June 2005, recorded in 2006)
2) East London Library and Community Centre is a total of 23,500 sq. ft with the YMCA occupying 10,500 sq. ft. (Library portion is 7642 sqft)

2014 Development Charges Background Study - Draft

TABLE E-1 - Library Services - Measure of Existing Service Standards

SERVICE: LIBRARY COMPONENT: FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Beacock	1280 Huron St	$3,894	$3,894	$4,102	$4,102	$4,102	$4,102	$4,102	$4,102	$4,102	$4,102
Byron	1295 Commissioners Rd W	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708	$3,708
Carson	465 Quebec St	$946	$946	$946	$946	$946	$946	$946	$946	$946	$946
Central Library	251 Dundas Street	$60,217	$60,217	$60,217	$60,217	$60,217	$60,217	$60,217	$60,217	$60,217	$60,217
Cherryhill (formerly Westown) Leased	301 Oxford St W	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250	$2,250
Crouch	550 Hamilton Rd	$3,329	$3,329	$3,329	$3,329	$3,329	$3,329	$3,329	$3,329	$3,329	$3,329
Eastwood (leased)	1920 Dundas St E	$1,291	$2,860	$2,860	$2,860	$2,860	$0	$0	$0	$0	$0
East London	2016 Dundas St E	$0	$0	$0	$0	$0	$2,789	$2,789	$2,789	$2,789	$2,789
Glanworth	2950 Glanworth Dr	$118	$118	$118	$118	$118	$118	$118	$118	$118	$118
Jalna	1119 Jalna Blvd	$3,931	$3,931	$3,717	$3,717	$3,717	$3,717	$3,717	$3,717	$3,717	$3,717
Lambeth	7112 Beattie Ave	$1,073	$1,073	$1,073	$1,073	$1,073	$1,073	$1,073	$1,073	$1,073	$1,073
Landon	167 Wortley Rd	$2,147	$2,147	$2,264	$2,264	$2,264	$2,264	$2,264	$2,264	$2,264	$2,264
Masonville	30 North Center	$4,594	$4,594	$4,594	$4,594	$4,594	$4,594	$4,594	$4,594	$4,594	$4,594
Northridge (Leased)	1444 Glenora Dr	$391	$391	$391	$391	$391	$391	$391	$391	$391	$391
Pond Mills (Leased)	1166 Commissioners Rd E	$1,276	$1,276	$1,276	$1,276	$1,276	$1,276	$1,276	$1,276	$1,276	$1,276
Sherwood Forest (Leased)	1225 Wonderland Rd N	$1,408	$1,408	$2,907	$2,907	$2,907	$2,907	$2,907	$2,907	$2,907	$2,907
Stoney Creek	920 Sunningdale Rd E	$0	$0	$0	$0	$0	$0	$2,407	$2,407	$2,407	$2,407
Westmount	3200 Wonderland Rd	$5,198	$5,198	$5,198	$5,198	$5,198	$5,198	$5,198	$5,198	$5,198	$5,198
Total		$95,770	$97,339	$98,949	$98,949	$98,949	$98,878	$101,285	$101,285	$101,285	$101,285
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$276.75	$278.73	$280.79	$278.61	$276.47	$274.17	$278.71	$276.62	$273.79	$271.01

10 year average	
Service Standard per Capita	$276.57

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$276.57
DC rate eligible amount (gross)	$10,841,544

Source : Building, site improvements and contents derived from information compiled by City of London - Facility Services division. Land values from information provided by Realty Services division.

NOTES:
1) The valuations above include the 2013 replacement value of building, land, site improvements and building contents (excluding computers and collections[latter is valued separately])

2014 Development Charges Background Study - Draft
TABLE E-1 - Measure of Existing Service Standards

SERVICE: LIBRARY

COMPONENT: COLLECTIONS

Contact person(s) Anne Baker
Unit of measure Collection item
Type of measure Quantity

Item Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/Item
Catalogued Volumes	942,407	858,728	850,854	841,854	829,782	804,470	780,080	788,392	762,085	760,415	$29
Uncatalogued volumes	500	500	250								$12
Government Documents	2,178	3,380	3,706	3,892	3,893	3,901	4,059	3,803	1,374	1,382	$38
Magazines, Newspapers, Periodicals	19,540	20,306	19,340	24,603	23,967	28,870	27,576	26,189	26,395	27,261	$5
Vertical Files, Technical Reports, Pamphlets	768	694	382	337	357	351	290	201	161	98	$33
Micromaterials	386	410	459	467	467	467	467	467	469	471	$300
Sound Recordings (LP's & Cassettes)	27,718	25,270	19,916	16,267	14,259	12,820	9,956	6,688	1,965	1,156	$40
Compact Discs	39,317	43,956	46,962	55,466	51,059	55,403	59,154	62,633	66,978	69,960	$23
Talking books	5,524	5,263	5,431	5,359	5,348	5,335	4,777	4,150	1,664	1,824	$48
Videos - VHS	40,221	38,292	36,799	35,539	34,284	29,319	24,375	17,649	9,657	7,921	$28
CD -ROMs	357	481	481	481	481	429	442	442	442	442	$15
DVDS	6,577	10,212	14,611	18,070	20,623	27,441	34,266	42,048	48,954	58,797	$25
Subscriptions - electronic resources		34	50	50	50	83	52	52	52	46	$3,160
Electronic collections (e-books, e-audio)				320	10,001	14,122	5,632	7,593	12,496	15,067	$31
Access Workstations				230	378	383	396	396	477	477	$950
Equipment			118	104	166	174	359	1,606	1,660	1,598	$47
Total	1,085,493	1,007,526	999,359	1,003,039	995,115	983,568	951,881	962,309	934,829	946,915	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	3.14	2.89	2.84	2.82	2.78	2.73	2.62	2.63	2.53	2.53

10 year average	
Quantity Standard per Capita	2.749791

Sources: Values and quantity of collections taken from Library inventory reports.

NOTES:
1) Collection categories added include electronic resource subscriptions, purchased electronic resources (ebooks and e-audio books), access workstations, and equipment (pedometers, talking book readers).
2) The dollar per item for equipment is calculated using a weighted average.
3) Due to the timing of the DC study, the 2013 figures are estimates.

2014 Development Charges Background Study - Draft

TABLE E-1 - Measure of Existing Service Standards

SERVICE: LIBRARY COMPONENT: COLLECTIONS

Contact person(s) Anne Baker
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Item Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Catalogued Volume	$27,329.8	$24,903.1	$24,674.8	$24,413.8	$24,063.7	$23,329.6	$22,622.3	$22,863.4	$22,100.5	$22,052.0
Uncatalogued volume	$6.0	$6.0	$3.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Government Documents	$82.8	$128.4	$140.8	$147.9	$147.9	$148.2	$154.2	$144.5	$52.2	$52.5
Magazines, Newspapers, Periodicals	$97.7	$101.5	$96.7	$123.0	$119.8	$144.4	$137.9	$130.9	$132.0	$136.3
Vertical Files, Technical Reports, Pamphlets	$25.3	$22.9	$12.6	$11.1	$11.8	$11.6	$9.6	$6.6	$5.3	$3.2
Micromaterials	$115.8	$123.0	$137.7	$140.1	$140.1	$140.1	$140.1	$140.1	$140.7	$141.3
Sound Recordings (LP's & Cassettes)	$1,108.7	$1,010.8	$796.6	$650.7	$570.4	$512.8	$398.2	$267.5	$78.6	$46.2
Compact Sound Disc Titles	$904.3	$1,011.0	$1,080.1	$1,275.7	$1,174.4	$1,274.3	$1,360.5	$1,440.6	$1,540.5	$1,609.1
Talking book titles	$265.2	$252.6	$260.7	$257.2	$256.7	$256.1	$229.3	$199.2	$79.9	$87.6
Videos - VHS	$1,126.2	$1,072.2	$1,030.4	$995.1	$960.0	$820.9	$682.5	$494.2	$270.4	$221.8
CD -ROMs	$5.4	$7.2	$7.2	$7.2	$7.2	$6.4	$6.6	$6.6	$6.6	$6.6
DVDS	$164.4	$255.3	$365.3	$451.8	$515.6	$686.0	$856.7	$1,051.2	$1,223.9	$1,469.9
Subscriptions - electronic resources	$0.0	$107.4	$158.0	$158.0	$158.0	$262.3	$164.3	$164.3	$164.3	$145.4
Electronic collections (e-books, e-audio)	$0.0	$0.0	$0.0	$9.9	$310.0	$437.8	$174.6	$235.4	$387.4	$467.1
Access Workstations	$0.0	$0.0	$0.0	$218.5	$359.1	$363.9	$376.2	$376.2	$453.2	$453.2
Equipment	$0.0	$0.0	$5.5	$4.9	$7.8	$8.2	$16.9	$75.5	$78.0	$75.1
Total	$31,231.5	$29,001.5	$28,769.5	$28,864.9	$28,802.4	$28,402.5	$27,330.0	$27,596.2	$26,713.4	$26,967.3
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$90.25	$83.05	$81.64	$81.28	$80.48	$78.75	$75.21	$75.37	$72.21	$72.16

10 year average	
Service Standard per Capita	$79.04

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$79.04
DC rate eligible amount (gross)	$3,098,368

2014 Development Charges Background Study

Table E-2: Library Service

Service component : **Library - Facility**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Residential %	NON - RESIDENTIAL: Residential $	NON - RESIDENTIAL: Commercial %	NON - RESIDENTIAL: Commercial $	NON - RESIDENTIAL: Institutional %	NON - RESIDENTIAL: Institutional $	NON - RESIDENTIAL: Industrial %	NON - RESIDENTIAL: Industrial $
			Amount Eligible for Development Charge Rate Calculations												*Allocation of Net Amount to types of Growth*									
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10% ′7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*	
	Anticipated and Planned Projects		*Note 1*				*Note 2*			*Note 3*					*Note 4*		*Note 4*		*Note 4*		*Note 4*			
DC14-LS00001	LSA 13 -- Southeast (Facility)	2016	$4,080.0		$750.0	$3,330.0	59.0%	$1,965.4	$1,364.6	19.9%	$272.2	$109.2	$983.2	$0.0	$983.2	100%	$983.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-LS00002	LSA 12 -- Northwest (Facility)	2019	$4,080.0		$750.0	$3,330.0	10.8%	$359.5	$2,970.5	59.4%	$1,763.9	$120.7	$1,085.9	$0.0	$1,085.9	100%	$1,085.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$0.0				$0.0		$0.0		$0.0		$0.0		$0.0		$0.0
	TOTAL		**$8,160.0**	**$0.0**	**$1,500.0**	**$6,660.0**	**34.9%**	**$2,324.9**	**$4,335.1**	**47.0%**	**$2,036.1**	**$229.9**	**$2,069.1**	**$0.0**	**$2,069.1**	**100.0%**	**$2,069.1**	**0.0%**	**$0.0**	**0.0%**	**$0.0**	**0.0%**	**$0.0**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$276.57
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$10,841.5
Current Growth Needs	$2,069.1
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential		Commercial		Institutional		Industrial
Excess Reserve Fund allocation - From Collections Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$2,069.1	100.0%	$2,069.1	0.0%	$.0	0.0%	$.0	0.0%	$.0
Total net cost eligible for DC rate calculation purposes (if >$0)	$.0	100.0%	$.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 0.00** /person		**$ -** /sq. m.		**$ -** /sq. m.		**$ -** /sq. m.

		Prefinancing - Calculated Residential DC Rate - financing costs to be added			Existing Res. Rate with financing included
		Facility	*Collections*	*Total*	*Jan 1, 2014 rate*
Single Family Dwelling	3.09	$ 0.00	$ 0.00	$ 0.00	$35.18
Multiple unit dwelling	2.20	$ -	$ 0.00	$ 0.00	$25.87
Apartment - bach. & 1 bed	1.40	$ -	$ 0.00	$ 0.00	$15.52
Apartment - ≥ 2 bedroom	1.91	$ -	$ 0.00	$ 0.00	$21.73

Notes:

1) Estimated costs include building fees, construction, land, furniture and equipment. Excludes the costs of collections.
2) Allocation of benefit to future growth has been based on the percentage of undeveloped hectares in Library branch service area beyond 2023 to the total developable hectares in branch service area.
3) Non-growth share reflects the percentage of developed area at the initiation of collection of DC's for new library in relation to the total developable area in the service area of the new library.
4) Residential share of growth costs 100% (consistent with 2009 DC Study). Benefit to ICI sector considered inappropriate.

2014 Development Charges Background Study

Table E-2: Library Service

Service component : **Library - Collections**
Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL Commercial %	NON - RESIDENTIAL Commercial $	NON - RESIDENTIAL Institutional %	NON - RESIDENTIAL Institutional $	NON - RESIDENTIAL Industrial %	NON - RESIDENTIAL Industrial $
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*'7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
	Anticipated and Planned Projects		*Note 1*				*Note 2*			*Note 3*						*Note 4*		*Note 4*		*Note 4*		*Note 4*	
DC14-LS00003	LSA 13 -- Southeast (Collections)	2016	$250.00			$250.0	0.0%	$.0	$250.0	0.0%	$.0	$25.0	$225.0	$.0	$225.0	100%	$225.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-LS00004	LSA 12 -- Northwest (Collections)	2019	$250.00			$250.0	0.0%	$.0	$250.0	0.0%	$.0	$25.0	$225.0	$.0	$225.0	100%	$225.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT								$.0				$.0		$.0		$.0		$.0		$.0		$.0
	TOTAL		**$500.0**	**$.0**	**$.0**	**$500.0**	**0.0%**	**$.0**	**$500.0**	**0.0%**	**$.0**	**$50.0**	**$450.0**	**$.0**	**$450.0**	**100.0%**	**$450.0**	**0.0%**	**$.0**	**0.0%**	**$.0**	**0.0%**	**$.0**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$79.04
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$3,098.4
Current Growth Needs	$450.0
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential	Commercial	Institutional	Industrial
Excess Reserve Fund allocation - From Facilities						
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$450.0	100.0%	$450.0	$.0	$.0	$.0
			0.0%	0.0%	0.0%	0.0%
Total net cost eligible for DC rate calculation purposes	$.0	100.0%	$.0	$.0	$.0	$.0
Divided By: Total Gross Growth Projections			55,191	167,034	279,258	456,510
Calculated DC Rate - Pre-Financing			**$ 0.00** /person	**$ -** /sq. m.	**$ -** /sq. m.	**$ -** /sq. m.

Pre- Financing Cost Residential Rates:

		Collections
Single Family Dwelling	3.09	$ 0.00
Multiple unit dwelling	2.20	$ 0.00
Apartment - bach. & 1 bed	1.40	$ 0.00
Apartment - ≥ 2 bedroom	1.91	$ 0.00

Notes:

1) Estimated costs of additions to existing Library collections.
2) Collection materials assumed expended within the time frame of the study due to their relatively short "shelf life"; therefore, no allocation made for benefit to future growth.
3) Collection materials are to meet incremental inventory needs to serve growth in the area, therefore no benefit assessed to existing population (the existing collections located at the leased space serving the existing population will be transferred to the new library).
4) Residential share of growth costs 100% (consistent with 2009 DC Study). Benefit to ICI sector considered inappropriate.

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Table E-3: Cash Flow Analysis & Final Rate Calculation

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Library**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 0.00	**$ 0.00**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)															
Commercial	167,034.2	$ -	**$ -**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258.0	$ -	**$ -**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	446,292.2				44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510.0	$ -	**$ -**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802.2				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$2,634.7	$2,680.8	$2,727.7	$128.3	$130.6	$132.9	-$1,327.1	-$1,367.0	-$1,408.0	-$1,450.2	$2,634.7
Revenues - Development Charge Collections															
Residential					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Non-Res.															
Commercial					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Institutional					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
C/I subtotal					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Industrial					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Total Non-Res.					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Total revenues					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Development Charge draws - calculated on separate page					$.0	$.0	$2,624.2	$.0	$.0	$1,442.3	$.0	$.0	$.0	$.0	$4,066.5
Closing surplus / <deficit> before interest					$2,634.7	$2,680.8	$103.6	$128.3	$130.6	-$1,309.5	-$1,327.1	-$1,367.0	-$1,408.0	-$1,450.2	-$1,183.8
Non-inflationary interest revenue /<expense>															
on savings	1.75%				$46.1	$46.9	$24.8	$2.2	$2.3						$122.3
on borrowings	3.00%									-$17.6	-$39.8	-$41.0	-$42.2	-$43.5	-$184.2
Closing surplus / <deficit>					$2,680.8	$2,727.7	$128.3	$130.6	$132.9	-$1,327.1	-$1,367.0	-$1,408.0	-$1,450.2	-$1,493.7	-$1,493.7

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$1,547.4

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:

1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	100%	100%
Non-residential		
Commercial	0%	0%
Institutional	0%	0%
C/I subtotal	0%	0%
Industrial	0%	0%

APPENDIX F – PARKS AND RECREATION

In November 2009 City Council adopted, subject to annual budget review, the recommendations of the Parks and Recreation Strategic Master Plan Update. The 2009 Master Plan Update informs the capital projects identified in this DC Study. The updated Master Plan provides direction and guidance for managing parks and recreation programs, infrastructure, and investment in a fiscally responsible manner. In 2015, a new Parks and Recreation Master Plan will be commenced in order to test community priorities and ensure that proposed directions remain relevant to current and future generations.

Existing Service Standards

The City provides parks and recreation services to its residents through numerous facilities, sports fields and play structures throughout the municipality.

For both Parks and Recreational facilities, a valuation of the historical service standard was prepared. It was substantiated by a comprehensive inventory and valuation of parkland development and recreation facilities for the preceding ten years. This valuation makes possible an objective comparison of the historical service standard with the proposed future needs. The comparison is necessary to demonstrate that no improvement in the future service standard is being incorporated into the development charge rate calculations.

The inventories reflect an approximation of the current replacement value of nearly all Parks and Recreation assets. The inventory includes valuation of all existing recreation facilities and takes into account the size, quality and nature of construction and land value (lands ancillary to facility only).[4] Some non-parkland properties have been excluded from the inventory where the amenity or facility is unique or unlikely to be replicated (for example golf courses are excluded from the inventory). The inventories arrive at an average per capita historical service level.

By projecting the historical per capita service level using the future population increase, a ceiling level of expenditure at which the City would be maintaining existing service levels is calculated. This ceiling is used to demonstrate that there is no increase to the existing service standard included in the DC rate calculation (as required by the legislation).

Population Growth Projected

As with other services, planning of Park and Recreation service expansion first involves an estimate of the extent and location of growth. The projection of growth and location is addressed in Appendix A of this study. The DC rate calculation for this service component contemplates a ten year planning horizon (legislatively mandated).

Growth allocations were prepared to inform Parks and Recreation projects to be included in this study:

- For parkland development projects, the population and housing projections outlined in Appendix A were used to determine the quantum of parkland by category required for the next 10 years, based on standards established in the 2009 Parks and Recreation Master Plan and a review of historical Ontario Municipal Benchmarking Initiative measures. Growth projections were also used to create a build-out of subdivisions and intensification lands throughout the City for the 10 year timeframe. Specific

[4] The land valuation excludes the value of park land.

locations of anticipated future growth are necessary for parks planning, especially for localized parks (e.g., neighbourhood parks, urban parks, etc.).

- Projections by Planning District were prepared for evaluating recreation facility needs. The planning district allocations provided 10 year growth at a scale conducive to examining future growth within recreation facility catchment areas.

Recreation Facilities Needs

The capital needs listed on the attached tables include three multi-purpose recreational facilities with various components. These facilities are planned in the Southwest and East/Southeast.

The 2009 Parks & Recreation Master Plan identified a need for **indoor aquatic facilities** for the Southwest and East/Southeast parts of the city. These aquatic facilities will serve both existing populations and future growth.

The Master Plan also identifies a need for new **community centre/gymnasium** space in each of the multi-purpose facilities it recommends.

The Master Plan recommended new **Field Houses and Spray Pads** to serve growth areas.

Growth projections prepared for this Study were examined in comparison to the 2009 Master Plan Update to assess capital needs previously identified and the timing of facility construction. Additional information on the projects contained in the 2014 DC Study is as follows:

- Southwest Recreation Centre: A combined community centre, gymnasium, pool and arena facility, the Southwest Recreation Centre has been identified as a priority project in both the 2003 Parks and Recreation Master Plan and the 2009 Parks and Recreation Master Plan Update. At the time of this Study's completion, a site for this facility is being sought, with construction anticipated to commence in 2014. Apart from refined cost estimates, this project remains consistent with the 2009 DC Study.[5]
- East/Southeast Recreation Centre: Both the 2003 Parks and Recreation Master Plan and 2009 Master Plan Update identified the need for recreation facility components to be located in the east/southeast part of the City. Both the 2004 and 2009 DC Studies included a southeast recreation centre as a consolidated, multi-purpose facility. However, community consultations, a review of growth projections and site acquisition efforts have resulted in a recommendation to split the southeast recreation centre into two separate projects: an arena-anchored recreation centre[6] and an aquatics-anchored recreation centre. Separating the recreation centre into two facilities is consistent with the 2009 Master Plan Update that recognized the potential need for two different sites for the recommended components. Although a site will need to be purchased for the arena-anchored facility, the aquatics-anchored facility will be located at East Lions Park, resulting in no additional land costs for these components.

[5] The Southwest Recreation Facility double icepad arena is replacing existing older arenas in the southern part of the city. As a result, it is a 0% growth project.

[6] The Southeast Recreation Facility double icepad arena is replacing existing older arenas in the southern part of the city. As a result, it is a 0% growth project.

- Field Houses: Several field houses have been identified for DC funding. These buildings generally provide washrooms, equipment storage and spray pad operations infrastructure for district parks and sports parks. Detailed assessments of field house needs have occurred since the 2009 DC Study, as few were previously identified for DC funding.[7] Going forward, the need for field houses will be linked with the need for growth-related sports parks and district parks.
- Spray pads: Four spray pads have been identified for DC funding. The spray pads are linked with district park development, and their need reflects an examination of growth projections and demographics in relation to the 2009 Master Plan Update standard for spray pads (1 spray pad per 4500 children aged 0-14). Spray pads provide an important recreational amenity for the city's children.

Determination of Growth Share of New Recreation Facilities

The growth share of these projects was determined by using the same method as the 2009 DC Study. First, a service area was generally defined for each of the existing facilities in the City. From this point, the benefiting area that would be served by each new multi-purpose facility was approximated. In one instance (East/Southeast) it was considered appropriate to distinguish between the benefiting area of the pool in contrast to the benefiting area of the community centre.

Second, the geographic service area already developed at the time of the commencement of DC collection (i.e., 1999) was compared to the total benefiting area for each new multi-purpose facility. This fraction is used in the calculations to represent the benefit to existing development (i.e., the non-growth share). The growth share attributed to growth beyond ten (10) years (i.e., future growth share) was also calculated to determine the growth share appropriate for the DC rate calculation.

Two twin-pad **arenas** are identified as part of the multi-purpose community centres in the Southwest and Southeast. 100% of the cost of these is allocated to existing development. This allocation is based on the expectation that these ice surfaces will simply replace existing single-pad arenas intended for decommissioning in the future, and do not address growth related needs.

The works needed to complete the multi-purpose facilities are what may be termed site development costs. These include land acquisition, design, site works, change rooms, architects fees and permits. The non-growth share of these works was determined in proportion to the non-growth share of the functional components (i.e., arena, community centre, gym and indoor pool), consistent with the method used in the 2009 DC Study.

With respect to **Field Houses and Spray Pads**, the benefit to existing development mirrors the district park or sports park where the facilities will be located. Three future field houses presently lack precise locations; as such, they have been allocated a 1/3 non-growth share.

Determination of "Post Period Benefit" of Recreation Facilities

The new facilities are expected to serve growth beyond the planning horizon for this service component. As a consequence, it was necessary to estimate this post period benefit and remove it from the rate calculations. Post period benefit was approximated by looking at

[7] Field houses constructed between 2009-2014 were funded through federal/provincial stimulus funding grants.

what geographic portion of the benefiting area would develop in the post ten year horizon. This portion was then removed from the rate calculation.

Other Deductions in Recreation Facilities DC Rate Calculations

Consistent with rate calculations for other soft services, the DC rate calculations for Recreation facilities also reflect:

- An estimate of the portion of the costs in question that were collected in prior years as represented by the uncommitted balance in the DC P&R Reserve fund. This amount is removed from the rate calculation so as not to overstate the amount that should be collected from the growth horizon in question (2014-2023). For Recreation facilities, this deduction amounted to approximately $2.5 million.
- Any capital grants, subsidies or other contributions from other sources that are anticipated for this service were also considered. In this case, there were no such contributions anticipated.
- A calculation of the amount that would otherwise represent an improvement over the existing combined quantity/quality service standard (an improvement prohibited by legislation) is made. No service standard reductions are required for recreation facilities for the 2014 DC Study.
- The 10% statutory deduction which applies to most "soft services" (Parks, Recreation, Library, Transit), resulting in the removal of $1.3 million of project costs.

Parkland Development – Capital Needs

The Parkland Development needs for the ten (10) year time horizon for this service are listed in the attached tables. The capital needs are influenced by recommendations contained in the 2009 Parks and Recreation Master Plan Update:

- The Master Plan Update identified amenities and additions to the development of park space in neighbourhoods and districts (skate parks, basketball hoops, play structures, tennis courts, soccer fields, baseball diamonds & sports field development), as well as additions and extensions to the City's inventory of natural open space and Thames Valley Parkway. The park development projects identified for inclusion in the DC rate calculations are consistent with the Master Plan for Parks and Recreation Services and in conformity with the Official Plan. Only those projects with a growth component are included in the list of Capital Needs.
- The **Neighbourhood Parks** program addresses the development of new parks in growing areas of London. As a result of an aggressive program of parks redevelopment, there are few parks in the established areas of the City that do not meet the same level of service to which new parks are being designed.
- The Master Plan for Parks and Recreation Services identifies short, medium and long term priorities for the development of recreational amenities such as sports fields, spray pads, skate parks and tennis courts. These types of amenities are generally provided at the District Park level.
- The future '**District Parks**', projects identified in the Capital Needs list are consistent with the Master Plan. Future parks will be developed with a mix of amenities that are consistent with existing parks of this level.
- The Official Plan for the City of London includes numerous policies that speak to the importance of the city's natural heritage system, and its role as a significant environmental/ecological resource, recreational asset and framework of the City's structure. Within the "Open Space", "Environmental", "Parks and Recreation", and "Services and Utilities" chapters of the Official Plan, policies that identify the

importance of a linked and accessible natural heritage system are found. These policies direct that opportunities to enhance these linkages be pursued, and that these areas be protected.

- The Capital Needs in the "**Major Open Space Network**" and "**Environmentally Significant Area**" categories are also consistent with the existing policies and the recommendations of the Parks and Recreation Master Plan relating to the development of a linked natural heritage system. For open space areas that are not linked through the extension of the City's primary recreational pathway system (the Thames Valley Parkway) the Master Plan recommends that a fully linked pathway system be developed. The projects identified in the Capital Needs include components of the natural heritage system within growth areas that will be linked to the City's existing system of pathways.
- The Capital Needs in the "**Thames Valley Parkway**" (TVP) category are also drawn from the recommendations of the Parks and Recreation Master Plan and Bicycle Master Plan, and reflect the priorities established for the City's multi-purpose pathway system. Through the public consultation process for the Master Plans, Londoners identified improving the pathway network as the top priority for parks development. The projects identified extend the City's existing linear parkway into growing areas of the City.
- In previous DC Studies, sports-related infrastructure was identified separately from parkland development, with these components to be installed primarily in district parks. Since the 2009 DC Study, a new category of **Sports Parks** has been established that reflect a new standalone park-type to concentrate major sports-related activities. The sports parks included in the capital needs are consistent with the Parks and Recreation Master Plan recommendations related to sports infrastructure requirements.
- **Woodland Parks** have been established as a new category of parkland from the 2009 DC Study. Historically, these parks were captured in the open space category. Woodlands now have their own category due to environmental considerations affecting trail development and unique tree hazard/environmental restoration needs.
- The 2009 Parks and Recreation Master Plan recommended the establishment of a new category of park: **Urban Parks**. These parks reflect emerging development patterns and a movement toward improved walkability and placemaking.
- The need for **Civic Spaces** has been identified in Placemaking Design Guidelines, the Downtown Master Plan, the London Psychiatric Hospital Plan and the Old Victoria Hospital Secondary Plan (under preparation at the time of the completion of the 2014 DC Study). These projects provide city-wide benefits, while providing high-quality amenity space for populations in the immediate vicinity.
- **Pedestrian Crossings** provide important linkages across major roads and rivers. A single Pedestrian Crossing for Richmond Street North is included with the 2014 DC Study as it has been determined to be required to address growth proximate to the project. The Richmond St. N crossing was identified in the Sunningdale North Area Plan (approved in 2006) and an environmental assessment for the project is underway at the time of the completion of this study.

In determining capital needs for inclusion in the 2014 DC Study, Environmental and Parks Planning staff conducted a detail analysis of numerous park development projects for each category completed in recent years, as well as replacement costs associated with sample parks. The survey included parks of varying sizes, project complexity and degree of amenities provided to establish a representative dollar per hectare valuation to apply to both

parks contained in the service standard inventory and future growth-related parks projects. This valuation approach has produced parks project estimates that are more robust and accurate than estimates provided in previous DC studies.

Definitions and descriptions of parkland infrastructure components and inclusions in cost estimates are as follows:

- **Neighbourhood Parks** are intended to serve as a focal point of a neighbourhood and are designed to serve the needs of the local neighbourhood by supporting both unorganized and organized activities and programs. Typical service/grade/seeding costs for neighbourhood parks are not included in DC calculation. These costs are incurred by the subdivision developer as per subdivision agreements. Installation of soccer field amenities has also been removed from DC calculation for the same reason because they form part of the typical service/grade/seed requirement. Infrastructure installed in neighbourhood parks includes playground equipment, asphalt pathways, fencing, parking lots, trees, benches, bike racks, playground equipment, baseball diamonds/basketball courts, and infrastructure installation costs.
- **District Parks** are intended to serve groups of neighbourhoods and are designed with an emphasis on facilities for organized sports and unorganized activities. Costs associated with the Thames Valley Parkway, spray pads, field houses and typical service/grade/seed requirements have not been included in district park DC calculations. Infrastructure installed in district parks includes asphalt pathways, parking lots, trees, benches, bike racks, playground equipment, soccer fields, ball diamonds, skate park infrastructure, and infrastructure installation costs.
- **Open Space** generally protects natural features and is often linear in nature following tributaries of the Thames River, upland corridors or utility easements. Open space includes asphalt pathway systems, boardwalks and/or bridges, trees, and infrastructure installation costs. Costs associated with significant woodlands are not included in the Open Space DC rate calculation.
- **Woodland Parks** have typically been established and protected for their environmental significance and may have been identified by the City through a previous study or have a development-related Environmental Impact Statement (EIS) with recommendations for their protection, management and enhancement. Smaller woodlands may not meet the test for significance, but are retained for their aesthetics and as a recreational amenity. Significant woodlands were historically included in the Open Space DC calculation. Infrastructure installed in Woodland Parks includes asphalt and woodchip trails, boardwalks, trees, strategic tree clearing, and infrastructure installation costs.
- **Environmentally Significant Areas (ESAs)** are identified as components of the Natural Heritage System and include lands that are to be maintained in their natural state through appropriate management for the purposes for which they have been recognized. Costs associated with the TVP abutting ESAs have not been included in the ESA DC calculation. A higher percentage for consulting (based on anticipated construction costs) has been incorporated into DC calculation due to the level of review required for environmental approvals. Costs for conservation plans in individual ESAs have also been included. Infrastructure installed in ESAs includes asphalt and woodchip

pathways, dirt trails, boardwalks, parking lots, bridges, benches, and infrastructure installation costs.

- **Sports Parks** are designed to accommodate multiple high-end sport fields and service larger areas in the City. These parks have Soccer fields and ball diamonds that are built to a higher standard. Athletic fields in sport parks are often irrigated and fully lit. Costs associated with the Thames Valley Parkway, field houses and typical service/grade/seed conditions are not included in Sport Park DC calculation. Infrastructure installed in sports parks includes asphalt pathways, parking lots, benches, trees, playground equipment, ball diamonds, soccer fields, irrigation systems, lighting, volleyball courts, and infrastructure installation costs.
- **Thames Valley Parkway (TVP)** is the City's multi-use pathway system which generally follows the Thames River. Future extensions of the TVP will occur as lands along the branches of the Thames River come under urban development. DC rate for the Thames Valley Parkway is a linear meter calculation. This calculation takes into account costs associated with routine structures found along the pathway system (road underpasses, pedestrian bridges), as well as asphalt pathways, initial tree clearing, and tree planting. Costs associated with tunnels and large bridges (crossing the Thames River) are not included in the TVP DC calculation.
- **Urban Parks** are relatively small spaces that provide a higher level of design quality and are intended to be focal points within neighbourhoods. The Urban Park category was recommended by the 2009 Parks and Recreation Master Plan Update and incorporated into the Official Plan. These parks are designed to accommodate large public gatherings and evening use. Costs associated with increased hard surface areas and formal lighting have been included in the urban park DC calculation. Typical service/grade/seed requirements are not included in the urban park DC calculation.
- **Civic Spaces** are small parcels of municipally owned land in the downtown core and along older main street areas that are designed to a high standard (as per urban design guidelines). They are meant to accommodate large public gatherings/events. These parks are typically composed of hard surfaces, seating areas, incorporate high end horticultural components and are fully lit.

<u>Parkland Development – Rate Calculation Adjustments</u>

- Consistent with other rate calculations for soft services, the DC rate calculations for Parkland Development reflect:
  - Gross cost of projects considered to benefit growth;
  - The growth share for parks development projects is determined based on two categories:
    - Major future parks have the potential to draw users from locations across the city (i.e., district parks, Environmentally Sensitive Areas, open space, sports parks, civic spaces and the Thames Valley Parkway). Benefit to existing development for projects in this category reflects the additional capacity built into their design to serve more than the local growth needs and their probable use by residents of the existing city.
    - Local Parks are used by and benefit the local growth area (i.e., neighbourhood parks, urban parks and woodland parks). Projects in this category do not have a benefit to existing development

given that they are being constructed to service new subdivisions in the immediate area of the park. These parks are built primarily for the immediate, local growth area and the benefit to existing development of these local parks is remote.

- Since many of the areas targeted for new facilities will grow over a number of years, a portion of the costs associated with district parks, sports parks, civic spaces and the Thames Valley Parkway projects beyond 2020 are also deferred for inclusion in future rate calculations. These "future" or "post period" benefits are removed from the ten (10) year rate calculation. Estimates are inherent in the allocations. This meets the statutory objective that the increase in need for service be attributable to the anticipated development.
- An estimate of the portion of the costs in question that were collected in prior years is represented by the uncommitted balance in the DC P&R Reserve fund. For Parkland development, this amounted to approximately $1.1 million. This amount is removed from the rate calculation so as not to overstate the amount that should be collected from the growth horizon in question (2014-2023).
- Any capital grants, subsidies or other contributions from other sources that are anticipated for this service were also considered. In this case, there were no such grants anticipated.
- A calculation of the amount that would otherwise represent an improvement over the existing combined quantity/quality service standard (an improvement prohibited by legislation) is made. This amount ($3.3M) is also removed from the rate calculation, all in accordance with the underlying legislation.
- The 10% statutory deduction which applies to most "soft services" (Parks, Recreation, Library, Transit), resulting in the removal of $2.6 million in project costs from the rate calculations.

Growth Related Capital Needs - Conclusion

This ends the discussion of growth related Capital Needs projected for Parks and Recreation. The reader will no doubt have noted the large variety of facilities and park developments, and their numerous locations throughout the City. The fact that many of these projects:

- were included in a prior DC study,
- serve both existing and developing areas of the City,
- will serve the developing area in which they are located for some time after the current planning horizon, and therefore merit some allocation of costs to future rate calculations,

make the calculation of development charge rates complex and time consuming. However, the combined product presents a reasonable allocation of costs to growth, which does not exceeding the historical service standard.

Allocation of Net Costs of Growth to Growth Types

There is no compelling case for attribution of capital costs associated with expansion of Parks and Recreation amenities to any group other than Residential growth (generally, population growth impacts Parks and Recreation capital needs, rather than non-residential employment growth). For this reason, 100% of growth costs have been attributed to Residential growth. This is consistent with practice in many other municipalities in the province.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the rate calculation table has been provided. This table simulates the cash flows in this component of the DC funds :

a) It begins with the 2014 opening balance– in this case, a balance of approximately $3.5M, which reflects the accumulation of uncommitted funds for growth projects identified in past DC studies (for both Park Development and Recreation Facilities combined), many of which are repeated as capital needs in this study.
b) DC fund revenues using the "pre-finance" rate are projected.
c) DC fund drawdowns for the growth share of projects being completed in the upcoming period ten (10) year planning horizon, are also reflected in the cash flow projection
d) Finally, an estimate of:
    a. annual interest revenues to be earned or
    b. financing costs that can be expected to be incurred due to fund deficits

    are projected throughout the planning horizon (10 years).

A deficit at the end of the planning period for the cash flow equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e., the post period benefit).

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (inflation assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service.

Long Term Operating Costs

An examination of the long term operating costs for growth needs for Parks and Recreation Services (DC) is included in Appendix O.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the 2009 Parks and Recreation Master Plan Update, with a review of 2014 DC Study growth allocations. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

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TABLE F-1 - Parks Recreation - Measure of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: SUMMARY

Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Type of Facility	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Parkland Summary	$166,921.7	$169,367.6	$171,329.4	$174,694.3	$174,848.7	$181,331.3	$186,510.5	$188,730.0	$192,716.5	$195,787.2
Rec Facilities Summary	$245,574.7	$253,893.2	$262,315.1	$265,335.9	$269,638.6	$270,131.3	$293,162.3	$294,081.4	$294,518.0	$294,518.0
Rec Equipment Summary	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9
Total	$413,612.4	$424,376.6	$434,760.4	$441,146.1	$445,603.2	$452,578.5	$480,788.7	$483,927.4	$488,350.5	$491,421.1

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$1,195.24	$1,215.21	$1,233.73	$1,242.14	$1,245.05	$1,254.90	$1,323.03	$1,321.66	$1,320.08	$1,314.91

10 year average	
combined Quality/Quantity Standard per Capita	**$1,266.60**

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$1,266.60
DC rate eligible amount (gross)	$49,650,720

Source : Building, site improvements and contents derived from information compiled by City of London - Facility Services Division. Land values from information provided by Realty Services Division.

NOTES:

1) The valuations above include the current (2013) replacement value of building, land, and site improvements.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT SUMMARY

Service Parkland Development
Contact person(s) Andrew Macpherson
Unit of measure Hectares of parkland
Type of measure Quantity

Parkland Classification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/ha.
Neighbourhood Parks	272.8	273.0	275.4	279.8	279.8	292.2	297.5	304.3	314.0	316.0	$74,284
Environmentally Significant Areas	485.3	539.5	564.5	565.4	573.7	593.6	615.0	618.3	634.1	639.1	$8,257
Open Space	373.9	387.6	405.7	448.5	449.5	498.6	507.9	522.0	532.7	547.0	$48,787
District Park	297.4	301.4	301.4	301.9	301.9	310.5	329.9	329.9	336.6	336.6	$137,163
Woodland Parks	38.2	44.6	47.1	50.4	50.4	56.3	56.3	64.4	64.5	79.5	$21,080
Urban Parks	1.6	1.6	1.6	1.9	1.9	2.5	2.5	2.8	4.0	5.4	$846,174
Sports Parks	111.9	111.9	111.9	111.9	111.9	114.8	114.8	114.8	114.8	114.8	$195,813
City Wide Park (note 2)	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	$501,223
Civic Spaces	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	$7,288,803
Springbank Park (note 2)	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	-
Sub-Total	1,605.9	1,684.4	1,732.4	1,784.6	1,793.9	1,893.3	1,948.7	1,981.3	2,025.5	2,063.2	
Total - hectares	1,605.9	1,684.4	1,732.4	1,784.6	1,793.9	1,893.3	1,948.7	1,981.3	2,025.5	2,063.2	
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Standard (ha. per person)	0.004641	0.004823	0.004916	0.005025	0.005012	0.005250	0.005362	0.005411	0.005475	0.005521	
Persons per hectare of developed parkland	215.49	207.33	203.41	199.01	199.51	190.49	186.48	184.80	182.64	181.14	

10 year average	
Quantity Standard per Capita (ha. Per person)	0.005144

NOTES:
1) The value of the development in these parks has been arrived at through a specific valuation of all Park Development amenities, including pathways, play structures, hard playing surfaces, parking facilities, at their 2013 replacement values.
2) City Wide Park inventory does not include Springbank Park (70.9 ha) as it is listed separately due to its size.
3) The parks listed above exclude the sq. footage of facilities located on park premises.
4) The parks listed above exclude the land associated with municipally owned golf courses.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: PARKLAND DEVELOPMENT SUMMARY

Service Parkland Development
Contact person(s) Andrew Macpherson
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Parkland Classification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Neighbourhood Parks (note 1 & 2)	$20,264.8	$20,279.6	$20,457.9	$20,784.8	$20,784.8	$21,705.9	$22,099.6	$22,604.7	$23,325.3	$23,473.9	see note 4)
Environmentally Significant Areas (note 2 & 3)	$4,006.9	$4,454.4	$4,660.9	$4,668.3	$4,736.8	$4,901.1	$5,077.4	$5,104.7	$5,235.1	$5,276.8	see note 4)
Open Space (note 2 & 3)	$18,241.3	$18,909.7	$19,792.7	$21,880.8	$21,929.6	$24,325.0	$24,778.7	$25,466.6	$25,988.1	$26,687.7	see note 4)
District Park (note 1 & 2)	$40,792.1	$41,340.8	$41,340.8	$41,409.4	$41,409.4	$42,589.0	$45,249.9	$45,249.9	$46,166.2	$46,166.2	see note 4)
Woodland Parks	$805.2	$940.2	$992.9	$1,062.4	$1,062.4	$1,186.8	$1,186.8	$1,357.5	$1,359.6	$1,675.6	see note 4)
Urban Parks (note 2)	$1,353.9	$1,353.9	$1,353.9	$1,607.7	$1,607.7	$2,115.4	$2,115.4	$2,369.3	$3,384.7	$4,569.3	see note 4)
Sports Parks (note 1 & 2)	$21,911.4	$21,911.4	$21,911.4	$21,911.4	$21,911.4	$22,479.3	$22,479.3	$22,479.3	$22,479.3	$22,479.3	see note 4)
City Wide Park (note 2)	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	$11,327.6	
Civic Spaces	$16,035.4	$16,035.4	$16,035.4	$16,035.4	$16,035.4	$16,035.4	$16,326.9	$16,326.9	$16,326.9	$16,326.9	
Thames Valley Parkway - linear parkway (note 2 & 3)	$11,549.8	$12,085.6	$12,698.9	$13,029.8	$13,066.9	$13,129.1	$13,173.2	$13,187.9	$13,308.1	$13,428.3	see note 4)
Parkway - Footbridges and tunnels	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$13,464.9	$13,464.9	$13,464.9	$13,464.9	see note 5)
Springbank Park (notes 1, 2 & 6)	$7,767.1	$7,862.9	$7,891.0	$8,110.6	$8,110.6	$8,670.6	$9,230.6	$9,790.6	$10,350.6	$10,910.6	see note 7)
Total	$166,921.7	$169,367.6	$171,329.4	$174,694.3	$174,848.7	$181,331.3	$186,510.5	$188,730.0	$192,716.5	$195,787.2	
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Standard ($ per person)	$482.36	$484.99	$486.19	$491.89	$488.54	$502.79	$513.24	$515.44	$520.94	$523.87	

Quantity/Quality Standard per Capita	**$501.03**

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$501.03
DC rate eligible amount (gross)	$19,640,180

Notes:
1) Includes pathways, minor footbridges (creeks & streams), driveways, parking lots, boardwalks, stairs, benches, plantings, play equipment, sportsfields, hard playing surfaces, irrigations systems, lighting and signage.

2) Excludes enclosed structures, major footbridges, wading pools, spray pads.

3) Includes pathways, driveways, parking lots, boardwalks, minor footbridges (creeks & streams), stairs, benches, plantings and signage.

4)Valuations were determined using a representative sample of all the parks in this category. A weighted average per hectare (2013) value was calculated, and this value applied to all parks (which all have similar level of development) in this category.

5)Values were determined through an individual approximation of 2013 replacement cost for each location.

6) Excludes the Pumphouse and all waterworks facilities, Springbank Dam, Civic Garden Complex, Springbank footbridge, Storybook Gardens, boat dock/shelter, train station, concession, and washrooms. Includes 2 picnic pavilions and train tracks.

7)The valuation for Springbank Park represents a park-specific replacement cost, rather than a $/ha cost.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Neighbourhood Parks											
NP	A. L. FURANNA PARK	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
NP	ADMIRAL PARK	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
NP	AMBLESIDE PARK	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
NP	ARTHUR FORD PARK	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
NP	ASHLEY OAKS PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	BELLWOOD PARK - EAST	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NP	BELLWOOD PARK - WEST	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	BELMONT PARK	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	BELVEDERE PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	BERKSHIRE PARK	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
NP	BLACKFRIARS PARK	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
NP	BOYLE COMMUNITY CENTRE	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
NP	BOYLE PARK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NP	BROOKSIDE PARK							1.2	1.2	1.2	1.2
NP	BROUGHDALE PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NP	BUTLER PARK	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
NP	BYRON HILLS PARK							1.1	1.1	1.1	1.1
NP	CAMDEN CRESCENT PARK	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NP	CANTEBURY PARK	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
NP	CAPULET PARK	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NP	CARLING PARK	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
NP	CARRIAGE HILL PARK	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
NP	CARROLL PARK	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
NP	CAYUGA PARK	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NP	CEDAR HOLLOW PARK									2.2	2.2
NP	CHELTENHAM PARK						3.0	3.0	3.0	3.0	3.0
NP	CHESHAM HEIGHTS PARK	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
NP	CHESWICK PARK	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
NP	CLEARDALE PARK	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
NP	CNRA PARK	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
NP	COLVILLE PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NP	CORONATION PARK NORTH								2.6	2.6	2.6

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NP	CRESTHAVEN PARK	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
NP	CRESTHAVEN PARK - LONGWORTH										0.3
NP	CULVER PARK	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
NP	DALKEITH PARK	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
NP	DOIDGE PARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
NP	DUCHESS AVENUE PARK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NP	DUNKIRK PLACE PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NP	EARL NICHOLS PARK AND ARENA	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
NP	RIVER EAST OPTIMIST PARK	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
NP	EAST LIONS PARK	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
NP	EBURY PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	EMPRESS AVENUE PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	ESSEX PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	FAIRMONT PARK	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
NP	FANSHAWE OPTIMIST LITTLE LEAGUE PARK	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
NP	FARNSBOROUGH PARK	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NP	FLANDERS PARK	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NP	FOREST HILL PARK										0.9
NP	FOREST VIEW COMMUNITY PARK	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
NP	FREDERICK PARK										0.5
NP	GAINSBOROUGH MEADOWS	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
NP	GARTSHORE PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	GENEVIVE PARK	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	GLANWORTH PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	GLASS AVENUE PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	GRAMPIAN WOODS	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	GRAND VIEW PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	GRETNA GREEN PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	GRIFFITH STREET PARK	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
NP	HALLS MILLS PARK	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NP	HASTINGS PARK	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
NP	HAZELDEN PARK	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
NP	HELEN MOTT SHAW PARK	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NP	HELEN MOTT SHAW PARK - WEST	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NP	HERITAGE PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	HERON HAVEN PARK						3.2	3.2	3.2	3.2	3.2
NP	HILL STREET PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	HUNTINGTON PARK	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	HURON HEIGHTS PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	HURONVIEW PARK	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
NP	JAYCEE PARK	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
NP	JUBILEE PARK	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	KELLY PARK	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
NP	KENSAL PARK	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
NP	KENSINGTON PARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
NP	LAMBETH OPTIMIST PARK	2.9	2.9	3.0	3.0	3.0	4.2	4.2	4.2	4.2	4.2
NP	LAMBETH VETERANS PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NP	LAURIER PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	LYNNGATE GROVE PARK	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NP	MAPLE GROVE PARK									1.5	1.5
NP	MCKILLOP PARK	4.8	4.8	4.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6
NP	MCMAHEN PARK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
NP	MEANDER CREEK PARK	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
NP	MEREDITH PARK	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NP	MILDRED BARONS PARK	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NP	MITCHELL PARK	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
NP	MURRAY PARK	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
NP	NAIOMI ALMEDIA PARK	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NP	NELSON PARK	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
NP	NICHOLAS WILSON PARK	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
NP	NORTHBROOK PARK			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NP	NORTHCREST PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NP	NORTHEAST RECREATION CENTRE	1.8	1.8	1.8	1.8	1.8	2.7	2.7	2.7	2.7	2.7
NP	NORWEST OPTIMIST PARK	4.5	4.5	4.5	6.4	6.4	6.4	6.4	6.4	6.4	6.4
NP	OAK PARK	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
NP	OAKLAND AVENUE PARK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NP	ODESSA PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	PAST PRESIDENTS PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	PAUL HAGGIS PARK				0.4	0.4	3.5	3.5	3.5	3.5	3.5
NP	PAWNEE PARK	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NP	PEBBLECREEK PARK										0.2
NP	PEPPERTREE PARK	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
NP	RALPH HAMLYN PARK	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
NP	RESERVOIR PARK	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
NP	RICHARD B. HARRISON PARK	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
NP	RIVER FORKS PARK	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
NP	ROLLINGWOOD CIRCLE PARK	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
NP	ROSECLIFFE PARK	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NP	ROSEL PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	ROWNTREE PARK	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
NP	RUSKIN PARK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NP	SCENIC VIEW PARK	1.5	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
NP	SEVILLA PARK	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NP	SHAFTESBURY PARK	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
NP	SMITH PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	SOUTHCREST PARK	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NP	SOUTHEAST OPTIMIST PARK	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
NP	SOUTHWINDS PARK	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NP	SPRINGBANK FLATS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
NP	ST. ANTHONY'S PARK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NP	ST. LAWRENCE PARK	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
NP	ST. STEPHEN'S PARK	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
NP	STANHOPE PARK	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
NP	STEPHEN'S FARM PARK				1.3	1.3	1.3	1.3	1.3	1.3	1.3
NP	SUMMERCREST PARK	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
NP	SUNRISE PARK								0.6	0.6	0.6
NP	TALBOT PARK									3.1	3.1
NP	THAMESRIDGE PARK						0.1	0.1	0.1	0.1	0.1
NP	THISTLEDOWN PARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

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TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NP	THORNWOOD PARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
NP	TROOPER MARK WILSON PARK							1.0	1.0	1.0	1.0
NP	UNIVERSITY HEIGHTS PARK	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NP	VILLAGE GREEN PARK	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
NP	VIRGINIA PARK	3.6	3.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
NP	VISTA WOODS										0.1
NP	WALNUT WOODS								3.6	3.6	3.6
NP	WELLINGSBORO PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	WENIGE PARK							2.0	2.0	2.0	2.0
NP	WESTDALE PARK	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
NP	WESTMOUNT LIONS PARK	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
NP	WESTMOUNT PARK	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
NP	WHETHERFIELD PARK									2.9	2.9
NP	WHISPERWOOD PARK	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
NP	WILTON GROVE PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NP	WINDBLEST PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NP	WOOD STREET PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NP											
NP	*Sub-Total (ha.)*	272.8	273.0	275.4	279.8	279.8	292.2	297.5	304.3	314.0	316.0
NP	*# of parks*	*126*	*126*	*127*	*129*	*129*	*132*	*136*	*139*	*143*	*148*
NP	*Average size (ha.):*	*2.17*	*2.17*	*2.17*	*2.17*	*2.17*	*2.21*	*2.19*	*2.19*	*2.20*	*2.14*

Woodland Parks

WP	BEAVERBROOK WOODS		4.3	4.3	4.3	4.3	6.0	6.0	6.0	6.0	6.0
WP	BRISCOE WOODS	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
WP	BURNETT WOODS	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
WP	CLARA BRENTON WOODS	7.2	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.3
WP	CRESTWOOD WOODS	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
WP	EGELTON WOODS			2.5	5.8	5.8	5.8	5.8	5.8	5.8	5.8
WP	FEKETE WOODS										14.9
WP	FOREST HILL WOODS								8.1	8.1	8.1
WP	HICKORY WOODS		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
WP	HICKORY WOODS - 1833 SUMAC										0.0
WP	HICKORY WOODS - 1819 SUMAC										0.0
WP	HICKORY WOODS - 1811 SUMAC										0.0
WP	HIGHLAND WOODS	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
WP	NORTHDALE WOODS	5.5	5.5	5.5	5.5	5.5	6.8	6.8	6.8	6.8	6.8
WP	SOVEREIGN WOODS						2.8	2.8	2.8	2.8	2.8
WP	THREE VALLEY PARK	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
WP	TRAFALGAR WOODS	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
WP	VISCOUNT WOODS	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
WP	WALNUT WOODS									0.1	0.1
WP											
WP	*Sub-Total (ha.)*	38.2	44.6	47.1	50.4	50.4	56.3	56.3	64.4	64.5	79.5
WP	*# of parks*	*9*	*11*	*12*	*12*	*12*	*13*	*13*	*14*	*15*	*19*
WP	*Average size (ha.):*	*4.24*	*4.05*	*3.93*	*4.20*	*4.20*	*4.33*	*4.33*	*4.60*	*4.30*	*4.18*
Environmentally Significant Areas											
ESA	BALLYMOTE ESA						0.8	0.8	0.8	0.8	0.8
ESA	COVES ESA					0.1	0.1	0.1	0.1	0.1	0.1
ESA	COVES - EAST POND WOODS							4.8	4.8	4.8	4.8
ESA	COVES - WEST POND WOODS							0.7	0.7	0.7	0.7
ESA	DINGMAN CREEK CONSERVATION AREA	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
ESA	ELSIE PERRIN WILLIAMS ESTATE	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6
ESA	FELNER SUBDIVISION - MEDWAY VALLEY										5.1
ESA	HYDE PARK WOODS	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
ESA	KAINS WOODS ESA			25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
ESA	KAINS WOODS ESA - SOUTH	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
ESA	KILALLY MEADOWS ESA	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5
ESA	KILALLY WOODS ESA	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
ESA	KILALLY WOODS ESA (KILLARNEY)								3.3	3.3	3.3
ESA	MEADOWLILY WOODS ESA	42.0	43.8	43.8	43.8	43.8	43.8	59.7	59.7	59.7	59.7
ESA	MEADOWLILY WOODS ESA (MEADOWLARK)									15.8	15.8
ESA	MEDWAY VALLEY HERITAGE FOREST ESA	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0

2014 Development Charges Background Study
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SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

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Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ESA	MEDWAY VALLEY HERITAGE FOREST ESA - EAST	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
ESA	MEDWAY VALLEY HERITAGE FOREST ESA - NORTH		10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
ESA	MEDWAY VALLEY HERITAGE FOREST ESA - SOUTH	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ESA	MIGGSIE LAWSON PARK						14.1	14.1	14.1	14.1	14.1
ESA	NAOMEE PARK	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
ESA	SIFTON BOG ESA	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
ESA	WARBLER WOODS ESA	26.8	26.8	26.8	27.7	27.7	28.9	28.9	28.9	28.9	28.9
ESA	WESTMINSTER PONDS - EAST - POND MILLS ESA	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
ESA	WESTMINSTER PONDS - NORTH EAST - POND MILL	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
ESA	WESTMINSTER PONDS - POND MILLS ESA	63.7	105.2	105.2	105.2	113.4	113.4	113.4	113.4	113.4	113.4
ESA	WESTMINSTER PONDS - SOUTH - POND MILLS ESA	25.8	25.8	25.8	25.8	25.8	29.6	29.6	29.6	29.6	29.6
ESA	WESTMINSTER PONDS - SOUTH EAST - POND MILL	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
ESA											
ESA	*Sub-Total (ha.)*	485.3	539.5	564.5	565.4	573.7	593.6	615.0	618.3	634.1	639.1
ESA	*# of parks*	*18*	*19*	*20*	*20*	*21*	*23*	*25*	*26*	*27*	*28*
ESA	*Average size (ha.):*	*26.96*	*28.39*	*28.23*	*28.27*	*27.32*	*25.81*	*24.60*	*23.78*	*23.48*	*22.83*
Open Space											
OS	ADELAIDE STREET WELLS PARK	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
OS	ANN STREET PARK	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
OS	BLACKFRIARS PARK - NORTH	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.3	1.3
OS	BOLER ROAD PARK	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OS	BRAEMAR BLOCK	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OS	BURR REED WOODS								2.8	2.8	2.8
OS	BUTTON BUSH WETLAND - SOUTH							2.1	2.1	2.1	2.1
OS	BUTTON BUSH WETLAND - NORTH							0.7	0.7	0.7	0.7
OS	BYRON RIVER VALLEY	8.7	8.7	8.7	8.7	8.7	9.5	9.5	9.5	9.5	9.5
OS	CARFRAE PARK EAST	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OS	CARFRAE PARK WEST	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
OS	CAVENDISH PARK	10.9	10.9	10.9	10.9	10.9	13.2	13.2	13.2	13.2	13.2
OS	CAVENDISH PARK - EAST	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OS	CHELSEA GREEN - NORTH	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

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TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

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Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OS	CHELSEA GREEN PARK	2.3	2.3	2.3	2.3	2.3	2.3	3.8	3.8	3.8	3.8
OS	CLARKE ROAD PARK	15.3	15.3	15.3	15.3	15.3	37.6	37.6	37.6	37.6	37.6
OS	COVES - ELMWOOD GATEWAY							0.6	0.6	0.6	0.6
OS	COVES - OPEN SPACE							2.9	2.9	2.9	2.9
OS	CREEKSIDE PARK									0.1	0.1
OS	CRESTHAVEN WOODS				2.7	2.7	2.7	2.7	2.7	2.7	2.7
OS	DEER RIDGE PARK										0.2
OS	DEER RIDGE PARK - CHERRYWOOD										0.1
OS	DEVON PARK										2.8
OS	EUSTON PARK	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
OS	EVERGREEN PARK	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
OS	FAIRMONT TRAIL	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
OS	FALLS VIEW PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OS	FOREST HILL										0.1
OS	FOX HOLLOW RAVINE - NORTH	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
OS	FOX HOLLOW RAVINE - SOUTH	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
OS	GAINSBOROUGH VALLEY PARK	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
OS	GARDEN PLOTS	1.1	1.1	1.1	1.1	1.1	4.1	4.1	4.1	4.1	4.1
OS	GIBBONS/UWO WETLAND								2.5	2.5	2.5
OS	GLEN CAIRN / OPEN SPACE	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
OS	GORE ROAD OPEN SPACE	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OS	GRAHAM PLACE PARK	6.8	6.8	6.8	6.8	6.8	7.7	7.7	7.7	7.7	7.7
OS	HAMPTON VALLEY	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
OS	HIGHBURY WETLAND								8.8	8.8	8.8
OS	HIGHBURY WOODS				10.1	10.1	10.1	10.1	10.1	10.1	10.1
OS	HIGHVIEW PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OS	HILLSIDE RAVINE	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
OS	HURON STREET WOODS	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
OS	HUTTON PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OS	JALNA SOUTH PARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
OS	KAINS WOODS TRAIL							1.5	1.5	1.5	1.5
OS	KELLY STANTON ESA - NORTH			12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
OS	KILALLY FIELDS	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3

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Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OS	KILALLY VALLEY PARK	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
OS	KRUPP PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OS	LONDON HYDE PARK ROTARY LINK	12.9	12.9	12.9	12.9	12.9	14.2	14.2	14.2	14.2	14.2
OS	LONGVIEW PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OS	LORD NELSON WOODS	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
OS	LTC - BRYDGES PARK	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OS	MATHERS STREAM			1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
OS	MCCORMICK PARK	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
OS	MCGARRELL WALK			1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
OS	MCNAY DRAIN - NORTH / OPEN SPACE	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
OS	MCNAY DRAIN - SOUTH / OPEN SPACE	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
OS	MUD CREEK EAST - NORTH						0.7	0.7	0.7	0.7	0.7
OS	MUD CREEK EAST - CENTRAL						0.7	0.7	0.7	0.7	0.7
OS	MUD CREEK EAST - SOUTH						1.8	1.8	1.8	1.8	1.8
OS	NORLAN AVE / OPEN SPACE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OS	NORLAN AVE / OPEN SPACE - SOUTH	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
OS	NORTH BRANCH PARK 1	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
OS	NORTH MUD CREEK	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
OS	NORTHBROOK VALLEY										5.4
OS	NORTHBROOK VALLEY - ADELAIDE										3.8
OS	BYRON VIEW PARK	4.1	4.1	4.1	4.1	4.1	4.7	4.7	4.7	4.7	4.7
OS	PINCOMB PARK - NORTH										0.1
OS	PINCOMB PARK - NORTH MORGAN										0.2
OS	PINCOMB PARK - NORTH SINGLETON										0.6
OS	PINNACLE PARK - EAST			0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OS	PINNACLE PARK - WEST			0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OS	POTTERSBURG PARK				28.9	28.9	28.9	28.9	28.9	28.9	28.9
OS	POND EDGE BERM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OS	PROUDFOOT PARK - EAST	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
OS	PROUDFOOT PARK - WEST	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
OS	RICHMOND TRAIL	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
OS	RIVER FORKS PARK - EAST	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OS	RIVER FORKS PARK - WEST	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OS	RIVER ROAD PARK	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
OS	RIVERSIDE BOAT LAUNCH	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
OS	RIVERSIDE WALK	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
OS	ROSS PARK	5.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
OS	SALISBURY OPEN SPACE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OS	SANDRA MCINNIS WOODS	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
OS	SHELBORNE PARK - NORTH	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
OS	SHELBORNE PARK - SOUTH	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
OS	SNAKE HILL OPEN SPACE	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OS	SOMERSET WOODS	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
OS	SOUTH BRANCH PARK	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
OS	SOUTH EAST RESERVOIR		10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
OS	SOUTH MUD CREEK	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
OS	SOUTH RIVER VALLEY	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
OS	SOUTHCREST RAVINE	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
OS	SOUTHCREST RAVINE - NORTH						0.4	0.4	0.4	0.4	0.4
OS	SOUTHWINDS PARK - NORTH				0.4	0.4	0.4	0.4	0.4	0.4	0.4
OS	STONEY CREEK VALLEY	5.8	5.8	5.8	5.8	5.8	16.7	16.7	16.7	16.7	16.7
OS	STONEY CREEK VALLEY - NORTH	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
OS	STONEY CREEK VALLEY - NORTH PRIVET										1.0
OS	STONEY CREEK VALLEY - SOUTH	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
OS	STONEY CREEK VALLEY - SOUTH EAST	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
OS	STONEYCREEK MEADOWS	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
OS	SUN VALLEY PARK	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
OS	TALLTREE PARK		1.0	1.0	1.0	1.0	1.7	1.7	1.7	1.7	1.7
OS	TALLWOOD VALLEY	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
OS	TETHERWOOD PARK	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
OS	THIRD STREET PARK	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
OS	THOMPSON RAVINE	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
OS	THOMPSON ROAD PARK	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
OS	UPLANDS NORTH WETLAND									4.4	4.4
OS	UPLANDS TRAIL			0.1	0.8	1.8	4.3	4.3	4.3	4.3	4.3
OS	VALLEY RUN PARK									0.1	0.1

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
OS	VALLEY RUN PARK - CREEKRIDGE									0.6	0.6
OS	WALDORF PARK	5.4	5.4	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
OS	WATSON STREET PARK	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
OS	WAUBANO CREEK - SOUTH / OPEN SPACE	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
OS	WAUBANO CREEK - NORTH / OPEN SPACE	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
OS	WELLINGTON VALLEY	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
OS	WOODHULL									5.5	5.5
OS											
OS	*Sub-Total (ha.)*	373.9	387.6	405.7	448.5	449.5	498.6	507.9	522.0	532.7	547.0
OS	*# of parks*	*81*	*83*	*89*	*93*	*93*	*97*	*102*	*105*	*110*	*120*
OS	*Average size (ha.):*	*4.62*	*4.67*	*4.56*	*4.82*	*4.83*	*5.14*	*4.98*	*4.97*	*4.84*	*4.56*
District Park											
DP	BASIL GROVER PARK	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
DP	BONAVENTURE MEADOWS PARK	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
DP	CARLING HEIGHTS OPTIMIST COMMUNITY CENTRE	6.1	6.1	6.1	6.1	6.1	8.0	8.0	8.0	8.0	8.0
DP	CONSTITUTION PARK	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
DP	ED BLAKE PARK	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
DP	FOXFIELD DISTRICT PARK									4.6	4.6
DP	GLEN CAIRN PARK - WEST	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DP	GLEN CAIRN PARK - EAST	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
DP	GLEN CAIRN PARK - NORTH	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
DP	GIBBONS PARK	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	25.9	25.9
DP	GREENWAY PARK	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9
DP	JESSE DAVIDSON PARK	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
DP	JORGENSON PARK	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
DP	KIWANIS PARK - NORTH	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
DP	KIWANIS PARK - CENTRAL NORTH	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
DP	KIWANIS PARK - CENTRAL SOUTH	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
DP	KIWANIS PARK - NORTH (HALE)	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
DP	KIWANIS PARK - SOUTH	3.5	3.5	3.5	3.5	3.5	3.7	3.7	3.7	3.7	3.7

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
DP	LAMBETH CENTENNIAL PARK	16.7	16.7	16.7	16.7	16.7	19.5	19.5	19.5	19.5	19.5
DP	MEADOWGATE PARK							9.1	9.1	9.1	9.1
DP	MEDWAY PARK	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
DP	MITCHES PARK	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
DP	OAKRIDGE OPTIMIST COMMUNITY PARK	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
DP	OSGOODE DRIVE PARK	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
DP	PLANE TREE PARK		3.8	3.8	4.3	4.3	8.0	8.0	8.0	8.0	8.0
DP	POTTERSBURG PARK	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
DP	RIVER'S EDGE DISC GOLF COURSE	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
DP	RIVERBEND PARK							10.3	10.3	10.3	10.3
DP	SILVERWOODS PARK	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
DP	SOUTHWEST OPTIMIST PARK	6.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
DP	THAMES PARK	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
DP	WEST LIONS PARK AND KINSMEN RECREATION CENTRE	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
DP	WESTMINSTER OPTIMIST PARK	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
DP	WHITE OAKS OPTIMIST PARK	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
DP	WHITE OAKS PARK	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
DP											
DP	*Sub-Total (ha.)*	297.4	301.4	301.4	301.9	301.9	310.5	329.9	329.9	336.6	336.6
DP	*# of parks*	*31*	*32*	*32*	*32*	*32*	*32*	*34*	*34*	*35*	*35*
DP	*Average size (ha.):*	*9.59*	*9.42*	*9.42*	*9.43*	*9.43*	*9.70*	*9.70*	*9.70*	*9.62*	*9.62*
Sports Parks											
SP	CITY WIDE SPORTS PARK	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
SP	LABATT PARK	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
SP	MORNINGTON PARK	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
SP	NORTH LONDON ATHLETIC FIELDS	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1
SP	ST. JULIEN PARK	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9
SP	STONEYBROOK RECREATION FIELD	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
SP	STRONACH PARK	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
SP	TED EARLY SPORTS COMPLEX	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
SP	VAUXHALL PARK	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
SP	WINDERMERE FIELDS	7.7	7.7	7.7	7.7	7.7	10.6	10.6	10.6	10.6	10.6
SP											
SP	*Sub-Total (ha.)*	111.9	111.9	111.9	111.9	111.9	114.8	114.8	114.8	114.8	114.8
SP	*# of parks*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*
SP	*Average size (ha.):*	*11.19*	*11.19*	*11.19*	*11.19*	*11.19*	*11.48*	*11.48*	*11.48*	*11.48*	*11.48*
Urban Parks											
UP	CAMPBELL MEMORIAL PARK	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
UP	M A BARRAN PARK									1.2	1.2
UP	PICCADILLY PARK	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
UP	RALEIGH PARKETTE								0.3	0.3	0.3
UP	SUGARCREEK PARK				0.3	0.3	0.9	0.9	0.9	0.9	0.9
UP	SUGARCREEK PARK - SUGARCREEK										0.3
UP	VANDELINDER PARKETTE										0.4
UP	VILLAGE WALK COMMONS										0.7
UP											
UP	*Sub-Total (ha.)*	1.6	1.6	1.6	1.9	1.9	2.5	2.5	2.8	4.0	5.4
UP	*# of parks*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*4*	*5*	*8*
UP	*Average size (ha.):*	*0.80*	*0.80*	*0.80*	*0.63*	*0.63*	*0.83*	*0.83*	*0.70*	*0.80*	*0.68*
City-wide Parks											
CWP	CIVIC GARDEN CENTRE COMPLEX	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
CWP	COVENT MARKET PLAZA	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CWP	HARRIS PARK	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
CWP	IVEY PARK	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
CWP	QUEENS PARK	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CWP	VICTORIA PARK	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
CWP	WONDERLAND ROAD PARK	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CWP											
CWP	*Sub-Total (ha.)*	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure hectares of parkland
Type of measure Quantity

Parkland Classification		**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
CWP	*# of parks*	*7*	*7*	*7*	*7*	*7*	*7*	*7*	*7*	*7*	*7*
CWP	*Average size (ha.):*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*	*3.23*
Civic Spaces											
CS	GOLDEN JUBILEE SQUARE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CS	R. H. COOPER SQUARE	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
CS	ROTARY SQUARE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CS	MARKET LANE							0.0	0.0	0.0	0.0
CS											
CS	*Sub-Total (ha.)*	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CS	*# of parks*	*3*	*3*	*3*	*3*	*3*	*3*	*4*	*4*	*4*	*4*
CS	*Average size (ha.):*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.56*	*0.56*	*0.56*	*0.56*

Grand Total (ha)	1,605.9	1,684.4	1,732.4	1,784.6	1,793.9	1,893.3	1,948.7	1,981.3	2,025.5	2,063.2
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard (ha. per person)	0.0046	0.0048	0.0049	0.0050	0.0050	0.0052	0.0054	0.0054	0.0055	0.0055
Persons per ha. of park space	215.49	207.33	203.41	199.01	199.51	190.49	186.48	184.80	182.64	181.14

10 year average	
Quantity Standard per Capita	0.0051

2014 Development Charges Background Study
TABLE F-1 - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure Meters of linear Parkway
Type of measure Quantity

Thames Valley Parkway	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/m
Length in meters - beginning of year	34,559	36,082	37,836	39,833	39,860	40,060	40,240	40,330	40,330	41,065	$ 327
Length added during year	1,523	1,754	1,997	27	200	180	90	0	735	0	
Sub-Total	36,082	37,836	39,833	39,860	40,060	40,240	40,330	40,330	41,065	41,065	
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Standard (m/person)	0.1043	0.1083	0.1130	0.1122	0.1119	0.1116	0.1110	0.1101	0.1110	0.1099	
Persons per linear m of parkway	9.5906	9.2299	8.8468	8.9099	8.9341	8.9625	9.0107	9.0788	9.0086	9.1009	

10 year average	
Quantity Standard per Capita (m./person)	0.1103

2014 Development Charges Background Study
TABLE F-1 - Measurement of Existing Service Standards
SERVICE: PARKS & RECREATION COMPONENT: PARKLAND DEVELOPMENT

Contact person(s) Andrew Macpherson
Unit of measure Meters of linear Parkway
Type of measure Quantity & Quality

Thames Valley Parkway	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Length in meters - average for the year	35,321	36,959	38,835	39,847	39,960	40,150	40,285	40,330	40,698	41,065
Total value of linear parkway (in $ thousands)	$11,549.8	$12,085.6	$12,698.9	$13,029.8	$13,066.9	$13,129.1	$13,173.2	$13,187.9	$13,308.1	$13,428.3
Average cost per meter ($2013)	$327.0	$327.0	$327.0	$327.0	$327.0	$327.0	$327.0	$327.0	$327.0	$327.0

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Standard	$33.38	$34.61	$36.04	$36.69	$36.51	$36.40	$36.25	$36.02	$35.97	$35.93
Persons per linear m of parkway	9.80	9.45	9.07	8.91	8.96	8.98	9.02	9.08	9.09	9.10

10 year average	
Service Standard per Capita	$35.78

NOTES:
1) Valuations were determined using a representative sample of all the projects in this category. A weighted average per metre value was calculated, and this value assigned to all parks with similar level of development in this category.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION — COMPONENT: PARKLAND DEVELOPMENT

Service Parks & Recreation
Contact person(s) Karl Grabowski
Unit of measure Replacement Costs based on : Deck Size of Structure & Length OR Width and Depth of tunnel
Type of measure Quantity

Facility name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.m.
Thames Valley Pathway System (sq. m. of deck)												
Spingbank Bridge		495	495	495	495	495	495	495	495	495	495	$4,956
Gibbons Bridge		420	420	420	420	420	420	420	420	420	420	$5,073
Meadowlilly Bridge		225	225	225	225	225	225	225	225	225	225	$8,150
King Street Bridge		292	292	292	292	292	292	375	375	375	375	$7,215
Tunnels												
Horton Ave to Evergreen Under CN Rail (Note 1)		158	158	158	158	158	158	158	158	158	158	$9,520
Commissioners Rd West Near Oxford (Note 1)		85	85	85	85	85	85	85	85	85	85	$6,555
Riverside Drive Pedestrian Tunnel		64	64	64	64	64	64	64	64	64	64	$22,031
Bradley Ave at White Oaks PS		134	134	134	134	134	134	134	134	134	134	$6,495
	Total	1,873	1,873	1,873	1,873	1,873	1,873	1,956	1,956	1,956	1,956	
Average Size (sq. m)		234	234	234	234	234	234	245	245	245	245	
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730	
Per Capita Level of Service (sq. m. per capita)		0.005413	0.005363	0.005315	0.005274	0.005233	0.005193	0.005382	0.005342	0.005287	0.005234	

10 year average	
Quantity Standard per Capita	0.0053

Source : Bridge and tunnel sq. m. measures derived from AECOM "2011 Structure Inventory Inspection, Summary Report" and were provided by Transportation Design and Planning, City of London. The 2011 values were updated for inflation to derive 2013 $/sq.m. No land value associated with any of the above. Costs associated with minor pedestrian footbridges in various City parks are included with the costing for Thames Valley Parkway, Open Space and District Parks.
Notes :
1) Both the Horton Ave and Commissioners Rd tunnels were missed in the 2009 DC Study service standard for footbridges and tunnels. They do not represent new tunnels.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: PARKLAND DEVELOPMENT

Service	Parks & Recreation
Contact person(s)	Karl Grabowski
Unit of measure	Replacement Costs based on : Deck Size of Structure & Length OR Width and Depth of tunnel
Type of measure	Quantitiy and Quality

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Thames Valley Pathway System (sq. m. of deck)											
Spingbank Bridge		$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2	$2,453.2
Gibbons Bridge		$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7	$2,130.7
Meadowlilly Bridge		$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8	$1,833.8
King Street Bridge		$2,106.8	$2,106.8	$2,106.8	$2,106.8	$2,106.8	$2,106.8	$2,705.6	$2,705.6	$2,705.6	$2,705.6
Tunnels											
Horton Ave to Evergreen Under CN Rail (Note 1)		$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2	$1,504.2
Commissioners Rd West Near Oxford (Note 1)		$557.2	$557.2	$557.2	$557.2	$557.2	$557.2	$557.2	$557.2	$557.2	$557.2
Riverside Drive Pedestrian Tunnel		$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0	$1,410.0
Bradley Ave at White Oaks PS		$870.3	$870.3	$870.3	$870.3	$870.3	$870.3	$870.3	$870.3	$870.3	$870.3
	Total	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$12,866.1	$13,464.9	$13,464.9	$13,464.9	$13,464.9
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service (replacement cost /capita)		$37.18	$36.84	$36.51	$36.23	$35.95	$35.67	$37.05	$36.77	$36.40	$36.03

10 year average	
Service Standard per Capita	$36.46

Notes
(see previous pg)

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES SUMMARY

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Buildings
Type of measure Quantity

Type of Facilities		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Arenas		525,492	560,277	590,697	601,790	601,790	601,790	601,790	601,790	601,790	601,790
Community/Snr Centers		166,044	166,044	166,044	166,044	166,044	167,486	233,847	238,233	240,015	240,015
Pools		109,232	109,769	109,769	109,769	109,769	109,769	109,769	109,769	109,769	109,769
Wading Pools/Spray Pads		NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A
Special Facilities		38,844	38,844	38,844	38,844	58,196	58,196	58,196	58,196	58,196	58,196
Fieldhouses, Washrooms, etc.		NA	NA	NA	NA	NA	N/A	N/A	N/A	N/A	N/A
Total		839,612	874,934	905,354	916,447	935,799	937,241	1,003,602	1,007,988	1,009,770	1,009,770
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		2.43	2.51	2.57	2.58	2.61	2.60	2.76	2.75	2.73	2.70

10 year average	
Quantity Standard per Capita	2.62

Source : Building, site improvements and contents derived from information compiled by City of London - Facility Services Division. Land values from information provided by Realty Services Division.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES SUMMARY

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value
Type of measure Quality & Quantity ($thousands)

Type of Facility		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Arenas		$114,816.2	$123,040.8	$130,339.9	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2
Community/Snr Centers		$50,666.2	$50,666.2	$50,666.2	$50,666.2	$50,666.2	$51,068.5	$72,721.5	$73,870.6	$74,307.2	$74,307.2
Pools		$47,110.3	$47,110.3	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1
Wading Pools/Spray Pads		$8,155.0	$8,155.0	$8,155.0	$8,210.0	$8,635.0	$8,375.0	$8,060.0	$7,830.0	$7,830.0	$7,830.0
Specialty Facilities		$10,784.3	$10,784.3	$10,784.3	$10,784.3	$14,662.0	$14,662.0	$14,662.0	$14,662.0	$14,662.0	$14,662.0
Fieldhouses, Washrooms, etc.		$14,042.8	$14,136.6	$14,136.6	$14,273.1	$14,273.1	$14,623.5	$16,316.5	$16,316.5	$16,316.5	$16,316.5
Total		$245,574.7	$253,893.2	$262,315.1	$265,335.9	$269,638.6	$270,131.3	$293,162.3	$294,081.4	$294,518.0	$294,518.0
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$709.65	$727.03	$744.38	$747.11	$753.39	$749.01	$806.72	$803.17	$796.12	$788.05

10 year average	
combined Quality/Quantity Standard per Capita	**$762.46**

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$762.46
DC rate eligible amount (gross)	$29,888,432

NOTES:
1) The valuations above reflect the current (2013) replacement value of building, land, and site improvements.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: RECREATION FACILITIES

Contact person(s) Duncan Sanders
Unit of measure Number of Machines
Type of measure Quantity

Facility Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/machine
Ice Resurfacing Equipment	13	13	13	13	13	13	13	13	13	13	$85,840
Total	13	13	13	13	13	13	13	13	13	13	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Level of Service (per 1,000 persons)	0.03757	0.03723	0.03689	0.03660	0.03632	0.03605	0.03577	0.03550	0.03514	0.03478

10 year average	
Quantity Standard per 1,000 persons	0.03619

NOTES
1) Ice Resurfacing equipment is replaced on an 8 year cycle.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Duncan Sanders
Unit of measure Number of Machines
Type of measure Quantity and Quality

Facility Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ice Resurfacing Equipment	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9
Total	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9	$1,115.9

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$3.22	$3.20	$3.17	$3.14	$3.12	$3.09	$3.07	$3.05	$3.02	$2.99

10 year average	
Quantity Standard per Capita	**$3.11**

DC Eligible amount (before adjustments)	
Forecast Population	39,200
$ per capita	**$3.11**
DC rate eligible amount (gross)	$121,912

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Building Area
Type of measure Quantity

Facility name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.
Argyle	1948 Wavell St	49,260	49,260	49,260	49,260	49,260	49,260	49,260	49,260	49,260	49,260	$246
Carling(expanded)	675 Grosvenor St	52,390	52,390	52,390	52,390	52,390	52,390	52,390	52,390	52,390	52,390	$240
Farquharson	411 Tecumseh Ave	38,573	38,573	38,573	38,573	38,573	38,573	38,573	38,573	38,573	38,573	$239
Glen Cairn (Note 1)	370 Chippendale Cr	29,370	29,370	29,370	29,370	29,370	29,370	29,370	29,370	29,370	29,370	$238
Kinsmen(expanded)	20 Granville Ave	56,520	56,520	56,520	56,520	56,520	56,520	56,520	56,520	56,520	56,520	$238
Lambeth	7112 Beattie St	27,426	27,426	27,426								$262
Lambeth (expanded)	7112 Beattie St				38,519	38,519	38,519	38,519	38,519	38,519	38,519	$260
Medway	119 Sherwood Forest Sq	25,022	25,022	25,022	25,022	25,022	25,022	25,022	25,022	25,022	25,022	$249
Nichols	799 Homeview Rd	58,140	58,140									$242
Nichols(expanded)	799 Homeview Rd			75,560	75,560	75,560	75,560	75,560	75,560	75,560	75,560	$241
Oakridge (Note 1)	825 Valetta St	29,989	29,989	29,989	29,989	29,989	29,989	29,989	29,989	29,989	29,989	$242
Silverwood	50 Sycamore St	25,032	25,032	25,032	25,032	25,032	25,032	25,032	25,032	25,032	25,032	$235
Stronach (Note 1)	1221 Sanford Ave	27,103										$240
Stronach (Gym) Expansion	1221 Sanford Ave			13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	$243
Stronach (Arena/pool) Expansion	1221 Sanford Ave		61,888	61,888	61,888	61,888	61,888	61,888	61,888	61,888	61,888	$238
Western Fair Sportsplex (note 2)	865 Florence St	106,667	106,667	106,667	106,667	106,667	106,667	106,667	106,667	106,667	106,667	$125
	Total	525,492	560,277	590,697	601,790	601,790	601,790	601,790	601,790	601,790	601,790	

Number of Ice pads reflected in inventory	16	17	18	18	18	18	18	18	18	18
Average Size (sq. ft)	32,843	32,957	32,816	33,433	33,433	33,433	33,433	33,433	33,433	33,433
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	1.518547	1.604357	1.676234	1.694466	1.681446	1.668625	1.655998	1.643560	1.626722	1.610226

10 year average	
Quantity Standard per Capita	1.6380

Source : Building square footage measures and total value provided by City of London Facility Services. Land value associated with facility provided by City of London Realty Services.

Notes:
1) Facility with pool excludes the filter room associated with the pool.
2) Land owned and contributed by Western Fair Association & is excluded from "2013 $/sq.ft." values. Due to partial, but not complete use agreement, only two-thirds of the facility (total sq. ft of 160,000) value incorporated into Quality & Quantity Calculations

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Argyle	1948 Wavell St	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0	$12,118.0
Carling(expanded)	675 Grosvenor St	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6	$12,573.6
Farquharson	411 Tecumseh Ave	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9	$9,218.9
Glen Cairn (Note 1)	370 Chippendale Cr	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1	$6,990.1
Kinsmen(expanded)	20 Granville Ave	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8	$13,451.8
Lambeth	7112 Beattie St	$7,185.6	$7,185.6	$7,185.6	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Lambeth (expanded)	7112 Beattie St	$0.0	$0.0	$0.0	$10,014.9	$10,014.9	$10,014.9	$10,014.9	$10,014.9	$10,014.9	$10,014.9
Medway	119 Sherwood Forest Sq	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5	$6,230.5
Nichols	799 Homeview Rd	$14,069.9	$14,069.9	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Nichols(expanded)	799 Homeview Rd	$0.0	$0.0	$18,210.0	$18,210.0	$18,210.0	$18,210.0	$18,210.0	$18,210.0	$18,210.0	$18,210.0
Oakridge (Note 1)	825 Valetta St	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3	$7,257.3
Silverwood	50 Sycamore St	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5	$5,882.5
Stronach (Note 1)	1221 Sanford Ave	$6,504.7	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Stronach (Gym) Expansion	1221 Sanford Ave	$0.0	$0.0	$3,159.0	$3,159.0	$3,159.0	$3,159.0	$3,159.0	$3,159.0	$3,159.0	$3,159.0
Stronach (Arena/pool) Expansion	1221 Sanford Ave	$0.0	$14,729.3	$14,729.3	$14,729.3	$14,729.3	$14,729.3	$14,729.3	$14,729.3	$14,729.3	$14,729.3
Western Fair Sportsplex (note 2)	865 Florence St	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3	$13,333.3
	Total	$114,816.2	$123,040.8	$130,339.9	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2	$133,169.2

Number of Ice pads reflected in inventory	16	17	18	18	18	18	18	18	18	18
Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$331.79	$352.33	$369.87	$374.97	$372.09	$369.25	$366.45	$363.70	$359.98	$356.32

10 year average	
Service Standard per Capita	$361.68

Notes:
1) The valuations above include the current (2013) replacement value of building, land, and site improvements.

2) The City is a major contributor to the financing of the Western Fair Sportsplex (4 pad) when it was constructed in 2000 ($5 million grant, $12 million loan). The City has a joint venture agreement which assures access to prime time ice at the 4 pad facility (240 hours per week). The facility provides a significant contribution to the prime time ice needs of the City. The facility has been included to the extent of 2/3 of its total estimated replacement value to recognize the major tenancy position the City enjoys and as a conservative estimate of the value this facility amongst the City inventory of arenas.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Building Space
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft
Boyle Comm Center	530 Charlotte	6,740	6,740	6,740	6,740	6,740	6,740	6,740	6,740	8,522	8,522	$245
Byron Optimist	1308 Norman Ave	3,904	3,904	3,904	3,904	3,904	3,904	3,904	8,290	8,290	8,290	$262
Hamilton Rd Senior's Annex *	898 Trafalgar Rd	2,780	2,780	2,780	2,780	2,780	2,780	2,780	2,780	2,780	2,780	$334
Hamilton Rd Senior's Center *	525 Hamilton Rd	5,836	5,836	5,836	5,836	5,836	5,836	5,836	5,836	5,836	5,836	$412
Kiwanis Senior Comm Cnter *	78 Riverside Dr.	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	$482
Lambeth Comm Centre	7112 Beattie St	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	$319
North London Optimist Center	1345 Cheapside St	55,200	55,200	55,200	55,200	55,200	55,200	55,200	55,200	55,200	55,200	$228
South London Comm Center	1119 Jalna Blvd	8,265	8,265	8,265	8,265	8,265	8,265	8,265	8,265	8,265	8,265	$739
Carling Heights Comm Center	656 Elizabeth St	43,030	43,030	43,030	43,030	43,030	43,030	43,030	43,030	43,030	43,030	$240
East Lions Artisans Community Center	1731 Churchill Ave	4,406	4,406	4,406	4,406	4,406	4,406	4,406	4,406	4,406	4,406	$275
Springbank Gardens Community Center	205 Wonderland Rd S	0	0	0	0	0	1,442	2,422	2,422	2,422	2,422	$279
Stoney Creek Community Center	920 Sunningdale Rd E	0	0	0	0	0	0	65,381	65,381	65,381	65,381	$327
*** Senior's Center Total**		26,899	26,899	26,899	26,899	26,899	26,899	26,899	26,899	26,899	26,899	
Total - all others		139,145	139,145	139,145	139,145	139,145	140,587	206,948	211,334	213,116	213,116	
Combined Total		166,044	166,044	166,044	166,044	166,044	167,486	233,847	238,233	240,015	240,015	

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
*** Senior's Center Standard**		0.0777	0.0770	0.0763	0.0757	0.0752	0.0746	0.0740	0.0735	0.0727	0.0720
Standard - others		0.4021	0.3984	0.3949	0.3918	0.3888	0.3898	0.5695	0.5772	0.5761	0.5702
Per Capita Level of Service		0.4798	0.4755	0.4712	0.4675	0.4639	0.4644	0.6435	0.6506	0.6488	0.6422

10 year average	
Combined	0.5407
Senior Centres*	0.0749
Others	0.4659

Source : Building square footage measures and total value provided by City of London Facility Services. Land value associated with facility provided by City of London Realty Services.

NOTES:
1) Above list does not include community and programming space provided at various non-community centre facilities (including the Canada Games Aquatic Center, Civic Garden Center and space at various arenas - Carling, Kinsmen, Medway, Nichols, Oakridge). These community and programming spaces are accounted in the square feet identified for the facility in question for service standard purposes.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards
SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Boyle Comm Center	530 Charlotte	$1,651.3	$1,651.3	$1,651.3	$1,651.3	$1,651.3	$1,651.3	$1,651.3	$1,651.3	$2,087.9	$2,087.9
Byron Optimist	1308 Norman Ave	$1,022.8	$1,022.8	$1,022.8	$1,022.8	$1,022.8	$1,022.8	$1,022.8	$2,172.0	$2,172.0	$2,172.0
Hamilton Rd Senior's Annex *	898 Trafalgar Rd	$928.5	$928.5	$928.5	$928.5	$928.5	$928.5	$928.5	$928.5	$928.5	$928.5
Hamilton Rd Senior's Center *	525 Hamilton Rd	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4	$2,404.4
Kiwanis Senior Comm Cnter *	78 Riverside Dr.	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4	$8,812.4
Lambeth Comm Centre	7112 Beattie St	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4	$5,614.4
North London Optimist Center	1345 Cheapside St	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6	$12,585.6
South London Comm Center	1119 Jalna Blvd	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8	$6,107.8
Carling Heights Comm Center	656 Elizabeth St	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2	$10,327.2
East Lions Artisans Comm Cntr	1731 Churchill Ave	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7	$1,211.7
Springbank Gardens Community Center	205 Wonderland Rd S	$0.0	$0.0	$0.0	$0.0	$0.0	$402.3	$675.7	$675.7	$675.7	$675.74
Stoney Creek Community Center	920 Sunningdale Rd E	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$21,379.6	$21,379.6	$21,379.6	$21,379.6
*** Senior's Center Total**		$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4	$12,145.4
Total - all others		$38,520.8	$38,520.8	$38,520.8	$38,520.8	$38,520.8	$38,923.2	$60,576.2	$61,725.3	$62,161.9	$62,161.9
Combined Total		$50,666.2	$50,666.2	$50,666.2	$50,666.2	$50,666.2	$51,068.5	$72,721.5	$73,870.6	$74,307.2	$74,307.2
Average Value /sq. ft		$305.14	$305.14	$305.14	$305.14	$305.14	$304.91	$310.98	$310.08	$309.59	$309.59
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$146.41	$145.08	$143.78	$142.66	$141.57	$141.60	$200.11	$201.75	$200.86	$198.83

10 year average	
Service Standard per Capita	$166.27
10 yr Average historical value/sq ft	$307.08

NOTES:
1) The valuations above include the current (2013) replacement value of building, land, and site improvements.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION — COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Indoor Building Area
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013$/sq.ft.	
Byron Bathhouse & Pool	1308 Norman Ave	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	$1,142	
Canada Games Aquatic Center	1045 Wonderland N	51,248	51,248	51,248	51,248	51,248	51,248	51,248	51,248	51,248	51,248	$287	
Carling Heights	656 Elizabeth St	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	11,690	$297	
East Lions Artisans Pool	1731 Churchill Ave	2,276	2,276	2,276	2,276	2,276	2,276	2,276	2,276	2,276	2,276	$1,415	
Gibbons Park bathhouse/pool	Victoria St	3,746	3,746	3,746	3,746	3,746	3,746	3,746	3,746	3,746	3,746	$461	
Glen Cairn Pool	370 Chippendale Cres	510	510	510	510	510	510	510	510	510	510		Note 1
Northeast Park Community Pool	1050 Victoria Drive	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	$1,091	
Northridge Bathhouse & pool	15 Mclean Drive	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	$1,361	
Oakridge Pool	825 Valetta Street	340	340	340	340	340	340	340	340	340	340		Note 1
Silverwood Bathhouse and Pool	56 Sycamore Street	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720	3,720	$604	
South London Community Pool	565 Bradley Ave	18,116	18,116	18,116	18,116	18,116	18,116	18,116	18,116	18,116	18,116	$217	
Southcrest Bathhouse & Pool	10 Hazelwood Ave	4,636	4,636	4,636	4,636	4,636	4,636	4,636	4,636	4,636	4,636	$556	
Stronach Pool	1221 Sandford Street	1,113	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650		Note 1
Thames Park Bathhouse And pool	15 Ridout Street South	5,264	5,264	5,264	5,264	5,264	5,264	5,264	5,264	5,264	5,264	$539	
Westminster Park Bathhouse and Pool	650 Osgoode Drive	1,803	1,803	1,803	1,803	1,803	1,803	1,803	1,803	1,803	1,803	$952	
Total		109,232	109,769	109,769	109,769	109,769	109,769	109,769	109,769	109,769	109,769		

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Level of Service (per 1,000 persons)		315.65	314.32	311.49	309.08	306.70	304.36	302.06	299.79	296.72	293.71

10 year average	
Quantity Standard per 1,000 persons	305.39

Notes:
1) Includes the filter & Pump room only. Change room space is included in space for adjoining arena, and therefore not duplicated here. The resulting value/sq.ft. is not comparable and is therefore not provided.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Byron Bathhouse & Pool	1308 Norman Ave	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7	$1,758.7
Canada Games Aquatic Center	1045 Wonderland N	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2	$14,708.2
Carling Heights (pool only)	656 Elizabeth St	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9	$3,471.9
East Lions Artisans Pool	1741 Churchill Ave	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5	$3,220.5
Gibbons Park bathhouse/pool	Victoria St	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9	$1,726.9
Glen Cairn Pool	370 Chippendale Cres	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5	$1,266.5
Northeast Park Community Pool	1050 Victoria Drive	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8	$1,843.8
Northridge Bathhouse & pool	15 Mclean Drive	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9	$2,095.9
Oakridge Pool	825 Valetta Street	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2	$1,381.2
Silverwood Bathhouse and Pool	56 Sycamore Street	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9	$2,246.9
South London Community Pool	565 Bradley Ave	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2	$3,931.2
Southcrest Bathhouse & Pool	10 Hazelwood Ave	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6	$2,577.6
Stronach Pool	1221 Sandford Street	$2,327.2	$2,327.2	$3,450.0	$3,450.0	$3,450.0	$3,450.0	$3,450.0	$3,450.0	$3,450.0	$3,450.0
Thames Park Bathhouse And pool	15 Ridout Street South	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3	$2,837.3
Westminster Park Bathhouse and Pool	650 Osgoode Drive	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5	$1,716.5
Total		$47,110.3	$47,110.3	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1	$48,233.1
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$136.14	$134.90	$136.87	$135.81	$134.77	$133.74	$132.73	$131.73	$130.38	$129.06

10 year average	
Service Standard per Capita	$133.61

Source : Total value provided by City of London Facility Services. Land value associated with facility provided by City of

NOTES:
1) The valuations above include the current (2013) replacement value of building, pool, land, and site improvements.
2) Full replacement of concrete deck, pool tank, and all associated mechanical equipment/piping is included in overall cost.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Number of Facilities
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/Facility
Byron Wading Pool	Charlotte Street	1	1	1	1	1	1	1	1	1	1	$315,000
Bonaventure Park Spray Pad	141 Bonaventure Drive	1	1	1	1	1	1	1	1	1	1	$370,000
Doidge Park Wading Pool	Wellington/Cheapside	1	1	1	1	1	1	0	0	0	0	$315,000
East Lions Wading Pool	1731 Churchill Ave	1	1	1	1	1	1	1	1	1	1	$315,000
Fairmont Wading Pool	15 Gibbons	1	1	1	1	1	1	1	0	0	0	$315,000
Gibbons Park Wading Pool	Victoria St	1	1	1	0	0	0	0	0	0	0	$315,000
Gibbons Park Spray Pad	Victoria St	0	0	0	1	1	1	1	1	1	1	$370,000
Kinsmen Rec Center Wading Pool	20 Granville Av	1	1	1	1	1	1	1	1	1	1	$370,000
West Lions Spray Pad	20 Granville Av	1	1	1	1	1	1	1	1	1	1	$370,000
Jesse Davidson Park Spray Pad	Monte Vista/Ensign Cr	1	1	1	1	1	1	1	1	1	1	$370,000
Kiwanis Wading Pool	311 Kiwanis Pk Dr	1	1	1	1	1	1	1	0	0	0	$315,000
Kiwanis Park Spray Pad	311 Kiwanis Pk Dr	1	1	1	1	1	1	1	1	1	1	$370,000
McMahen Wading Pool	Adelaide Steet	1	1	1	1	1	1	1	1	1	1	$315,000
Meredith Wading Pool	Nelson/Maitland	1	1	1	1	1	1	1	1	1	1	$315,000
Murray Wading Pool	Cliftonvale Ave	1	1	1	1	1	1	1	1	1	1	$315,000
Oakridge Wading Pool	825 Valetta Street	1	1	1	1	1	0	0	0	0	0	$315,000
Oakridge Spray Pad	825 Valetta Street	0	0	0	0	0	1	1	1	1	1	$370,000
Ray Lanctin Park Spray Pad	1045 Wonderland Rd. N.	0	0	0	0	0	0	0	1	1	1	$400,000
Rowntree Park Spray Pad	Whetter Ave/Trevithen St.	1	1	1	1	1	1	1	1	1	1	$370,000
Silverwood Wading Pool	56 Sycamore Street	1	1	1	1	1	1	1	1	1	1	$315,000
Smith Park Wading Pool	Brampton Rd	1	1	1	1	1	1	1	1	1	1	$315,000
Springbank Wading Pool	Springbank Park	1	1	1	1	1	1	1	1	1	1	$315,000
Thames Park Wading Pool	15 Ridout St South	1	1	1	1	1	0	0	0	0	0	$315,000
University Heights Wading Pool	Trott Drive	1	1	1	1	1	1	1	1	1	1	$315,000
White Oaks Wading Pool	1119 Jalna Blvd	1	1	1	1	1	1	1	1	1	1	$315,000
Lambeth Centennial Park Spray Pad	Beattie Steet	1	1	1	1	1	1	1	1	1	1	$370,000
SE Optimist Spray Pad	237 Deveron Crescent	0	0	0	0	1	1	1	1	1	1	$425,000
Forks of the Thames Spray Pad	King St. & Thames St.	1	1	1	1	1	1	1	1	1	1	$525,000
Total		24	24	24	24	25	24	23	22	22	22	

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Level of Service (per 1,000 persons)		0.06935	0.06872	0.06811	0.06758	0.06985	0.06655	0.06329	0.06008	0.05947	0.05887

10 year average	
Quantity Standard per 1,000 persons	0.07

NOTES:

1) The following pools incorporate a wading pool the value of which has been included in the value of the pool:
   - Northeast Park Community Pool,
   - Northridge Bathhouse & pool,
   - Westminster Park Bathhouse and Pool
   - Stronach Pool (from 2003 forward)
   - Westminster Park Bathhouse and Pool

2) Spray Pads and Wading Pools are located in community parks acquired through Parkland Dedications

3) No land value computed with these facilities. Most facilities are located in Neighbourhood Parks or are located on very minor land associated with each facility.

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Byron Wading Pool	Charlotte Street	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Bonaventure Park Spray Pad	141 Bonaventure Drive	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
Doidge Park Wading Pool	Wellington/Cheapside	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0	$0.0
East Lions Wading Pool	1731 Churchill Ave	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Fairmont Wading Pool	15 Gibbons	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0
Gibbons Park Wading Pool	Victoria St	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Gibbons Park Spray Pad	Victoria St	$0.0	$0.0	$0.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
Kinsmen Rec Center - West Lions Pk	20 Granville Av	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
West Lions Spray Pad	20 Granville Av	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
Jesse Davidson Park Spray Pad	Monte Vista/Ensign Cr	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
Kiwanis Wading Pool	311 Kiwanis Pk Dr	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0
Kiwanis Spray Pad	311 Kiwanis Pk Dr	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
McMahen Wading Pool	Adelaide Steet	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Meredith Wading Pool	Nelson/Maitland	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Murray Wading Pool	Cliftonvale Ave	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Oakridge Wading Pool	825 Valetta Street	$315.0	$315.0	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0	$0.0	$0.0
Oakridge Spray Pad	825 Valetta Street	$0.0	$0.0	$0.0	$0.0	$0.0	$370.0	$370.0	$370.0	$370.0	$370.0
Ray Lanctin Park Spray Pad	1045 Wonderland Rd. N.	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$400.0	$400.0	$400.0
Rowntree Park Spray Pad	Whetter Ave/Trevithen St.	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
Silverwood Wading Pool	56 Sycamore Street	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Smith Park Wading Pool	Brampton Rd	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Springbank Wading Pool	Springbank Park	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Thames Park Wading Pool	15 Ridout St South	$315.0	$315.0	$315.0	$315.0	$315.0	$0.0	$0.0	$0.0	$0.0	$0.0
University Heights Wading Pool	Trott Drive	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
White Oaks Wading Pool	1119 Jalna Blvd	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0	$315.0
Lambeth Centennial Park Spray Pad	Beattie Steet	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0	$370.0
SE Optimist Spray Pad	237 Deveron Crescent	$0.0	$0.0	$0.0	$0.0	$425.0	$425.0	$425.0	$425.0	$425.0	$425.0
Forks of the Thames Spray Pad	King St. & Thames St.	$525.0	$525.0	$525.0	$525.0	$525.0	$525.0	$525.0	$525.0	$525.0	$525.0
Total		$8,155.0	$8,155.0	$8,155.0	$8,210.0	$8,635.0	$8,375.0	$8,060.0	$7,830.0	$7,830.0	$7,830.0
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$23.57	$23.35	$23.14	$23.12	$24.13	$23.22	$22.18	$21.38	$21.17	$20.95

10 year average	
Quantity Standard per Capita	$22.62

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure Square Feet of Specialty Buildings
Type of measure Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.
Civic Garden Centre	625 Springbank Dr	6,276	6,276	6,276	6,276	6,276	6,276	6,276	6,276	6,276	6,276	$877
Civic Garden Greenhouse	645 Springbank Dr	13,036	13,036	13,036	13,036	13,036	13,036	13,036	13,036	13,036	13,036	$165
EW Curtis Gardens	605 Springbank Dr	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	6,240	$150
Labatts Park Grandstand	25 Wilson Ave	5,740	5,740	5,740	5,740	17,736	17,736	17,736	17,736	17,736	17,736	$203
Labatts Park Bleachers	25 Wilson Ave	1,425	1,425	1,425	1,425	2,850	2,850	2,850	2,850	2,850	2,850	$55
McManus Canoeing/Rowing Bldg	199 Wonderland Rd	6,127	6,127	6,127	6,127	6,127	6,127	6,127	6,127	6,127	6,127	$155
Springbank Gardens	295 Wonderland Rd					5,931	5,931	5,931	5,931	5,931	5,931	$230
Total		38,844	38,844	38,844	38,844	58,196	58,196	58,196	58,196	58,196	58,196	

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Level of Service (per 1,000 persons)		112.25	111.23	110.23	109.37	162.60	161.36	160.14	158.94	157.31	155.72

10 year average	
Quantity Standard per 1,000 persons	139.92

2014 Development Charges Background Study

TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Civic Garden Centre	625 Springbank Dr	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1	$5,504.1
Civic Garden Greenhouse	645 Springbank Dr	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9	$2,150.9
EW Curtis Gardens	605 Springbank Dr	$936.0	$936.0	$936.0	$936.0	$936.0	$936.0	$936.0	$936.0	$936.0	$936.0
Labatts Park Grandstand	25 Wilson Ave	$1,165.2	$1,165.2	$1,165.2	$1,165.2	$3,600.4	$3,600.4	$3,600.4	$3,600.4	$3,600.4	$3,600.4
Labatts Park Bleachers	25 Wilson Ave	$78.4	$78.4	$78.4	$78.4	$156.8	$156.8	$156.8	$156.8	$156.8	$156.8
McManus Canoeing/Rowing Bldg	199 Wonderland Rd	$949.7	$949.7	$949.7	$949.7	$949.7	$949.7	$949.7	$949.7	$949.7	$949.7
Springbank Gardens	295 Wonderland Rd					$1,364.1	$1,364.1	$1,364.1	$1,364.1	$1,364.1	$1,364.1
Total		$10,784.3	$10,784.3	$10,784.3	$10,784.3	$14,662.0	$14,662.0	$14,662.0	$14,662.0	$14,662.0	$14,662.0

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$31.16	$30.88	$30.60	$30.37	$40.97	$40.65	$40.35	$40.04	$39.63	$39.23

10 year average	
Quantity Standard per Capita	$36.39

Source : Total value provided by City of London Facility Services. Land value associated with facility provided

NOTES
1)The valuations above include the current (2013) replacement value of building, but exclude land and site improvements.

2014 Development Charges Background Study
TABLE F-1 - Parks Recreation - Measurement of Existing Service Standards

SERVICE: PARKS & RECREATION

COMPONENT: RECREATION FACILITIES

Contact person(s) Jim Klingenberger
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Facility Name	Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Citywide Field House								$1,520.7	$1,520.7	$1,520.7	$1,520.7
Doidge Park field house	Grosvenor/Cheapside	$89.0	$89.0	$89.0	$89.0	$89.0	$89.0	$0.0	$0.0	$0.0	$0.0
Ed Blake Park	449 Barker St							$261.3	$261.3	$261.3	$261.3
Gibbons Park picnic shelter	15 Gibbons	$26.4	$26.4	$26.4	$26.4	$26.4	$26.4	$26.4	$26.4	$26.4	$26.4
Gibbons Park washroom	15 Gibbons	$40.0	$40.0	$40.0	$40.0	$40.0	$40.0	$40.0	$40.0	$40.0	$40.0
Glanworth field house	Bradish Rd	$465.5	$465.5	$465.5	$465.5	$465.5	$465.5	$465.5	$465.5	$465.5	$465.5
Greenway Park washroom	S/W Riverside & Wonderland	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3
Basil Grover Park washroom	Wharncliffe/Commissioners	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3
Jesse Davidson Park Field house	Monte Vista/Ensign Cr		$93.8	$93.8	$93.8	$93.8	$93.8	$93.8	$93.8	$93.8	$93.8
Kiwanis Park field house #1	Trafalgar St/Pottersburg Creek	$139.5	$139.5	$139.5	$139.5	$139.5	$139.5	$139.5	$139.5	$139.5	$139.5
Kiwanis Park new field house	Trafalgar St/Pottersburg Creek	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3	$250.3
Lambeth lawn bowling clubhouse	4326 Col Talbot Rd	$22.5	$22.5	$22.5	$22.5	$22.5	$22.5	$22.5	$22.5	$22.5	$22.5
Lambeth Optimist WR & concession	Campbell St	$142.4	$142.4	$142.4	$142.4	$142.4	$142.4	$142.4	$142.4	$142.4	$142.4
Lambeth Park washroom #3	7112 Beattie St	$34.5	$34.5	$34.5	$34.5	$34.5	$34.5	$34.5	$34.5	$34.5	$34.5
McKillop Pk shelter/washroom	Riverside/Wonderland	$117.0	$117.0	$117.0	$117.0	$117.0	$117.0	$117.0	$117.0	$117.0	$117.0
McMahon Park bathhouse	Adelaide St N	$686.6	$686.6	$686.6	$686.6	$686.6	$686.6	$686.6	$686.6	$686.6	$686.6
Meredith Park field house	Nelson/Maitland	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0
Murray playground field house	Tecumseh/Wharncliffe	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0
North London Field House		$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0	$678.0
Oakridge Acres field house	Tarbutt/Valetta	$355.0	$355.0	$355.0	$355.0	$355.0	$355.0	$355.0	$355.0	$355.0	$355.0
Reservoir Park washroom	Commissioners/Crestwood	$38.6	$38.6	$38.6	$38.6	$38.6	$38.6	$38.6	$38.6	$38.6	$38.6
Ralph Hamlyn Park washroom #1	east end Dennis Ave	$189.9	$189.9	$189.9	$189.9	$189.9	$189.9	$189.9	$189.9	$189.9	$189.9
Rowntree playground field house	Whetter/Fairview	$134.4	$134.4	$134.4	$134.4	$134.4	$134.4	$134.4	$134.4	$134.4	$134.4
Smith playground service bldg	Brampton/Cheapside	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0
Southeast Opt. field house	Deveron Cres	$199.2	$199.2	$199.2	$199.2	$199.2	$199.2	$199.2	$199.2	$199.2	$199.2
Southwest Opt. field house	Deveron Cres	$303.3	$303.3	$303.3	$303.3	$303.3	$303.3	$303.3	$303.3	$303.3	$303.3
Springbank Park Concession # 1	Commissioners/Springbank	$152.1	$152.1	$152.1	$152.1	$152.1	$152.1	$152.1	$152.1	$152.1	$152.1
Springbank Park New Field House	Commissioners/Springbank						$350.4	$350.4	$350.4	$350.4	$350.4
Springbank Park Old Pump House	Commissioners/Springbank	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5	$2,731.5
St. Julien Park Field House	81 Sanders St	$84.0	$84.0	$84.0	$84.0	$84.0	$84.0	$84.0	$84.0	$84.0	$84.0
Stoneybrook Washrooms	747 Windermere Rd	$0.0	$0.0	$0.0	$136.5	$136.5	$136.5	$136.5	$136.5	$136.5	$136.5
Stronach ball service building	Huron/Highbury/Sanford	$315.7	$315.7	$315.7	$315.7	$315.7	$315.7	$315.7	$315.7	$315.7	$315.7
Thames Park field house	55 Ridout St S	$198.3	$198.3	$198.3	$198.3	$198.3	$198.3	$198.3	$198.3	$198.3	$198.3
Univ. Heights field house	Trott Dr/Coombs	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0	$135.0
Vauxhaul Park field house	59 Price St/Homan	$284.9	$284.9	$284.9	$284.9	$284.9	$284.9	$284.9	$284.9	$284.9	$284.9
Victoria Park Bandshell	580 Clarence St	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7	$3,013.7
Victoria Park Outdoor rink	580 Clarence St	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9	$1,162.9
Springbank Park Washrooms	Commissioners/Springbank	$147.0	$147.0	$147.0	$147.0	$147.0	$147.0	$147.0	$147.0	$147.0	$147.0
Covent Gardens Outdoor rink	Covent Garden	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0	$1,000.0
	Total	$14,042.8	$14,136.6	$14,136.6	$14,273.1	$14,273.1	$14,623.5	$16,316.5	$16,316.5	$16,316.5	$16,316.5
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$40.58	$40.48	$40.12	$40.19	$39.88	$40.55	$44.90	$44.56	$44.11	$43.66

10 year average	
Service Standard per Capita	$41.90

Notes:

1) The valuations above include the current (2013) replacement value of building only. Other site improvements are included in the value of the parkland . Values were determined through an individual approximation of the replacement value of each facility.

2014 Development Charges Background Study

Table F-2: Parks and Recreation

Service component : **Parks & Recreation - Facility**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Residential %	NON - RESIDENTIAL: Residential $	NON - RESIDENTIAL: Commercial %	NON - RESIDENTIAL: Commercial $	NON - RESIDENTIAL: Institutional %	NON - RESIDENTIAL: Institutional $	NON - RESIDENTIAL: Industrial %	NON - RESIDENTIAL: Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	Anticipated and Planned Projects					(1) - sum(2,3)		(4) * (5)	(4) - (6)		(7) * (8)	[(7) - (9)] * 10%	'7) - sum(9,10)		(11) - (12)		(13) * (14)		(13) * (16)		(13) * (18)		(13) * (20)
							Note 3			Note 4						Note 6		Note 6		Note 6		Note 6	
	Multi-Purpose Recreation Centres																						
DC14-PR00001	Multi-purpose Rec. Centre (SW)	2014																					
	Double Icepad Arena	2014	$10,083.6		$6,432.5	$3,651.1	0.0%	$0.0	$3,651.1	100.0%	$3,651.1	$0.0	$0.0	$0.0	$0.0	100.0%	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Indoor Swimming Pool	2014	$3,758.9		$2,397.9	$1,361.0	29.5%	$400.8	$960.2	44.4%	$426.2	$53.4	$480.6	$0.0	$480.6	100.0%	$480.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Community Centre/Gymnasium	2014	$6,131.0		$3,911.1	$2,219.9	33.0%	$731.6	$1,488.3	39.0%	$580.9	$90.7	$816.7	$0.0	$816.7	100.0%	$816.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Change Rooms	2014	$1,749.6		$1,116.1	$633.5	31.6%	$200.3	$433.2	70.8%	$306.8	$12.6	$113.8	$0.0	$113.8	100.0%	$113.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Furniture/Fittings/Equipment	2014	$349.2		$222.8	$126.4	31.6%	$40.0	$86.5	70.8%	$61.2	$2.5	$22.7	$0.0	$22.7	100.0%	$22.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Land/Site Works/Prof. Fees	2014	$12,427.3		$7,927.6	$4,499.7	31.6%	$1,423.0	$3,076.7	70.8%	$2,178.9	$89.8	$808.0	$0.0	$808.0	100.0%	$808.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Subtotal		$34,499.6	$.0	$22,008.0	$12,491.6	22.4%	$2,795.8	$9,695.8	74.3%	$7,205.0	$249.1	$2,241.8	$0.0	$2,241.8	100.0%	$2,241.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00002	Multi-purpose Rec. Centre (SE - Arena Anchored)	2018																					
	Double Icepad Arena	2018	$9,789.9		$154.9	$9,635.0	0.0%	$0.0	$9,635.0	100.0%	$9,635.0	$0.0	$0.0	$0.0	$0.0	100.0%	$0.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Community Centre/Gymnasium	2018	$6,094.6		$96.5	$5,998.1	15.8%	$948.6	$5,049.5	69.4%	$3,506.0	$154.4	$1,389.2	$0.0	$1,389.2	100.0%	$1,389.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Change Rooms	2018	$1,749.6		$27.7	$1,721.9	15.8%	$272.3	$1,449.6	88.3%	$1,279.6	$17.0	$153.0	$0.0	$153.0	100.0%	$153.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Furniture/Fittings/Equipment	2018	$529.0		$8.4	$520.6	15.8%	$82.3	$438.3	88.3%	$386.9	$5.1	$46.3	$0.0	$46.3	100.0%	$46.3	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Land/Site Works/Prof. Fees	2018	$10,400.5		$1,712.6	$8,687.9	15.8%	$1,374.0	$7,313.9	88.3%	$6,456.1	$85.8	$772.0	$0.0	$772.0	100.0%	$772.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Subtotal		$28,563.6	$.0	$2,000.0	$26,563.6	10.1%	$2,677.3	$23,886.3	89.0%	$21,263.5	$262.3	$2,360.5	$0.0	$2,360.5	100.0%	$2,360.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00003	Multi-purpose Rec. Centre (SE - Pool Anchored)	2018																					
	Community Centre/Gymnasium	2018	$6,094.6		$0.0	$6,094.6	15.8%	$963.9	$5,130.7	69.4%	$3,562.4	$156.8	$1,411.5	$0.0	$1,411.5	100.0%	$1,411.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Indoor Swimming Pool	2018	$3,667.2		$0.0	$3,667.2	12.8%	$469.8	$3,197.4	73.5%	$2,350.1	$84.7	$762.6	$0.0	$762.6	100.0%	$762.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Change Rooms	2018	$1,749.6		$0.0	$1,749.6	14.7%	$257.0	$1,492.6	71.0%	$1,059.2	$43.3	$390.1	$0.0	$390.1	100.0%	$390.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Furniture/Fittings/Equipment	2018	$345.3		$0.0	$345.3	14.7%	$50.7	$294.6	71.0%	$209.0	$8.6	$77.0	$0.0	$77.0	100.0%	$77.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Land/Site Works/Prof. Fees	2018	$5,096.1		$0.0	$5,096.1	14.7%	$748.4	$4,347.7	71.0%	$3,085.1	$126.3	$1,136.3	$0.0	$1,136.3	100.0%	$1,136.3	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
	Subtotal		$16,952.8	$.0	$.0	$16,952.8	14.7%	$2,489.8	$14,463.0	71.0%	$10,265.8	$419.7	$3,777.5	$.0	$3,777.5	100.0%	$3,777.5	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Field Houses																						
DC14-PR00004	Meadowgate Park Field House	2014	$300.0			$300.0	0.0%	$.0	$300.0	33.0%	$99.0	$20.1	$180.9	$.0	$180.9	100.0%	$180.9	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00005	Riverbend Park Field House	2015	$150.0			$150.0	0.0%	$.0	$150.0	0.0%	$.0	$15.0	$135.0	$.0	$135.0	100.0%	$135.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00006	Kilally Sports Fields Field House	2016	$600.0			$600.0	0.0%	$.0	$600.0	25.0%	$150.0	$45.0	$405.0	$.0	$405.0	100.0%	$405.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00007	Constitution Park Field House	2017	$300.0			$300.0	0.0%	$.0	$300.0	50.0%	$150.0	$15.0	$135.0	$.0	$135.0	100.0%	$135.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00008	Southwest London Field House	2018	$600.0			$600.0	0.0%	$.0	$600.0	25.0%	$150.0	$45.0	$405.0	$.0	$405.0	100.0%	$405.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00009	Foxfield Park Field House	2019	$300.0			$300.0	0.0%	$.0	$300.0	0.0%	$.0	$30.0	$270.0	$.0	$270.0	100.0%	$270.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00114	Future Field House (North)	2021	$500.0			$500.0	50.0%	$250.0	$250.0	33.0%	$82.5	$16.8	$150.8	$.0	$150.8	100.0%	$150.8	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00115	Future Field House (South)	2022	$500.0			$500.0	50.0%	$250.0	$250.0	33.0%	$82.5	$16.8	$150.8	$.0	$150.8	100.0%	$150.8	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00116	Future Field House (West)	2023	$500.0			$500.0	50.0%	$250.0	$250.0	33.0%	$82.5	$16.8	$150.8	$.0	$150.8	100.0%	$150.8	0.0%	$.0	0.0%	$.0	0.0%	$.0
			$3,750.0	$.0	$.0	$3,750.0	20.0%	$750.0	$3,000.0	26.6%	$796.5	$220.4	$1,983.2	$.0	$1,983.2	100.0%	$1,983.2	0.0%	$.0	0.0%	$.0	0.0%	$.0
	Splash Pads																						
DC14-PR00010	Growth-related Spray Pad (Meadowgate)	2014	$400.0			$400.0	0.0%	$.0	$400.0	33.0%	$132.0	$26.8	$241.2	$.0	$241.2	100.0%	$241.2	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00011	Growth-related Spray Pad (Riverbend)	2015	$200.0			$200.0	0.0%	$.0	$200.0	0.0%	$.0	$20.0	$180.0	$.0	$180.0	100.0%	$180.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00012	Growth-related Spray Pad (Constitution)	2017	$400.0			$400.0	0.0%	$.0	$400.0	50.0%	$200.0	$20.0	$180.0	$.0	$180.0	100.0%	$180.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-PR00013	Growth-related Spray Pad (Foxfield)	2019	$400.0			$400.0	0.0%	$.0	$400.0	0.0%	$.0	$40.0	$360.0	$.0	$360.0	100.0%	$360.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
			$1,400.0	$.0	$.0	$1,400.0	0.0%	$.0	$1,400.0	23.7%	$332.0	$106.8	$961.2	$.0	$961.2	100.0%	$961.2	0.0%	$.0	0.0%	$.0	0.0%	$.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT		$7,958.5			$7,958.5			$7,958.5				$7,958.5		$7,958.5	100.0%	$7,958.5	0.0%	$.0	0.0%	$.0	0.0%	$.0
TOTAL			**$93,124.5**	**$.0**	**$24,008.0**	**$69,116.5**	**12.6%**	**$8,712.9**	**$60,403.6**	**66.0%**	**$39,862.8**	**$1,258.2**	**$19,282.6**	**$.0**	**$19,282.6**	**100.0%**	**$19,282.6**	**0.0%**	**$.0**	**0.0%**	**$.0**	**0.0%**	**$.0**

Table F-2: Parks and Recreation

Service component : **Parks & Recreation - Facility**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
															Residential		Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
						(1) - sum(2,3)		(4) * (5)	(4) - (6)		(7) * (8)	[(7) - (9)] * 10%	(7) - sum(9,10)		(11) - (12)		(13) * (14)		(13) * (16)		(13) * (18)		(13) * (20)

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$762.46
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$29,888.4
Growth needs before comparison to historical standard	$19,282.6
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial	
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$2,487.1	100.0%	$2,487.1	0.0%	$.0	0.0%	$.0	0.0%	$.0	
Total net cost eligible for DC rate calculation purposes	$16,795.5	100.0%	$16,795.5	0.0%	$.0	0.0%	$.0	0.0%	$.0	
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510	
Calculated DC Rate - Pre-Financing			**$ 304.31** /person		**$ -** /sq. m.		**$ -** /sq. m.		**$ -** /sq. m.	

Notes:

1) The double ice pad arenas for both RC2755 and RC2758 are classified as 100% non-growth because it is assumed these ice surfaces will simply replace facilities being decommissioned (Farqharson, Glen Cairn, and Silverwoods). That is, these parts of the new facilities will not provide new capacity but rather only replace existing capacity.
2) "Future growth benefits" for the Multi Purpose Community Centers is based on approximation of area served over time. The proportion of the expected service area of the facility that is projected to be developed beyond the planning horizon for this service component (2023) is removed from the rate calculation.
3) The cost of furniture/fittings/equipment, change rooms and land/infrastructure/site works/architectural fees has been allocated among the three components (arena, community center and pool) that benefit from these "common" expenses. The growth/non-growth splits for these components of the facility are based on the growth share of the double ice pad arena,community center and gymnasium in relation to the gross cost of all three components.
4) Residential share of growth costs 100% (consistent with 2009 DC Study). Benefit to ICI sector considered negligible.

Prefinancing - Calculated Residential DC Rate costs to be added - financing

		Facility	Parkland Development	Total	Existing Res. Rate with financing included (Jan 1, 2014 rate)
Single Family Dwelling	3.09	$ 940.33	$ 1,040.38	$ 1,980.71	$1,451.68
Multiple unit dwelling	2.20	$ 669.49	$ 740.73	$ 1,410.22	$1,040.90
Apartment - bach. & 1 bed	1.40	$ 426.04	$ 471.37	$ 897.41	$619.78
Apartment - ≥ 2 bedroom	1.91	$ 581.24	$ 643.08	$ 1,224.32	$868.11

2014 Development Charges Background Study

Table F-2: Parks and Recreation

Service component : **Parks & Recreation - Parkland Development**

Planning horizon for this component : **2014-2023**

		Amount Eligible for Development Charge Rate Calculations														*Allocation of Net Amount to types of Growth*							
										Non-growth share						RESIDENTIAL	NON - RESIDENTIAL						
																Residential	Commercial		Institutional		Industrial		
Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	%	benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8) Note 1)	(10) [(7) - (9)] * 10%	(11) '7) - sum(9,10)	(12) Note 2)	(13) (11) - (12)	(14) Note 3)	(15) (13) * (14)	(16) Note 3)	(17) (13) * (16)	(18) Note 3)	(19) (13) * (18)	(20) Note 3)	(21) (13) * (20)
	Anticipated and Planned Projects																						
	Neighbourhood Parks																						
DC14-PR00014	Vista Woods (39T-03505)	2014	$104.0			$104.0	0.0%	$0.0	$104.0	0.0%	$0.0	$10.4	$93.6	$13.6	$80.0	100.0%	$80.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00015	Forest Hill Subdivision (39T-10501)	2014	$80.2			$80.2	0.0%	$0.0	$80.2	0.0%	$0.0	$8.0	$72.2	$10.5	$61.7	100.0%	$61.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00016	Claybar Subdivision (39T-04503)	2015	$17.1			$17.1	0.0%	$0.0	$17.1	0.0%	$0.0	$1.7	$15.4	$2.2	$13.1	100.0%	$13.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00017	Drewlo Edge Valley (39T-05505)	2015	$43.1			$43.1	0.0%	$0.0	$43.1	0.0%	$0.0	$4.3	$38.8	$5.6	$33.1	100.0%	$33.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00018	Old Victoria (39T-09502)	2015	$109.2			$109.2	0.0%	$0.0	$109.2	0.0%	$0.0	$10.9	$98.3	$14.3	$84.0	100.0%	$84.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00019	Powell Subdivision (39T-05510)	2016	$62.4			$62.4	0.0%	$0.0	$62.4	0.0%	$0.0	$6.2	$56.2	$8.2	$48.0	100.0%	$48.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00020	Ross Lands North (39T-07502)	2017	$104.0			$104.0	0.0%	$0.0	$104.0	0.0%	$0.0	$10.4	$93.6	$13.6	$80.0	100.0%	$80.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00021	Ross Lands South (39T-07502)	2017	$26.0			$26.0	0.0%	$0.0	$26.0	0.0%	$0.0	$2.6	$23.4	$3.4	$20.0	100.0%	$20.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00022	Kent Subdivision (39T-04510)	2017	$193.1			$193.1	0.0%	$0.0	$193.1	0.0%	$0.0	$19.3	$173.8	$25.3	$148.5	100.0%	$148.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00023	Applewood (39T-09501)	2017	$67.6			$67.6	0.0%	$0.0	$67.6	0.0%	$0.0	$6.8	$60.8	$8.9	$52.0	100.0%	$52.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00024	Marsman Stoney Creek (39T-04512)	2018	$66.9			$66.9	0.0%	$0.0	$66.9	0.0%	$0.0	$6.7	$60.2	$8.8	$51.4	100.0%	$51.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00025	Stanton Lands (39T-11503)	2018	$14.9			$14.9	0.0%	$0.0	$14.9	0.0%	$0.0	$1.5	$13.4	$1.9	$11.4	100.0%	$11.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00026	Meadowlily Secondary Pln (B-NP-05)	2019	$156.7			$156.7	0.0%	$0.0	$156.7	0.0%	$0.0	$15.7	$141.1	$20.5	$120.5	100.0%	$120.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00027	Jackson Road (39T-06507)	2020	$336.5			$336.5	0.0%	$0.0	$336.5	0.0%	$0.0	$33.7	$302.9	$44.1	$258.8	100.0%	$258.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00028	Auburn Col. Talbot (39T-12503)	2020	$153.0			$153.0	0.0%	$0.0	$153.0	0.0%	$0.0	$15.3	$137.7	$20.0	$117.7	100.0%	$117.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00029	LPH Dundas (B-OS-26)	2020	$156.7			$156.7	0.0%	$0.0	$156.7	0.0%	$0.0	$15.7	$141.1	$20.5	$120.5	100.0%	$120.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00030	Future Neighbourhood Parks	2021	$319.4			$319.4	0.0%	$0.0	$319.4	0.0%	$0.0	$31.9	$287.5	$41.8	$245.7	100.0%	$245.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00031	Future Neighbourhood Parks	2022	$319.4			$319.4	0.0%	$0.0	$319.4	0.0%	$0.0	$31.9	$287.5	$41.8	$245.7	100.0%	$245.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00032	Future Neighbourhood Parks	2023	$319.4			$319.4	0.0%	$0.0	$319.4	0.0%	$0.0	$31.9	$287.5	$41.8	$245.7	100.0%	$245.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$2,649.7			$2,649.7		$0.0	$2,649.7		$0.0	$265.0	$2,384.8	$347.0	$2,037.8		$2,037.8		$0.0		$0.0		$0.0
	District Parks																						
DC14-PR00033	Clarke Subdivision (39T-05511)	2016	$37.0			$37.0	0.0%	$0.0	$37.0	33.0%	$12.2	$2.5	$22.3	$3.2	$19.1	100.0%	$19.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00034	Old Victoria Hospital Dist. Park	2016	$452.6			$452.6	0.0%	$0.0	$452.6	33.0%	$149.4	$30.3	$272.9	$39.7	$233.2	100.0%	$233.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00035	Southwest District Pk (B-DP-29)	2017	$913.5			$913.5	0.0%	$0.0	$913.5	20.0%	$182.7	$73.1	$657.7	$95.7	$562.0	100.0%	$562.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00036	Beaverbrook	2019	$768.1			$768.1	0.0%	$0.0	$768.1	33.0%	$253.5	$51.5	$463.2	$67.4	$395.8	100.0%	$395.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00037	Meadowgate	2020	$499.3			$499.3	10.0%	$49.9	$449.3	33.0%	$148.3	$30.1	$271.0	$39.4	$231.5	100.0%	$231.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00038	Future District Parks	2021	$987.6			$987.6	20.0%	$197.5	$790.1	33.0%	$260.7	$52.9	$476.4	$69.3	$407.1	100.0%	$407.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$3,658.1			$3,658.1		$247.4	$3,410.7		$1,006.8	$240.4	$2,163.5	$314.8	$1,848.7		$1,848.7		$0.0		$0.0		$0.0
	Urban Parks																						
DC14-PR00039	Old Victoria (39T-09502)	2015	$126.9			$126.9	0.0%	$0.0	$126.9	0.0%	$0.0	$12.7	$114.2	$16.6	$97.6	100.0%	$97.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00040	SoHo Urban Park (Plan-UP-33)	2015	$846.2			$846.2	0.0%	$0.0	$846.2	0.0%	$0.0	$84.6	$761.6	$110.8	$650.7	100.0%	$650.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00041	Applewood Urban Park (39T-09501)	2017	$575.4			$575.4	0.0%	$0.0	$575.4	0.0%	$0.0	$57.5	$517.9	$75.4	$442.5	100.0%	$442.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00042	Hydro Lands Urban Park (Plan-UP-34)	2017	$592.3			$592.3	0.0%	$0.0	$592.3	0.0%	$0.0	$59.2	$533.1	$77.6	$455.5	100.0%	$455.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00043	Future Urban Park	2020	$846.2			$846.2	0.0%	$0.0	$846.2	0.0%	$0.0	$84.6	$761.6	$110.8	$650.7	100.0%	$650.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00044	Future Urban Park	2022	$846.2			$846.2	0.0%	$0.0	$846.2	0.0%	$0.0	$84.6	$761.6	$110.8	$650.7	100.0%	$650.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$3,833.2			$3,833.2		$0.0	$3,833.2		$0.0	$383.3	$3,449.9	$502.0	$2,947.9		$2,947.9		$0.0		$0.0		$0.0
	Civic Spaces																						
DC14-PR00045	Future Civic Spaces	2015	$2,186.6			$2,186.6	0.0%	$0.0	$2,186.6	75.0%	$1,640.0	$54.7	$492.0	$71.6	$420.4	100.0%	$420.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00046	Future Civic Spaces	2016	$2,186.6			$2,186.6	0.0%	$0.0	$2,186.6	75.0%	$1,640.0	$54.7	$492.0	$71.6	$420.4	100.0%	$420.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00047	Future Civic Spaces	2018	$2,186.6			$2,186.6	0.0%	$0.0	$2,186.6	75.0%	$1,640.0	$54.7	$492.0	$71.6	$420.4	100.0%	$420.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00048	Future Civic Spaces	2020	$2,186.6			$2,186.6	10.0%	$218.7	$1,968.0	75.0%	$1,476.0	$49.2	$442.8	$64.4	$378.4	100.0%	$378.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00049	Future Civic Spaces	2022	$2,186.6			$2,186.6	10.0%	$218.7	$1,968.0	75.0%	$1,476.0	$49.2	$442.8	$64.4	$378.4	100.0%	$378.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$10,933.2			$10,933.2		$437.3	$10,495.9		$7,871.9	$262.4	$2,361.6	$343.6	$2,018.0		$2,018.0		$0.0		$0.0		$0.0
	Woodland Parks																						
DC14-PR00050	Kenmore Subdivision (39T-08502)	2015	$116.4			$116.4	0.0%	$0.0	$116.4	0.0%	$0.0	$11.6	$104.7	$15.2	$89.5	100.0%	$89.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00051	Applewood (39T-09501)	2017	$105.4			$105.4	0.0%	$0.0	$105.4	0.0%	$0.0	$10.5	$94.9	$13.8	$81.1	100.0%	$81.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00052	Jackson Road (39T-06507)	2018	$95.5			$95.5	0.0%	$0.0	$95.5	0.0%	$0.0	$9.5	$85.9	$12.5	$73.4	100.0%	$73.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00053	Summerside (39T-92020)	2018	$476.4			$476.4	0.0%	$0.0	$476.4	0.0%	$0.0	$47.6	$428.8	$62.4	$366.4	100.0%	$366.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00054	Riverbend South (B-WP-12)	2019	$52.7			$52.7	0.0%	$0.0	$52.7	0.0%	$0.0	$5.3	$47.4	$6.9	$40.5	100.0%	$40.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00055	Future Significant Woodlands	2022	$168.6			$168.6	0.0%	$0.0	$168.6	0.0%	$0.0	$16.9	$151.8	$22.1	$129.7	100.0%	$129.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00056	Future Significant Woodlands	2023	$168.6			$168.6	0.0%	$0.0	$168.6	0.0%	$0.0	$16.9	$151.8	$22.1	$129.7	100.0%	$129.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$1,183.6			$1,183.6		$0.0	$1,183.6		$0.0	$118.4	$1,065.3	$155.0	$910.3		$910.3		$0.0		$0.0		$0.0
	Major Open Space Network																						

Table F-2: Parks and Recreation

Service component : **Parks & Recreation - Parkland Development**

Planning horizon for this component : **2014-2023**

			Amount Eligible for Development Charge Rate Calculations												*Allocation of Net Amount to types of Growth*							
										Non-growth share						RESIDENTIAL	NON - RESIDENTIAL						
																	Residential	Commercial		Institutional		Industrial	
Project #	Project Description	*Expected Year*	*Total Estimated Cost*	*Less: future capital grants, subsidies or other contributions anticipated*	*Less: Portion of Gross Project Cost Funded In Prior Years*	*Subtotal*	*Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)*	*Subtotal*	%	benefit	*Less: 10% statutory deduction (if applicable)*	*Subtotal*	*Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)*	*Net Amount Eligible for DC rate calculation*	%	$	%	$	%	$	%	$
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*'7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
DC14-PR00057	Oliver Subdivision (39T-00510)	2014	$24.4			$24.4	0.0%	$0.0	$24.4	25.0%	$6.1	$1.8	$16.5	$2.4	$14.1	100.0%	$14.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00058	Marsman Stoney Creek (39T-04512)	2014	$23.4			$23.4	0.0%	$0.0	$23.4	25.0%	$5.9	$1.8	$15.8	$2.3	$13.5	100.0%	$13.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00059	Felner Subdivision (39T-06510)	2014	$8.8			$8.8	0.0%	$0.0	$8.8	25.0%	$2.2	$.7	$5.9	$.9	$5.1	100.0%	$5.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00060	Highland Ridge/Crestview (39T-07503)	2014	$48.8			$48.8	0.0%	$0.0	$48.8	25.0%	$12.2	$3.7	$32.9	$4.8	$28.1	100.0%	$28.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00061	Andover Trails Ph 4 (39T-07510)	2014	$47.3			$47.3	0.0%	$0.0	$47.3	25.0%	$11.8	$3.5	$31.9	$4.6	$27.3	100.0%	$27.3	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00062	Old Victoria (39T-09502)	2014	$21.0			$21.0	0.0%	$0.0	$21.0	25.0%	$5.2	$1.6	$14.2	$2.1	$12.1	100.0%	$12.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00063	Forest Hill Phase 5 (39T-10501)	2014	$6.8			$6.8	0.0%	$0.0	$6.8	25.0%	$1.7	$.5	$4.6	$.7	$3.9	100.0%	$3.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00064	Kape/Wickerson (39T-00519)	2015	$16.6			$16.6	0.0%	$0.0	$16.6	25.0%	$4.1	$1.2	$11.2	$1.6	$9.6	100.0%	$9.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00065	Richmond North (39T-04513)	2015	$4.4			$4.4	0.0%	$0.0	$4.4	25.0%	$1.1	$.3	$3.0	$.4	$2.5	100.0%	$2.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00066	Kenmore Subdivision (39T-08502)	2015	$23.9			$23.9	0.0%	$0.0	$23.9	25.0%	$6.0	$1.8	$16.1	$2.3	$13.8	100.0%	$13.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00067	Meddaoui/Wickerson (39T-08507)	2015	$25.9			$25.9	0.0%	$0.0	$25.9	25.0%	$6.5	$1.9	$17.5	$2.5	$14.9	100.0%	$14.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00068	Stanton Lands (39T-11503)	2015	$5.9			$5.9	0.0%	$0.0	$5.9	25.0%	$1.5	$.4	$4.0	$.6	$3.4	100.0%	$3.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00069	Monarch (39T-99515)	2015	$53.7			$53.7	0.0%	$0.0	$53.7	25.0%	$13.4	$4.0	$36.2	$5.3	$31.0	100.0%	$31.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00070	Woodhull (39T-03511)	2016	$3.4			$3.4	0.0%	$0.0	$3.4	25.0%	$.9	$.3	$2.3	$.3	$2.0	100.0%	$2.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00071	Claybar Subdivision (39T-04503)	2016	$6.3			$6.3	0.0%	$0.0	$6.3	25.0%	$1.6	$.5	$4.3	$.6	$3.7	100.0%	$3.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00072	Clarke Subdivision (39T-05511)	2016	$149.3			$149.3	0.0%	$0.0	$149.3	25.0%	$37.3	$11.2	$100.8	$14.7	$86.1	100.0%	$86.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00073	Ross Lands South (39T-07502)	2016	$28.8			$28.8	0.0%	$0.0	$28.8	25.0%	$7.2	$2.2	$19.4	$2.8	$16.6	100.0%	$16.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00074	CPRI (B-OS-16)	2016	$1,219.7			$1,219.7	0.0%	$0.0	$1,219.7	25.0%	$304.9	$91.5	$823.3	$119.8	$703.5	100.0%	$703.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00075	Kent Subdivision (39T-04510)	2017	$17.6			$17.6	0.0%	$0.0	$17.6	25.0%	$4.4	$1.3	$11.9	$1.7	$10.1	100.0%	$10.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00076	Applewood (39T-09501)	2017	$2.0			$2.0	0.0%	$0.0	$2.0	25.0%	$.5	$.1	$1.3	$.2	$1.1	100.0%	$1.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00077	Sergautis/Applewood (39T-11502)	2017	$14.6			$14.6	0.0%	$0.0	$14.6	25.0%	$3.7	$1.1	$9.9	$1.4	$8.4	100.0%	$8.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00078	Summerside (39T-92020)	2018	$81.0			$81.0	0.0%	$0.0	$81.0	25.0%	$20.2	$6.1	$54.7	$8.0	$46.7	100.0%	$46.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00079	3408 Southwinds Dr (39T-09503)	2019	$310.3			$310.3	0.0%	$0.0	$310.3	25.0%	$77.6	$23.3	$209.4	$30.5	$179.0	100.0%	$179.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00080	Centre Street/Drewlo (39T-12501)	2019	$339.1			$339.1	0.0%	$0.0	$339.1	25.0%	$84.8	$25.4	$228.9	$33.3	$195.6	100.0%	$195.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00081	Meadowlily Secondary Pl (B-OS-03)	2019	$48.8			$48.8	0.0%	$0.0	$48.8	25.0%	$12.2	$3.7	$32.9	$4.8	$28.1	100.0%	$28.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00082	Future Open Space Parks	2020	$634.2			$634.2	0.0%	$0.0	$634.2	25.0%	$158.6	$47.6	$428.1	$62.3	$365.8	100.0%	$365.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00083	Auburn Col. Talbot (39T-12503)	2020	$136.6			$136.6	0.0%	$0.0	$136.6	25.0%	$34.2	$10.2	$92.2	$13.4	$78.8	100.0%	$78.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00084	LPH Dundas (B-OS-25)	2020	$73.2			$73.2	0.0%	$0.0	$73.2	25.0%	$18.3	$5.5	$49.4	$7.2	$42.2	100.0%	$42.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00085	Corlon Sunninglea (B-OS-19)	2021	$926.9			$926.9	0.0%	$0.0	$926.9	25.0%	$231.7	$69.5	$625.7	$91.0	$534.6	100.0%	$534.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00086	Future Open Space Parks	2022	$844.0			$844.0	0.0%	$0.0	$844.0	25.0%	$211.0	$63.3	$569.7	$82.9	$486.8	100.0%	$486.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$5,146.5			$5,146.5		$0.0	$5,146.5		$1,286.6	$386.0	$3,473.9	$505.5	$2,968.4		$2,968.4		$0.0		$0.0		$0.0
	Sports Parks																						
DC14-PR00087	Southwest Sports Pk (B-SP-28)	2016	$1,253.2			$1,253.2	0.0%	$0.0	$1,253.2	25.0%	$313.3	$94.0	$845.9	$123.1	$722.8	100.0%	$722.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00088	Kilally Sports Fields (B-SP-27)	2016	$3,230.9			$3,230.9	0.0%	$0.0	$3,230.9	25.0%	$807.7	$242.3	$2,180.9	$317.3	$1,863.5	100.0%	$1,863.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00089	Meadowlily Secondary Pl (B-SP-06)	2019	$176.2			$176.2	0.0%	$0.0	$176.2	33.0%	$58.2	$11.8	$106.3	$15.5	$90.8	100.0%	$90.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00090	Future Sports Parks	2020	$1,253.2			$1,253.2	10.0%	$125.3	$1,127.9	30.0%	$338.4	$79.0	$710.6	$103.4	$607.2	100.0%	$607.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$5,913.5			$5,913.5		$125.3	$5,788.2		$1,517.5	$427.1	$3,843.6	$559.3	$3,284.3		$3,284.3		$0.0		$0.0		$0.0
	Pedestrian Crossing																						
DC14-PR00091	Richmond Road Pedestrian Crossing (B-OS-30)	2016	$1,406.0			$1,406.0	10.0%	$140.6	$1,265.4	25.0%	$316.3	$94.9	$854.1	$124.3	$729.9	100.0%	$729.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$1,406.0			$1,406.0		$140.6	$1,265.4		$316.3	$94.9	$854.1	$124.3	$729.9		$729.9		$0.0		$0.0		$0.0
	Thames Valley Parkway																						
DC14-PR00092	Drewlo Edge Valley (39T-05505)	2015	$356.9			$356.9	0.0%	$0.0	$356.9	25.0%	$89.2	$26.8	$240.9	$35.1	$205.9	100.0%	$205.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00093	Old Victoria (39T-05505)	2015	$585.6			$585.6	0.0%	$0.0	$585.6	25.0%	$146.4	$43.9	$395.3	$57.5	$337.7	100.0%	$337.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00094	Old Victoria Hospital TVP (Plan-TVP-32)	2015	$474.0			$474.0	0.0%	$0.0	$474.0	25.0%	$118.5	$35.6	$320.0	$46.6	$273.4	100.0%	$273.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00095	Hydro Lands TVP (Plan-TVP-35)	2017	$312.3			$312.3	0.0%	$0.0	$312.3	25.0%	$78.1	$23.4	$210.8	$30.7	$180.1	100.0%	$180.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00096	CPRI (B-TVP-15)	2018	$725.0			$725.0	0.0%	$0.0	$725.0	25.0%	$181.2	$54.4	$489.4	$71.2	$418.2	100.0%	$418.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00097	Norquay South/Riverbend (B-TVP-14)	2018	$780.8			$780.8	0.0%	$0.0	$780.8	25.0%	$195.2	$58.6	$527.0	$76.7	$450.3	100.0%	$450.3	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00098	Future TVP	2020	$278.8			$278.8	10.0%	$27.9	$251.0	25.0%	$62.7	$18.8	$169.4	$24.6	$144.7	100.0%	$144.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00099	Centre Street/Drewlo (39T-12501)	2021	$278.8			$278.8	20.0%	$55.8	$223.1	25.0%	$55.8	$16.7	$150.6	$21.9	$128.7	100.0%	$128.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00100	Future TVP	2021	$278.8			$278.8	20.0%	$55.8	$223.1	25.0%	$55.8	$16.7	$150.6	$21.9	$128.7	100.0%	$128.7	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00101	Future TVP	2022	$278.8			$278.8	30.0%	$83.7	$195.2	25.0%	$48.8	$14.6	$131.8	$19.2	$112.6	100.0%	$112.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00102	Future TVP	2023	$278.8			$278.8	30.0%	$83.7	$195.2	25.0%	$48.8	$14.6	$131.8	$19.2	$112.6	100.0%	$112.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$4,628.7			$4,628.7		$306.7	$4,322.0		$1,080.5	$324.2	$2,917.4	$424.5	$2,492.9		$2,492.9		$0.0		$0.0		$0.0
	Environmentally Significant Areas																						
DC14-PR00103	Felner Subdivision Medway (39T-06510)	2014	$41.7			$41.7	0.0%	$0.0	$41.7	33.0%	$13.8	$2.8	$25.1	$3.7	$21.5	100.0%	$21.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0

Table F-2: Parks and Recreation

Service component : **Parks & Recreation - Parkland Development**

Planning horizon for this component : **2014-2023**

Project #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL: Residential %	NON - RESIDENTIAL: Residential $	NON - RESIDENTIAL: Commercial %	NON - RESIDENTIAL: Commercial $	NON - RESIDENTIAL: Institutional %	NON - RESIDENTIAL: Institutional $	NON - RESIDENTIAL: Industrial %	NON - RESIDENTIAL: Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) '7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
DC14-PR00104	Old Victoria - ESA (39T-09502)	2015	$8.8			$8.8	0.0%	$0.0	$8.8	33.0%	$2.9	$0.6	$5.3	$0.8	$4.5	100.0%	$4.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00105	Sergautis/Applewood (39T-11052)	2016	$52.1			$52.1	0.0%	$0.0	$52.1	33.0%	$17.2	$3.5	$31.4	$4.6	$26.8	100.0%	$26.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00106	CPRI (B-ESA-16)	2016	$57.8			$57.8	0.0%	$0.0	$57.8	33.0%	$19.1	$3.9	$34.9	$5.1	$29.8	100.0%	$29.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00107	Ross Lands North (39T-07502)	2017	$18.2			$18.2	0.0%	$0.0	$18.2	33.0%	$6.0	$1.2	$11.0	$1.6	$9.4	100.0%	$9.4	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00108	Riverbend South Warbler Wds (B-ESA-10	2018	$82.6			$82.6	0.0%	$0.0	$82.6	33.0%	$27.2	$5.5	$49.8	$7.2	$42.5	100.0%	$42.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00109	Meadowlily Secondary Pln (B-OS-03)	2019	$16.5			$16.5	0.0%	$0.0	$16.5	33.0%	$5.4	$1.1	$10.0	$1.4	$8.5	100.0%	$8.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00110	Riverbend - Kains ESA at west limit (B-ES	2019	$123.8			$123.8	0.0%	$0.0	$123.8	33.0%	$40.9	$8.3	$74.7	$10.9	$63.8	100.0%	$63.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00111	Future ESAs	2019	$126.3			$126.3	0.0%	$0.0	$126.3	33.0%	$41.7	$8.5	$76.2	$11.1	$65.1	100.0%	$65.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00112	Future ESAs	2021	$126.3			$126.3	0.0%	$0.0	$126.3	33.0%	$41.7	$8.5	$76.2	$11.1	$65.1	100.0%	$65.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-PR00113	Future ESAs	2023	$126.3			$126.3	0.0%	$0.0	$126.3	33.0%	$41.7	$8.5	$76.2	$11.1	$65.1	100.0%	$65.1	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
			$780.4			$780.4		$0.0	$780.4		$257.5	$52.3	$470.6	$68.5	$402.1		$402.1		$0.0		$0.0		$0.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT		$0.0			$0.0		$0.0	$0.0		$0.0	$0.0	$0.0	$0.0	$0.0		$0.0		$0.0		$0.0		$0.0
TOTAL			**$40,133.0**	**$.0**	**$.0**	**$40,133.0**	**3.1%**	**$1,257.4**	**$38,875.6**	**34.3%**	**$13,337.2**	**$2,553.8**	**$22,984.5**	**$3,344.4**	**$19,640.2**	**100.0%**	**$19,640.2**	**0.0%**	**$.0**	**0.0%**	**$.0**	**0.0%**	**$.0**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$501.03
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$19,640.2
Growth needs before comparison to historical standard	$22,984.5
Excess Of Growth Needs Over Maximum Eligible	$3,344.4

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$1,057.6	100.0%	$1,057.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
Total net cost eligible for DC rate calculation purpose	$18,582.6	100.0%	$18,582.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 336.69**		**$ -**		**$ -**		**$ -**
			/person		/sq. m.		/sq. m.		/sq. m.

Pre- Financing Cost Residential Rates:

		Parkland Dev.
Single Family Dwelling	3.09	$ 1,040.38
Multiple unit dwelling	2.20	$ 740.73
Apartment - bach. & 1 bed	1.40	$ 471.37
Apartment - ≥ 2 bedroom	1.91	$ 643.08

Notes:

1) Non-growth share for Neighbourhood Parks, Urban Parks and Woodland Parks is 0% as they benefit and serve the immediate growth area and are typically located in new growth neighbourhoods. Open Space, ESAs, the Thames Valley Parkway, and Pedestrian Crossing are allocated a non-growth share reflective of these projects being routinely utilized by residents from other areas of the City due to parkland purpose or additions to an existing network that extends well beyond growing neighbourhoods. The non-growth share for District Parks reflects a gross estimate of the benefit and usage of the individual district park by persons in new developments and by existing residents. Due to the location and nature of Civic Spaces, a high non-growth share has been allocated reflecting the benefit to existing residents.

2) Amounts otherwise included in the DC rate calculations for this component are reduced based on limitations of the historical standard of service, as calculated in 'Supplement A' above.

3) Residential share of growth costs 100% (consistent with 2009 DC Study). Benefit to ICI sector considered negligible.

2014 Development Charges Background Study

Table F-3: Cash Flow Analysis & Final Rate Calculation

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Parks & Recreation**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 641.01	**$ 645.06**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)															
Commercial	167,034.2	$ -	**$ -**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258.0	$ -	**$ -**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	446,292.2				44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510.0	$ -	**$ -**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802.2				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$3,544.7	$2,800.3	$3,385.2	$1,148.5	$1,937.7	-$5,122.4	-$4,575.8	-$5,387.9	-$5,037.4	-$5,085.5	$3,544.7
Revenues - Development Charge Collections															
Residential					$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$35,601.9
Non-Res.															
Commercial					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Institutional					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
C/I subtotal					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Industrial					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Total Non-Res.					$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0
Total revenues					$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$3,560.2	$35,601.9
Development Charge draws - calculated on separate page					$4,359.6	$3,029.0	$5,836.2	$2,797.8	$10,573.2	$2,870.2	$4,225.1	$3,055.6	$3,458.7	$1,568.4	$41,773.8
Closing surplus / <deficit> before interest					$2,745.3	$3,331.5	$1,109.2	$1,910.9	-$5,075.3	-$4,432.4	-$5,240.7	-$4,883.3	-$4,935.9	-$3,093.7	-$2,627.2
Non-inflationary interest revenue /<expense>															
on savings	1.75%				$55.0	$53.7	$39.3	$26.8							$174.8
on borrowings	3.00%								-$47.1	-$143.3	-$147.2	-$154.1	-$149.6	-$122.7	-$764.0
Closing surplus / <deficit>					$2,800.3	$3,385.2	$1,148.5	$1,937.7	-$5,122.4	-$4,575.8	-$5,387.9	-$5,037.4	-$5,085.5	-$3,216.4	-$3,216.4

Target which reflects growth costs incurred in the forecast period and recoverable from future growth: -$3,216.4

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:

1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	100%	100%
Non-residential		
Commercial	0%	0%
Institutional	0%	0%
C/I subtotal	0%	0%
Industrial	0%	0%

APPENDIX G – TRANSIT

Conventional Service

The London Transit Commission is charged with the delivery of public transit services for the citizens of London. The present conventional service is a fixed route modified radial service. There are 38 routes plus one community bus operation with 4 routings defined by day. While service levels vary by route, by time of day and by day of week, overall service periods cover 18 hours a day on Monday to Saturday, and 15.5 hours a day on Sundays and Statutory Holidays. Currently, a total of 560,000 revenue service hours are provided annually to accommodate the 23.6 million annual passenger trips.

Efficient high quality public transit services contribute to the environmental health and economic competitiveness of a City, which benefits the entire community. Public transit services:

- provide Londoners with opportunity, choice and access to the community and employment opportunities;
- have a positive impact on the environment in terms of air quality;
- enable city-building by linking growth nodes and activity/employment centres;
- support, in concert with effective land use planning, the retention of natural green space that would otherwise be used to build new roads and/or parking lots;
- are a critical part of the solution to mitigate the negative economic and environmental impact of traffic congestion whether the negative impact be on business or on the environment; and,
- are supportive of building and maintaining a healthy downtown.

Bus Rapid Transit

In 2012, Municipal Council approved a new Transportation Master Plan for the City of London. The 2012 TMP was an integrated plan that sought to improve mobility for residents of the City by providing viable choices through all modes of travel. Household travel surveys conducted for the TMP demonstrated that public transit's modal share had reached 12.5%, exceeding the 10% target established in the 2004 TMP for 2024. The findings suggested that investments in transit infrastructure could significantly increase the share of non-automobile trip making and support a viable rapid transit system in the City. As a result, a new 2030 target of 20% mode share for transit was established, with the construction of a bus rapid transit (BRT) system providing the foundation for a more comprehensive transit system.

The approved TMP also established a target of 40% intensification for future residential growth to support investments in transit infrastructure and to defer a large number of arterial road projects that would be required without a rapid transit system.

The London Transit Commission will purchase and operate future transit vehicles, buildings and structures associated with the bus rapid transit system. Within the first 10 year period, it is anticipated that the first two "legs" of the BRT (Downtown north to Masonville Mall and Downtown south to White Oaks Mall) will be in service, including the construction of a Downtown transit terminal. Both the City of London and the London Transit Commission are seeking to obtain funding from the provincial and federal governments to pay for a combined 2/3rds of the costs of the BRT.

Existing Service Levels

In order to establish historical service levels required by the Development Charges Act, London Transit undertook an inventory and valuation of its current facilities and fleet and equipment over the past ten years. These measures are reflected in the tables of this Appendix and are discussed below.

(a) Facilities

Two facilities are operated by London Transit for a combined total of 384,560 square feet, consisting of the following:

Bus Storage	210,170 sq. ft.
Bus Maintenance	99,500 sq. ft.
Fueling/Washing	27,600 sq. ft.
Administration area	47,290 sq. ft.
Total all areas	384,560 sq. ft.

The attached tables provide an inventory and valuation of facilities for London Transit over the past ten years.

(b) Fleet

The attached tables provide a breakdown of the fleet by vehicle type and length, with associated replacement valuation, for the past ten years. Bus valuations were based upon 2013 costing and include accessory equipment cost. Over the past 10 years, the fleet has increased from 183 buses (2004) to 199 buses (2014).

(c) Equipment

London Transit equipment consists of electronic fare collection systems, automatic vehicle location and communication devices, security cameras and bike racks. For this study, the equipment costs are included in the costing of the fleet versus being shown separately.

Capacity

The London Transit Commission has extremely limited capacity in the existing network to address future growth needs. Over the last three years 2010 to 2013, ridership grew from 21.2 million to 23.7 million rides or 11.7% while revenue service hours grew from 538,000 to 558,000 or 3.7% for a ridership growth to service growth ratio of 3 to 1, which represents a significant spread. The significance of the ridership to service growth ratio in terms of service quality is evidenced by the following:

- 49% increase in service quality complaints (schedule adherence, overcrowding, missed passengers (no room on bus) for 2013 vs. 2010;
- the number of times the buses have been reported as overload, via the Automatic Vehicle Location system, full load counts for 2012 totalled 42,256 times while for 2013 they totalled 53,504 times, representing an increase of 27%;
- actual load count analysis shows that on a system-wide basis, actual loads exceed seated capacity for all time periods with the exception of Early AM. The exceeded seated capacity ranged from between 25% and 64%.

Capacity exists for existing transit storage facilities to meet the needs of future growth. No additional storage facilities are deemed to be required during the 10 year projection period.

Growth Allocations

As part of the Transportation Master Plan, population and employment growth was allocated to traffic zones throughout the City. This information was used by the London Transit Commission to identify vehicle and facility capital needs based on future growth locations. The capital needs projections are based on the recommendations contained in the Transportation Master Plan.

Growth Needs Projections

(a) Fleet

Over the 2014-2023 period, the north and south "legs" of the BRT will be completed and in service. A total of 22 buses will be purchased to accommodate growth for BRT purposes. It is anticipated that 2/3rds of the $24.8 million cost of the buses will be paid for from federal and provincial grants.

The fleet is projected to increase by 43 buses over the next ten years. The increase covers service to new growth areas and service expansion to existing service areas. Neither lifecycle replacement purchases nor costs associated with additional buses to increase the frequency of service on pre-existing routes are included in the capital plan for DC recovery.

Five (5) of the 43 buses are required to provide conventional transit service to growth areas of the city over the next 10 years.

Consistent with previous Development Charges Background Studies, transit vehicles identified for DC recovery are triggered by growth, providing service to growth areas and are not replacement vehicles. As a result, no benefit to existing development is allocated. This allocation also recognizes that the investments in transit vehicles increases the transit modal share, resulting in significant reductions in the arterial roads program identified in the 2014 Development Charges Background Study, thus reducing the overall growth costs of that program.

(b) Facilities

With the construction of the Wonderland Road facility in 2010, the London Transit Commission does not require any additional bus storage facilities within the 10 year horizon (2014-2023). In order to service the bus rapid transit system, however, the need for a Downtown transit terminal has been identified. The design and overall configuration of this facility is unknown at present, pending the completion of the BRT environmental assessment. As a result, the costs associated with the BRT Transit Terminal are preliminary estimates. It is anticipated that federal/provincial grant funding will be obtained for this facility to off-set costs that would normally be recoverable through development charges. Given that the transit terminal is being constructed to service the BRT routes, the terminal has the same benefit to existing development allocation as the BRT buses.

(c) Equipment

Each new bus purchased will be equipped with an electronic fare collection system, an automatic vehicle location and communication device, a security camera and a bike rack. These costs have been built into the bus purchasing costs identified in the attached tables.

Allocation of Growth Costs - Residential / Non –Residential

Transit service demands have been allocated to Residential and Non-Residential growth on the basis of population growth vs. employment Growth for the ten year time horizon of this study. This approach is consistent with the 2009 Development Charges Study.

Financing Costs Added to Arrive at Final Calculated DC Rate

For the purpose of calculating the development charge rate for this component inclusive of financing costs, the rate calculation table has been provided. This table simulates the cash flows in this component of the DC funds:

(a) It begins with the opening balance – in this case, a balance of $2.3 million which reflects uncommitted funds raised through prior development charge rates.
(b) Drawdowns for the growth share of projects being completed in the upcoming period
(c) An estimate of annual interest expenses that can be expected to be incurred due to fund deficits encountered throughout the planning horizon.

All figures are presented on an un-inflated, constant (2014) dollar basis. Interest rates which exclude the inflationary component (assumed to be 2%) are also used for consistency. The rates generated from this cash flow analysis reflect what is appropriately recovered from growth, for the planning horizon of this service.

The spreadsheet is programmed to solve for the DC rates such that the growth costs are recovered by the end of the planning horizon (in this case, 2023).

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been determined by a concentrated internal review and were reported to the London Transit Commission. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

Long Term Operating Costs

An examination of the long term operating costs for growth needs for Transit Services (DC) is included in Appendix O.

2014 Development Charges Background Study
TABLE G-1 - Transit Services - Measure of Existing Service Standards

SERVICE: TRANSIT

COMPONENT: FACILITIES

Contact person(s)
Unit of measure
Type of measure

Facility Name & Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/sq.ft.
450 Highbury Ave	248,060	248,060	248,060	248,060	248,060	253,300	248,060	248,060	248,060	248,060	**$150.67**
3508 Wonderland	0	0	0	0	0	0	0	136,500	136,500	136,500	**$165.98**
Total	248,060	248,060	248,060	248,060	248,060	253,300	248,060	384,560	384,560	384,560	

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	0.716835	0.710322	0.703926	0.698465	0.693099	0.702343	0.682609	1.050280	1.039520	1.028978

10 year average	
Quantity Standard per Capita	0.802638

Current Transit Facility Valuation - in Total and by component						
450 Highbury Ave		*Total*	*Office*	*Bus Storage*	*Bus Maintenance*	*Fueling / Washing*
Sq. footage (Note 3)		248,060	28,490	132,970	70,500	16,100
Facility replacement value / ft² (Note 4)		$126.64	$180	$100	$150	$150
Facility		$31,415,200	$5,128,200	$13,297,000	$10,575,000	$2,415,000
Equipment	5.0%	1,570,760	256,410	664,850	528,750	120,750
Land ($150,000/acre) - note 1	17.4	2,610,000	299,762	1,399,064	741,776	169,399
Subtotal		35,595,960	5,684,372	15,360,914	11,845,526	2,705,149
Parking, site work, landscaping	5.0%	1,779,798	284,219	768,046	592,276	135,257
Total		$37,375,758	$5,968,590	$16,128,959	$12,437,802	$2,840,406
Replacement value / ft²		**$150.67**	**$209**	**$121**	**$176**	**$176**

Current Transit Facility Valuation - in Total and by component						
3508 Wonderland		*Total*	*Office*	*Bus Storage*	*Bus Maintenance*	*Fueling / Washing*
Sq. footage (Note 3)		136,500	18,800	77,200	29,000	11,500
Facility replacement value / ft² (Note 4)		$125.85	$180	$100	$150	$150
Facility		$17,179,000	$3,384,000	$7,720,000	$4,350,000	$1,725,000
Equipment	5.0%	858,950	169,200	386,000	217,500	86,250
Land ($350,500/acre) - note 1	10.1	3,540,000	487,560	2,002,110	752,088	298,242
Subtotal		21,577,950	4,040,760	10,108,110	5,319,588	2,109,492
Parking, site work, landscaping	5.0%	1,078,898	202,038	505,405	265,979	105,475
Total		$22,656,848	$4,242,798	$10,613,515	$5,585,567	$2,214,966
Replacement value / ft²		**$165.98**	**$226**	**$137**	**$193**	**$193**
Wghted Avg. - Replacement value / ft²		**$156.11**				

NOTES:
1) Land values provided by Realty Services based on 2013 valuation.

2) Total value of facilities (next page) based on Weighted Average Replacement Costs including land; with 5% allowance for equipment and 5% allowance for parking, site works, and landscaping

3) Square footage of facilties are from inventory reports maintained by London Transit. Reductions in total sq. ft. are a a result of demolition of some structures to improve overall vehicle flow on property.

4) $/sq.ft. estimates were provided by London Transit Commission based on costs associated with the Wonderland Road facility and based on previous estimates provided by Spriet and Associates.

2014 Development Charges Background Study
TABLE G-1 - Transit Services - Measure of Existing Service Standards

SERVICE: TRANSIT

COMPONENT: FACILITIES

Contact person(s)
Unit of measure
Type of measure

Facility Name - Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
450 Highbury Ave	$37,375	$37,375	$37,375	$37,375	$37,375	$38,165	$37,375	$37,375	$37,375	$37,375
3508 Wonderland	$0	$0	$0	$0	$0	$0	$0	$22,656	$22,656	$22,656
Total	$37,375	$37,375	$37,375	$37,375	$37,375	$38,165	$37,375	$60,031	$60,031	$60,031

Population	346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service	$108.01	$107.02	$106.06	$105.24	$104.43	$105.82	$102.85	$163.95	$162.27	$160.63

10 year average	
Quality & Quantity Standard per Capita	$122.63

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$122.63
DC rate eligible amount (gross)	$4,807,096

Source : Values compiled by London Transit.

2014 Development Charges Background Study
TABLE G-1 - Transit Services - Measure of Existing Service Standards

SERVICE: TRANSIT

COMPONENT: VEHICLES

Contact person(s) Kelly Paleczny
Unit of measure Number of Vehicles
Type of measure Quantity

Vehicle Type	*bus length (in feet)*	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013 $/item
40 foot standard floor - diesel	*40*	75	58	55	55	53	38	27	13	0	0	$486,000
40 foot low floor - natural gas	*40*	36	34	24	12	0	0	0	0	0	0	$486,000
26 foot Orion	*26*	7	7	7	7	7	0	0	0	0	0	$486,000
40 foot low floor - diesel	*40*	62	81	99	112	126	142	150	161	170	169	$486,000
60 foot low floor - diesel	*60*	3	3	3	4	6	6	6	8	10	12	$745,400
40 foot low floor - hybrid	*40*	0	0	0	0	0	0	4	6	8	10	$724,000
30 foot low floor - diesel	*30*	0	0	0	0	0	4	4	4	4	4	$486,000
Total number of buses		183	183	188	190	192	190	191	192	192	195	

Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service - buses per capita		0.000529	0.000524	0.000533	0.000535	0.000536	0.000527	0.000526	0.000524	0.000519	0.000522

10 year average	
Quantity Standard per Capita - Buses	0.000528

Sources: Values and quantity of vehicles taken from Transit inventory reports

NOTES:
1) Estimated cost of buses are inclusive of all ancillary equipment required to place a bus in service (i.e. radio, smart bus technology, fare box).
2) Cost (2013 values) make up as provided by LTC:

Vehicle size	26' LF Diese	40' LF -CNG	40' Std - Diesel	40' LF Diesel	60' LF Diesel	40' LF Hybrid	30' LF Diesel	
Bus including post delivery inspection	433,900	433,900	433,900	433,900	693,300	671,900	433,900	
Electronic fare collection system	12,000	12,000	12,000	12,000	12,000	12,000	12,000	
Automatic vehicle location and communication	35,000	35,000	35,000	35,000	35,000	35,000	35,000	(includes equipment on bus as well as supporting
Security Cameras	4,100	4,100	4,100	4,100	4,100	4,100	4,100	system software and hardware)
Bike Rack	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	486,000	486,000	486,000	486,000	745,400	724,000	486,000	

2014 Development Charges Background Study

TABLE G-1 - Transit Services - Measure of Existing Service Standards

SERVICE: TRANSIT COMPONENT: VEHICLES

Contact person(s) Kelly Paleczny
Unit of measure 2013 Replacement Value ($thousands)
Type of measure Quality & Quantity

Vehicle Type		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
40 foot standard floor - diesel		$36,450	$28,188	$26,730	$26,730	$25,758	$18,468	$13,122	$6,318	$0	$0
40 foot low floor - natural gas		$17,496	$16,524	$11,664	$5,832	$0	$0	$0	$0	$0	$0
26 foot Orion		$3,402	$3,402	$3,402	$3,402	$3,402	$0	$0	$0	$0	$0
40 foot low floor - diesel		$30,132	$39,366	$48,114	$54,432	$61,236	$69,012	$72,900	$78,246	$82,620	$82,134
60 foot low floor - diesel		$2,236	$2,236	$2,236	$2,982	$4,472	$4,472	$4,472	$5,963	$7,454	$8,945
40 foot low floor - hybrid		$0	$0	$0	$0	$0	$0	$2,896	$4,344	$5,792	$7,240
30 foot low floor - diesel		$0	$0	$0	$0	$0	$1,944	$1,944	$1,944	$1,944	$1,944
Total		$89,716	$89,716	$92,146	$93,378	$94,868	$93,896	$95,334	$96,815	$97,810	$100,263
Population		346,049	349,222	352,395	355,150	357,900	360,650	363,400	366,150	369,940	373,730
Per Capita Level of Service		$259.26	$256.90	$261.48	$262.93	$265.07	$260.35	$262.34	$264.41	$264.39	$268.28

10 year average	
Quality & Quantity Standard per Capita	$262.54

DC Eligible amount (before adjustments)	
Net Forecast Pop'n - 10 yr.	39,200
$ per capita	$262.54
DC rate eligible amount (gross)	$10,291,568

Sources: Values and quantity of vehicles taken from Transit inventory reports

2014 Development Charges Background Study

Table G-2: Transit Service

Service component : **Transit - Facility**

Planning horizon for this component : **2014-2023**

Amount Eligible for Development Charge Rate Calculations																*Allocation of Net Amount to types of Growth*									
											Non-growth share							RESIDENTIAL		NON - RESIDENTIAL						
																		Residential		Commercial		Institutional		Industrial	
Project #	*Project Description*	*Expected Year*	*Total Estimated Cost*	*Less: future capital grants, subsidies or other contributions anticipated*	*Less: Portion of Gross Project Cost Funded In Prior Years*	*Subtotal*	*Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)*	*Subtotal*	%	benefit	*Less: 10% statutory deduction (if applicable)*	*Subtotal*	*Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)*	*Net Amount Eligible for DC rate calculation*	%	$	%	$	%	$	%	$
			(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*
	(all $'s in ,000's)					*(1) - sum(2,3)*		*(4) * (5)*	*(4) - (6)*		*(7) * (8)*	*[(7) - (9)] * 10%*	*(7) - sum(9,10)*		*(11) - (12)*		*(13) * (14)*		*(13) * (16)*		*(13) * (18)*		*(13) * (20)*
Anticipated and Planned Projects				*Note 1*			*Note 2*			*Note 3*						*Note 4*		*Note 4*		*Note 4*		*Note 4*	
DC14-TS00001	Downtown BRT Transit Terminal	2018	$5,000.0	$3,350.0		$1,650.0	52.4%	$864.6	$785.4	0.0%	$0.0	$78.5	$706.9	$0.0	$706.9	73.8%	$521.3	7.9%	$56.1	8.1%	$57.1	10.2%	$72.3
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT					$0.0			$0.0				$0.0		$0.0		$0.0		$0.0		$0.0		$0.0
TOTAL			**$5,000.0**	**$3,350.0**	**$0.0**	**$1,650.0**	**52.4%**	**$864.6**	**$785.4**	**0.0%**	**$0.0**	**$78.5**	**$706.9**	**$0.0**	**$706.9**	**73.8%**	**$521.3**	**7.9%**	**$56.1**	**8.1%**	**$57.1**	**10.2%**	**$72.3**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$122.63
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$4,807.1
Current Growth Needs	$706.9
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

	Residential		Commercial		Institutional		Industrial	
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$134.3	80.9%	$108.6	13.8%	$18.6	5.3%	$7.1	0.0%	$0.0
Total net cost eligible for DC rate calculation purposes	$572.5	72.1%	$412.7	6.6%	$37.5	8.7%	$50.0	12.6%	$72.3
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 7.48** /person		**$ 0.22** /sq. m.		**$ 0.18** /sq. m.		**$ 0.16** /sq. m.

	Prefinancing - financing costs to be added		**Calculated Residential DC Rate -**			**Existing Res. Rate with financing included**
			Facility	*Vehicle*	*Total*	*Jan 1, 2014 rate*
Single Family Dwelling	3.09	$	23.10	$295.35	$ 318.46	$ 243.15
Multiple unit dwelling	2.20	$	16.45	$295.35	$ 311.80	$ 173.83
Apartment - bach. & 1 bed	1.40	$	10.47	$210.28	$ 220.75	$ 103.47
Apartment - ≥ 2 bedroom	1.91	$	14.28	$133.82	$ 148.10	$ 145.89

Notes:

1) Rate calculations assume 2/3 funding from Provincial/Federal sources.
2) The Bus Rapid Transit (BRT) Terminal future benefit is based on the total number of BRT buses that will use the facility upon BRT completion. The north and south legs of the BRT are anticipated to be constructed within the 10 year timeframe (2014-2023). The east and west leg BRT buses (44 of the 84 BRT buses) are anticipated to be purchased beyond the current DC planning horizon (ie. 52.4%).
3) There is no non-growth benefit for the BRT Transit Terminal. The terminal is required to achieve an improved transit modal split, and avoid the construction of additonal capacity on City roads. The non-growth split applied to additional capacity on arterial roads is generally based on the percentage of the road work that represents rehabilitation of existing lanes - that split is not applicable to the bus terminal, as the terminal to be constructed represents entirely new capacity. This project may be subject to re-classification pending the outcome of the Downtown Master Plan and the BRT Environmental Assessment
4) Residential / Institutional / Commercial / Industrial splits based on ratio of Population growth to Employment growth for the ten(10) year planning horizon for this service

2014 Development Charges Background Study

Table G-2: Transit Service

Service component : **Transit - Vehicle**

Planning horizon for this component : **2014-2023**

Amount Eligible for Development Charge Rate Calculations														*Allocation of Net Amount to types of Growth*							
									Non-growth share					RESIDENTIAL		NON - RESIDENTIAL					
														Residential		Commercial		Institutional		Industrial	
Project # Project Description	*Expected Year*	*Total Estimated Cost*	*Less: future capital grants, subsidies or other contributions anticipated*	*Less: Portion of Gross Project Cost Funded In Prior Years*	*Subtotal*	*Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)*	*Subtotal*	%	benefit	*Less: 10% statutory deduction (if applicable)*	*Subtotal*	*Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)*	*Net Amount Eligible for DC rate calculation*	%	$	%	$	%	$	%	$
(all $'s in ,000's)		*(1)*	*(2)*	*(3)*	*(4)* *(1) - sum(2,3)*	*(5)*	*(6)* *(4) * (5)*	*(7)* *(4) - (6)*	*(8)*	*(9)* *(7) * (8)*	*(10)* *[(7) - (9)] * 10%*	*(11)* *(7) - sum(9,10)*	*(12)*	*(13)* *(11) - (12)*	*(14)*	*(15)* *(13) * (14)*	*(16)*	*(17)* *(13) * (16)*	*(18)*	*(19)* *(13) * (18)*	*(20)*	*(21)* *(13) * (20)*
Anticipated and Planned Projects		*Note 1*	*Note 2*			*Note 3*									*Note 4*		*Note 4*		*Note 4*		*Note 4*	
DC14-TS00002 North Leg BRT Buses (10 - 40' buses; 9 - 60' buses)	2019	$11,750.0	$7,872.5		$3,877.5	0.0%	$.0	$3,877.5	0%	$.0	$387.8	$3,489.8	$.0	$3,489.8	73.8%	$2,573.7	7.9%	$277.1	8.1%	$281.9	10.2%	$357.0
DC14-TS00003 South Leg BRT Buses (11 - 40' buses; 10 - 60' buses)	2021	$13,000.0	$8,710.0		$4,290.0	0.0%	$.0	$4,290.0	0%	$.0	$429.0	$3,861.0	$.0	$3,861.0	73.8%	$2,847.5	7.9%	$306.5	8.1%	$311.9	10.2%	$395.0
DC14-TS00004 40' Low Floor Diesel Bus	2015	$479.6			$479.6	0.0%	$.0	$479.6	0%	$.0	$48.0	$431.6	$.0	$431.6	73.8%	$318.3	7.9%	$34.3	8.1%	$34.9	10.2%	$44.2
DC14-TS00005 40' Low Floor Diesel Bus	2016	$479.6			$479.6	0.0%	$.0	$479.6	0%	$.0	$48.0	$431.6	$.0	$431.6	73.8%	$318.3	7.9%	$34.3	8.1%	$34.9	10.2%	$44.2
DC14-TS00006 40' Low Floor Diesel Bus	2018	$479.6			$479.6	0.0%	$.0	$479.6	0%	$.0	$48.0	$431.6	$.0	$431.6	73.8%	$318.3	7.9%	$34.3	8.1%	$34.9	10.2%	$44.2
DC14-TS00007 40' Low Floor Diesel Bus	2021	$479.6			$479.6	0.0%	$.0	$479.6	0%	$.0	$48.0	$431.6	$.0	$431.6	73.8%	$318.3	7.9%	$34.3	8.1%	$34.9	10.2%	$44.2
DC14-TS00008 40' Low Floor Diesel Bus	2022	$479.6			$479.6	0.0%	$.0	$479.6	0%	$.0	$48.0	$431.6	$.0	$431.6	73.8%	$318.3	7.9%	$34.3	8.1%	$34.9	10.2%	$44.2
PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT				$.0								$.0	$.0			$.0		$.0		$.0		$.0
TOTAL		**$27,148.0**	**$16,582.5**	**$.0**	**$10,565.5**	**0.0%**	**$.0**	**$10,565.5**	**0.0%**	**$.0**	**$1,056.6**	**$9,509.0**	**$.0**	**$9,509.0**	**73.8%**	**$7,012.9**	**7.9%**	**$755.0**	**8.1%**	**$768.2**	**10.2%**	**$972.9**

Supplement A
Existing Service Standard Limitation

Existing Service Standard Measure	$262.54
Net Growth Projection	39,200
Maximum Eligible Amount For DC Rate Calculation	$10,291.6
Current Growth Needs	$9,509.0
Excess Of Growth Needs Over Maximum Eligible	$.0

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$2,148.5	80.9%	$1,737.5	13.8%	$297.3	5.3%	$113.7	0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$7,360.5	71.7%	$5,275.4	6.2%	$457.6	8.9%	$654.6	13.2%	$972.9
Divided By: Total Gross Growth Projections			55,191		167,034		279,258		456,510
Calculated DC Rate - Pre-Financing			**$ 95.58** /person		**$ 2.74** /sq. m.		**$ 2.34** /sq. m.		**$ 2.13** /sq. m.

Pre- Financing Cost Residential Rates:

		Vehicle
Single Family Dwelling	3.09	$ 295.35
Multiple unit dwelling	2.20	$ 210.28
Apartment - bach. & 1 bed	1.40	$ 133.82
Apartment - ≥ 2 bedroom	1.91	$ 182.56

Notes:

1) New buses required to facilitate increase transit modal split, and avoid cost of additional lane capacity required as a result of growth. Replacement vehicles that do not add capacity are not eligible for DC funding. The capital program for new vehicles reflected herein does not exceed the historical service standard.
2) Rate calculations assume 2/3 funding from Provincial/Federal sources.
3) No future growth benefits due to the cyclical nature of vehicle additions. Costs associated with annual vehicle additions are incurred to meet current growth needs.
4) Residential / Institutional / Commercial / Industrial splits based on ratio of Population growth to Employment growth for the ten(10) year planning horizon for this service

2014 Development Charges Background Study

Table G-3: Cash Flow Analysis & Final Rate Calculation Transit Service

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Transit**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
		Pre-Financing DC Rate	**Post-Financing DC Rate**	% Collected assumption	Growth projection for each year of forecast period										
Planning Horizon - yrs	10														
Growth - Res. (Persons In New Housing)	55,191	$ 103.06	**$ 99.24**	100%	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	5,519.1	55,191.4
Growth - Non-Res. (sq. m.)			**$ -**												
Commercial	167,034.2	$ 2.96	**$ 2.85**	100%	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	16,703.4	167,034.2
Institutional	279,258.0	$ 2.52	**$ 2.43**	100%	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	27,925.8	279,258.0
C/I subtotal	446,292.2		**$ -**		44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	44,629.2	446,292.2
Industrial	456,510.0	$ 2.29	**$ 2.20**	100%	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	45,651.0	456,510.0
Total Non-Res.	902,802.2				90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	90,280.2	902,802.2
Reserve Fund Projections:															
Opening Surplus / <Deficit>					$2,282.8	$3,093.3	$3,482.6	$3,878.7	$4,717.1	$3,636.8	$950.7	$1,737.9	-$1,791.7	-$1,508.2	$2,282.8
Revenues - Development Charge Collections															
Residential					$547.7	$547.7	$547.7	$547.7	$547.7	$547.7	$547.7	$547.7	$547.7	$547.7	$5,477.1
Non-Res.															
Commercial					$47.7	$47.7	$47.7	$47.7	$47.7	$47.7	$47.7	$47.7	$47.7	$47.7	$476.8
Institutional					$67.8	$67.8	$67.8	$67.8	$67.8	$67.8	$67.8	$67.8	$67.8	$67.8	$678.4
C/I subtotal					$115.5	$115.5	$115.5	$115.5	$115.5	$115.5	$115.5	$115.5	$115.5	$115.5	$1,155.2
Industrial					$100.6	$100.6	$100.6	$100.6	$100.6	$100.6	$100.6	$100.6	$100.6	$100.6	$1,006.4
Total Non-Res.					$216.2	$216.2	$216.2	$216.2	$216.2	$216.2	$216.2	$216.2	$216.2	$216.2	$2,161.6
Total revenues					$763.9	$763.9	$763.9	$763.9	$763.9	$763.9	$763.9	$763.9	$763.9	$763.9	$7,638.7
Development Charge draws - calculated on separate page					$.0	$431.6	$431.6	$.0	$1,916.6	$3,489.8	$.0	$4,292.6	$431.6	$.0	$10,994.0
Closing surplus / <deficit> before interest					$3,046.7	$3,425.5	$3,814.8	$4,642.5	$3,564.3	$910.9	$1,714.6	-$1,790.9	-$1,459.5	-$744.4	$17,124.6
Non-inflationary interest revenue /<expense>															
on savings	1.75%				$46.6	$57.0	$63.9	$74.6	$72.5	$39.8	$23.3				$377.7
on borrowings	3.00%											-$.8	-$48.8	-$33.8	-$83.4
Closing surplus / <deficit>					$3,093.3	$3,482.6	$3,878.7	$4,717.1	$3,636.8	$950.7	$1,737.9	-$1,791.7	-$1,508.2	-$778.1	-$778.1

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$778.1

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate,"*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	72%	72%
Non-residential		
Commercial	6%	6%
Institutional	9%	9%
C/I subtotal	15%	15%
Industrial	13%	13%

APPENDIX H –ROADS SERVICES

The 2014 Transportation Development Charge Background Study prepared by AECOM formed the basis for determining the Major CSRF Roadworks growth costs and Minor CSRF Roadworks costs used in the DC rate calculation. Planning for Major Roadworks is undertaken through a master planning process, with the City's most recent Transportation Master Plan (London 2030 TMP) completed in 2013. An objective of the update was to identify the Major Roadworks needed to meet 20 year growth requirements. The outputs of this work drove the needs incorporated into 2014 Transportation Development Charge Background Study. The Major Roadworks include:

- the identification of required Major Roadworks;
- their prioritization over a 20 year growth period;
- related costs for construction of the recommended improvements; and
- implementation of programs, studies and new initiatives.

The Minor Roadworks include all the following works save and except those projects included in the UWRF calculation (APPENDIX I –Urban Works Reserve Fund Grandfathered Works):

- traffic signalization;
- minor intersection improvements and channelization;
- sidewalk and/or street lighting elements; and
- the oversizing of Local and Secondary Collector roads to Primary Collector and Arterial Road status.

This appendix summarizes the methods applied to develop the Roads Services component of the 2014 Development Charge. More detailed information is available in the AECOM 2014 Transportation Development Charge Background Study.

Policy Considerations

The Transportation Development Charge Background Study was prepared to ensure the provision of sufficient funding for future growth related works for roads infrastructure. The following policies were used to establish the quantum of works included in the Roads Services development charge:

Major Roadworks (CSRF - Roads Services)

Major Transportation road works typically consist of large-scale arterial road widening projects or two lane road upgrades triggered by increased traffic volumes associated with growth across the City. All Major Transportation Roadworks are constructed by the City and the growth related cost is eligible for a claim from the CSRF - Roads Services.

The costs of the following items are incorporated into road projects and are required as a result of growth:

- Structures to be widened or replaced
- Noise barrier wall where required
- Land acquisition (raw land cost, appraisals, surveying, legal, etc.) but only where lands cannot be acquired through dedications under the Planning Act.

Minor Roadworks (CSRF - Roads Services)

Minor Road Works that would be constructed as part of the major road project are eligible to be claimed from the CSRF - Roads Services. These works include: new traffic signals, channelization, sidewalks, and streetlights. In some cases, these works are done in advance of the road capacity expansion project as a means of addressing a network wide benefit to growth, without completing the entire road expansion. These works do not include work already included in APPENDIX I –Urban Works Reserve Fund Grandfathered Works.

Arterial Road Extensions (CSRF - Roads Services)

When a development precedes the construction of a new arterial road that is either adjacent to or runs through the developable lands, the Developer is responsible for the construction of a primary collector road along the ultimate road right-of-way. A partial claim for this work may be made as per the primary road oversizing provisions for Minor Works - CSRF.

Minor Road Works - Road Oversizing (CSRF – Minor Roadworks)

Where a new arterial or primary collector road is to be constructed in whole or in part through or adjacent to a development, the Developer is responsible for the cost of constructing a secondary collector road as defined in the City of London's Design Specifications & Requirements Manual. If the required road is wider or at a higher standard, the Developer is responsible for the cost of a standard road, including sidewalks, street lights, etc., and is eligible for a claim to the CSRF – Minor Roadworks for the difference in cost between a standard secondary collector road and the road (arterial or primary collector) actually constructed. The construction responsibilities shall be defined by the conditions of an agreement between the City and the Developer. If the Developer wishes to construct the road at an enhanced standard beyond that acceptable to the City Engineer, then the Developer shall pay for the additional costs of enhancement with no eligibility for a claim from any fund.

Channelization (CSRF – Minor Roadworks)

Channelization on a primary or arterial road into a new public street is eligible for a claim from the CSRF – Minor Roadworks. The following subsections list the various additional components of the channelization which are considered claimable:

Tree Plantings
When replacement trees are planted as part of external roadworks to compensate for removed trees, other than those removed to facilitate an access, the cost of the removal and replacement is claimable. All other tree plantings are not claimable.

Ditching
When ditching and/or the installation of catchbasins is required to facilitate claimable external road work the drainage works may be incorporated in the minor roadworks claim to the CSRF.

Utility Relocations
Utility relocations necessitated by the claimable roadworks can be claimed upon providing a copy of the invoices from the utility and proof of payment in full. The City shall issue a letter to the utility company stating that this work is required by the City

under the Highway Act and will pay for 50% of cost of labor and trucking. This 50% share is claimable from the CSRF; the other 50% is the utility's share and is not claimable. Should the utility refuse to pay these costs, the 50% "utility share" shall be the responsibility of the proponent developer. Engineering fees associated with these relocations are not claimable.

Local Service Costs (Developer Cost)

The following subsections list the various road components which are considered a local service cost and therefore completed at the expense of the developer:

Connections
Connections of all public and private new streets, roads, ramps or entrances (including features and design details such as: round-abouts, culverts, signage, gateway treatments, noise wall alterations, sidewalks, bike lanes, bike pathways, paths, directional traffic islands, decorative features) to the existing road infrastructure;

Placing Fill
Re-grading, cutting and placing fill on lands beyond the road allowance along their frontage in accordance with City of London standards. In addition, all grading and restoration of road allowance along the development frontage if no claimable roadworks are required;

Topsoil and Sod
Topsoil and sod to the edge of any existing sidewalk fronting the development;

Tree Planting
Planting of new trees fronting the development, except as provided in the Minor Road Works - Road Oversizing or Channelization policies.

Sidewalk Reinforcement
Any upgrade or reinforcement from a standard 100mm thickness sidewalk across the development's new access;

Retaining Walls
Retaining walls along the development frontage, where acceptable to the City Engineer;

Temporary Works
100% of the cost of temporary asphalt sidewalks, roads, paths, swales along the frontage abutting arterial or primary collectors where installation in ultimate location is deemed premature;

Traffic Signals at Private Streets
Traffic signal installations at all private entrances and at public entrances which do not meet MTO warrants;

Other Works
Any other services, removals, relocations, etc., required including but not limited to, utility relocation, sidewalk alterations, and curb cuts;

Restoration and Damage
Restoration of any utility cuts, and or damage created by construction activities and /or construction traffic in and out of the development. including but not limited to daily removal of mud tracking, daily dust suppression, milling and paving of deteriorated asphalt caused by construction traffic, grading of gravel shoulders to remove rutting caused by construction traffic;

Noise Attenuation Measures
All noise berms, window streets, fences and privately maintained noise walls;

Grading and BMPs
Grading elements such as: swales, ditches, best management practices, (BMPs) and any other feature to address over land flow route needs created by the development's grading;

Paths and Walkways
Pedestrian paths, walkways, bridges, tunnels, including the related lighting and signage (Note: Parkways are constructed by the City and are specifically provided in the Development Charges Background Study);

Utility Upgrades
The costs related to the upgrading of any utility plant, or the relocation of the same, unless necessitated by the roadwork;

Relocation and Replacement Costs
The relocation and/or replacement costs of any encroachment on the City's road allowance or easement including but not limited to hedges, sprinklers systems and fences;

Street Lighting
Street lighting at intersections with existing roads where required by the development agreement.

Transportation Master Plan Update

The 2030 Transportation Master Plan (TMP) was developed to provide a comprehensive plan for road expansion needs based on growth projections. The primary scope of this TMP update was to build upon the recommendations from previous studies, incorporate the most recent strategic planning objectives of Council. Additional information on the TMP modeling, source of growth projections and modeling approach can be found in the AECOM Transportation Development Charge Background Study and the AECOM 2030 Transportation Master Plan Final Report.

Transportation Master Plan: Project Deferrals

In light of a large increase in the Roads component of the development charges rate over the rate calculated in 2009 Staff brought forward a report discussing an option for deferral of a number of projects outlined in the Transportation Master Plan. The following resolution was made by Council at its session held on February 25, 2014 (full report attached in Appendix "Q"):

*The Civic Administration **BE DIRECTED to** include revisions to the Transportation Master Plan schedule of approximately $115 million in projects beyond the twenty (20) year period; thereby reducing the draft single family residential rate by approximately $1,000 per single family home.*

It is staff's position that further reductions to the Development Charges rates are not possible without making significant changes to the proposed growth infrastructure programs. Staff have reviewed the various proposed capital infrastructure plans and identified the most acceptable projects for deferral beyond the 20 year period. These changes resulted in an approximately $115M of roads deferrals.

Project Identification

The methods used in identifying Major Roadworks and Two-lane Arterial Upgrades for the 2014-2033 review period are described below. Each required DC roadwork has been clearly identified in the project lists complete with ID, growth area, street segment, length, timing and growth/non-growth allocations.

a) Major Transportation Roadworks

Major Transportation Roadworks typically consist of large-scale arterial road widening projects triggered by increased traffic volumes associated with growth in the area. For each horizon year, model results were summarized on a screenline basis, and were compared to available capacity to determine if improvements were required. A deficiency was identified for any screenline where the ratio of volume to capacity was equal to or greater than 1.0 (LOS F) in the PM peak hour which means that the roadway is operating at 100% of its capacity. This is generally accepted as the threshold where improvements would be implemented in most urban municipalities.

The selection of recommended projects to address the deficiency was generally based on the recommended future improvements from the London 2030 TMP. The model was updated to include the recommended improvements for each deficiency and a new run was completed to determine if those improvements solved the problem. An iterative process was used to determine the optimum set of improvements for each horizon year. This work established an optimized implementation plan for the TMP projects based on 5 year increments of growth.

b) Two-Lane Arterial Upgrades

Existing rural roads in urbanizing areas of the City are not typically designed to withstand the increased traffic brought on by advancing development. As a result, these roads may require an upgrade from their existing condition to a two-lane urban cross-section. The Two-lane Arterial Upgrade projects identified in the Transportation DC Update were compiled based on needs identified in developing areas i.e. available community plans, draft approved plans of subdivision, subdivision servicing agreements as well as the City's GMIS. This information was used to project growth pressures and determine the Two-lane Arterial Upgrades required or proposed to be completed in the 20-year horizon with timing. The identified Two-lane Arterial Upgrades are listed in Table H-1.

c) Minor Transportation Roadworks

The Minor Roadworks identified in the Transportation DC Update were compiled based on materials provided to AECOM by the City including existing lists of project needs, growth

forecasts, available community plans, draft approved plans of subdivision, subdivision servicing agreements and other relevant sources. This information was used to assess growth pressures and determine the Minor Roadworks required or proposed to be completed within the 20-year horizon. Once the initial list of required works was prepared, it was cross-referenced against the other DC Master Plans (Sanitary, Storm Drainage, and Water) to create an integrated listing. Line items for each minor work category have been included in Table I-1. Further detail is available in the AECOM 2014 Transportation Development Charge Background Study.

Establishing Cost Estimates

The DC rate setting process requires the estimated costs assigned to identified growth works be reasonable and defensible. Prior to assigning costs, AECOM undertook a detailed costing analysis collecting industry cost indexes, previous project pricing, and recent tenders and then adjusting for inflation. All works have been cost estimated in 2014 dollars.

a) Major Transportation Roadworks

Each Major Roadwork project was considered to consist of some or all of the following components.

- Base cost per metre for the roadway construction cost based on the improvement (e.g., Two Lane Rural Arterial [2 LRA] to 5 Lane Urban Arterial [5 LUA] widening).
- Cost per square metre for structures (bridges, railroad overpasses, etc.) to be widened or replaced unless more detailed information from environmental assessment materials and/or preliminary design data was available.
- Cost per metre of noise barrier wall required.
- Cost for land acquisition per metre (raw land cost, on-site alterations, appraisals, surveying, and legal).
- Any complicated costs associated with railway diversions, bridges, Environmentally Sensitive Areas, large known utilities (high tension hydro towers), etc.

Each Major Roadworks project was assigned a utility relocation cost equal to 10% of the Net Roadway Construction Cost, and engineering and contingency costs equal to 15% and 10% of the Total Construction Cost, respectively.

Proposed unit costs for roadway construction, structures, and noise barrier walls are provided in 2014 dollars and were developed based either on pricing obtained on previous projects or recent cost estimates, with adjustments for annual construction cost escalation. A preliminary analysis of each project was undertaken by AECOM with preparation of base plan, draft alternative alignments and identification of complicated issues for drainage, traffic control, property acquisitions and major utilities.

b) 2-Lane Arterial Upgrades

Proposed unit costs per metre for two lane arterial roadway upgrades are provided in 2014 dollars and were derived by taking the unit costs from the previous Transportation DC Study and adjusting them for annual construction cost escalation. The proposed unit costs were back checked against recent tender information to confirm their validity.

Post-Period Benefit Adjustments Major: Transportation Roadworks

Post Period Benefit was determined with the consideration of the recommended timing of the project relative to the planning period for the DC Background Study In general, the following

table values where applied as a minimum with some individual projects receiving a higher PPB. Specifically, several projects outside the currently built out City have been provided up to a 50% PPB based on the expected utilization during the 20-year period on a project specific basis.

Project Timing	PPB%
0-5	10%
5-10	20%
10-15	30%
15-20	45%

Post-Period Benefit Adjustments: 2-Lane Arterial Upgrades

Network needs may require the placement of infrastructure outside of the UGB. Analogous to other services, the City's Global Service needs may have placed or routed in a manner that they are built on the edge outside of the UGB. In these cases, it's appropriate to credit the "Local PPB Needs" of secondary road connections.

The improvements of intersections on roads that lay on or near the urban growth boundary can lead to the improvement of intersection legs at or near future residential or commercial entrances. These developments will occur in the future but economies of scale suggest overall savings in constructing them now.

Post Period Benefit Considerations for Minor Roadworks

Due to the immediate nature of the need for minor roadworks to support imminent adjacent development the benefiting period for minor roadworks has been considered to align with the 20-year benefitting period outlined in the development charges study. As such no post period benefit exists for minor roadworks.

Allocation Splits

(a) Growth/Non-Growth

As per the previous DC Background Study and By-law, the BTE (Benefit to Existing also referred to as the Growth/Non-Growth split) determination for Major Roadworks and two lane arterial upgrades was based on the cost to rehabilitate existing roadways. The list of these roadways was based on the London 2030 TMP.

A review was undertaken by the City to determine how other municipalities in Ontario determine BTE (Growth/Non-Growth) allocations for roadway projects. It was generally found that most municipalities took a road rehabilitation or reconstruction cost credit approach to determine BTE (Growth/Non-Growth) allocation.

As a result of this, it was determined that BTE (Growth/Non-Growth) allocation would continue to be based on existing DC policy as reiterated for completeness below:

For road widenings including arterial, two lane arterial upgrades and BRT, required for increased traffic growth, BTE (Growth/Non-Growth) components were determined as follows:

- The 20 year rehabilitation costs for roadways in question shall be estimated and become the Non-Growth share for the DC calculation purposes. These rehabilitation credits were determined by calculating the cost of alternative roadway rehabilitation/replacement scenarios over the service life of the asphalt pavement and underlying granular road base (60 year timeframe assumed). The alternative that had the highest cost was pro-rated into a present value. In calculating the 20 year rehabilitation costs (2 lane = $489,000/km; 3 lane = $734,000/km; 4 lane = $979,000/km), roadway rehabilitations (milling and asphalt resurfacing), were considered to have a service life of 13.3 years. Full roadway reconstruction was considered to be required at 30 year intervals.
- 100% credit to the Non-Growth portion was provided for full rehabilitation assuming no additional life of pavement due to recent restorations, or extended service life due to premium mix designs or low equivalent single axle loads.

New roads which are a network need identified in the London 2030 TMP, have a 100% Growth benefit.

For the replacement of interchanges, the ratio share of existing foot print / proposed foot print on the structure is the Non-Growth share (including gore areas for ramps on the structure).

For new grade separations required for railway crossings where a bridge does not current exist, the ratio share of % delay attributed to Growth is taken as the Growth share. In this way, the non-growth share is attributed with the % of delays currently existing.

For the reconstruction of existing rail grade separations the ratio share of existing foot print / proposed foot print of the structure is the Non-Growth share.

Summarizing this approach for all roadworks, the Non-Growth component was calculated to range on a project basis from 0% to 67%.

The minor road program addresses growth needs of emergent areas and adjacent or connected bottlenecks in the transportation system. The introduction of traffic control devices reduces current flow speed, and increases areas of conflict, potentially increasing the probability for congestion, friction, weaving and different types of collisions. As such, the Benefit to Existing for these pieces of infrastructure is set to be zero.

(b) Residential/ICI

Net growth costs for identified transportation growth projects must also be apportioned to the various benefiting land uses (ie. Residential, Institutional, Commercial, Industrial). The RES/ICI split for arterial road network improvements is based on the relative proportion of projected growth in population and jobs (by sector) of the 2014-2033 period for which transportation needs were determined. The resulting Major Roadworks RES/ICI split is as follows.

Residential	Institutional	Commercial	Industrial
69.3%	8.4%	11.3%	11.0%

This allocation was globally applied to the Growth share of all Major Roadworks, Two Lane Arterial Upgrades and Minor Roadworks tables, studies and programs.

Final Costs for DC Rate Calculation

The required Major Transportation Roadworks, Two-lane arterial upgrade works and Minor Roadworks identified in the AECOM 2014 Transportation Development Charge Background Study form the basis for determining development charges for the Roads Services CSRF and represents the numerator in the rate calculation. The final net costs for these works attributable to the 20 yr growth window is outlined in Table H-1.

Uncommitted Reserve Funds

The uncommitted balance of the reserve funds is netted against the determined total growth servicing costs to take into account DC funds that have been collected in the past. The above costs figures are reduced by the uncommitted roads balance in order to determine the calculated DC rate, before providing for financing costs.

Contributions by Others

The costs related to Bus Rapid Transit have been discounted by a factor of 2/3 to account for anticipated provincial and federal funding for municipal rapid transit. Including a grant provides for a more conservative (i.e. lower) development charge. The costs related to these discounts are included in the column titled “Less: future capital grants, subsidies or other contributions”. If these grants do not materialize, a review of the BRT program and revision of the DC rate calculations for this area would be in order.

Financing Costs

Table H-2 was produced to simulate cash flows for CSRF funded Transportation works for the purpose of calculating the final DC rate inclusive of financing costs. Forecasting cash flow and financing costs involved:

a) Starting with the 2014 opening balance which reflects accumulated funds for growth projects identified in past DC studies that remain as capital needs in this study;
b) Projecting DC revenues using the “pre-finance” rate;
c) Incorporating DC drawdowns in the cash flow projection based on the growth projects identified in the 20-year study period; and
d) Estimating annual interest revenues to be earned and/or financing costs to be incurred due to fund deficits throughout the 20-year planning horizon.

The deficit at the end of the planning period for the cash flow equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e. the post period benefit). All figures are presented on an un-inflated, constant (2014) dollar basis and interest rates exclude the inflationary component (2%). The rates generated from this cash flow analysis reflect the appropriate cost recovery from growth for the 20-year planning horizon.

Council Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the AECOM 2014 Transportation Development Charge Background Study. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council’s stated intention to “provide for the needs of growth in a way that does

not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

NOTE:
An examination of long term Roads Services operating costs for growth needs is included in Appendix O of this Background Study.

2014 Development Charges Background Study

Table H-1: Roads Services

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																	Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	% (8)	benefit (9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) - sum(9,10)	(12)	(11) - (12)	% (14)	$ (15) (13) * (14)	% (16)	$ (17) (13) * (16)	% (18)	$ (19) (13) * (18)	% (20)	$ (21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Arterial Road Works																					
DC14-RS00001	11a: Hyde Park Road-Oxford to CPR (2 to 4 through lanes)	2014	$22,980.0	$.0	$3,750.0	$19,230.0	10.0%	$1,923.0	$17,307.0	4.7%	$810.2	$.0	$16,496.8	$.0	$16,496.8	69.3%	$11,432.3	11.3%	$1,864.1	8.4%	$1,385.7	11.0%	$1,814.6
DC14-RS00002	12 (1a): Sunningdale Road-Stage 1 - Phase 1 - Wonderland/Sunningdale Intersection (2 to 4 through lanes)	2014	$3,300.0	$.0	$1,350.0	$1,950.0	40.0%	$780.0	$1,170.0	6.8%	$79.8	$.0	$1,090.2	$.0	$1,090.2	69.3%	$755.5	11.3%	$123.2	8.4%	$91.6	11.0%	$119.9
DC14-RS00003	5: Wonderland Interchange-Highway 401 (Interchange)	2015	$10,450.0	$.0	$450.0	$10,000.0	50.0%	$5,000.0	$5,000.0	0.0%	$.0	$.0	$5,000.0	$.0	$5,000.0	69.3%	$3,465.0	11.3%	$565.0	8.4%	$420.0	11.0%	$550.0
DC14-RS00004	2: Commissioners Road-Wonderland Road to Viscount Road (2 to 4 through lanes with centre turn lane)	2015	$13,802.0	$.0	$2,846.0	$10,956.0	10.0%	$1,095.6	$9,860.4	6.4%	$628.8	$.0	$9,231.6	$.0	$9,231.6	69.3%	$6,397.5	11.3%	$1,043.2	8.4%	$775.5	11.0%	$1,015.5
DC14-RS00005	39: Hyde Park Road-CPR to Fanshawe Park Road (2 to 4 through lanes)	2015	$15,585.5	$.0	$2,550.0	$13,035.5	10.0%	$1,303.6	$11,732.0	6.9%	$809.8	$.0	$10,922.1	$.0	$10,922.1	69.3%	$7,569.0	11.3%	$1,234.2	8.4%	$917.5	11.0%	$1,201.4
DC14-RS00006	42: Highbury Interchange-Highway 401 (Interchange)	2018	$5,000.0	$.0	$.0	$5,000.0	10.0%	$500.0	$4,500.0	55.0%	$2,475.0	$.0	$2,025.0	$.0	$2,025.0	69.3%	$1,403.3	11.3%	$228.8	8.4%	$170.1	11.0%	$222.8
DC14-RS00007	6a: Fanshawe Park Road-Adelaide Street to Highbury Avenue (2 to 4 through lanes with centre turn lane)	2016	$15,460.0	$.0	$2,270.0	$13,190.0	10.0%	$1,319.0	$11,871.0	6.3%	$751.0	$.0	$11,120.0	$.0	$11,120.0	69.3%	$7,706.2	11.3%	$1,256.6	8.4%	$934.1	11.0%	$1,223.2
DC14-RS00008	8: Sarnia Road-Wonderland Road to Sleightholme Ave (3 to 4 through lanes)	2016	$8,362.0	$.0	$642.0	$7,720.0	10.0%	$772.0	$6,948.0	7.5%	$518.4	$.0	$6,429.6	$.0	$6,429.6	69.3%	$4,455.7	11.3%	$726.5	8.4%	$540.1	11.0%	$707.3
DC14-RS00009	19: Veterans Memorial Parkway-Huron Street to Clarke Road (New 2 through lanes)	2017	$12,122.5	$.0	$.0	$12,122.5	10.0%	$1,212.3	$10,910.3	7.5%	$814.2	$.0	$10,096.1	$.0	$10,096.1	69.3%	$6,996.6	11.3%	$1,140.9	8.4%	$848.1	11.0%	$1,110.6
DC14-RS00010	28: VMP Interchange & Extension-Highway 401 (Interchange)	2016	$6,148.0	$.0	$.0	$6,148.0	10.0%	$614.8	$5,533.2	46.0%	$2,545.3	$.0	$2,987.9	$.0	$2,987.9	69.3%	$2,070.6	11.3%	$337.6	8.4%	$251.0	11.0%	$328.7
DC14-RS00011	9: Western Road-Platts Lane to Oxford Street (2 to 4 through lanes, including widening rail underpass)	2018	$23,818.8	$.0	$450.0	$23,368.8	10.0%	$2,336.9	$21,031.9	16.9%	$3,552.0	$.0	$17,479.9	$.0	$17,479.9	69.3%	$12,113.6	11.3%	$1,975.2	8.4%	$1,468.3	11.0%	$1,922.8
DC14-RS00012	22b: Bradley Avenue Extension-Phase 2 - Wharncliffe to Wonderland (4 through lanes)	2017	$12,264.4	$.0	$.0	$12,264.4	10.0%	$1,226.4	$11,037.9	0.0%	$.0	$.0	$11,037.9	$.0	$11,037.9	69.3%	$7,649.3	11.3%	$1,247.3	8.4%	$927.2	11.0%	$1,214.2
DC14-RS00013	44: Colonel Talbot Interchange-Highway 401 (Interchange)	2018	$5,000.0	$.0	$.0	$5,000.0	10.0%	$500.0	$4,500.0	50.0%	$2,250.0	$.0	$2,250.0	$.0	$2,250.0	69.3%	$1,559.3	11.3%	$254.3	8.4%	$189.0	11.0%	$247.5
DC14-RS00014	36: Wharncliffe Road-Horton Street to Commissioners Road (Optimization)	2019	$6,563.8	$.0	$.0	$6,563.8	10.0%	$656.4	$5,907.4	32.8%	$1,938.4	$.0	$3,969.0	$.0	$3,969.0	69.3%	$2,750.5	11.3%	$448.5	8.4%	$333.4	11.0%	$436.6
DC14-RS00015	11b: Hyde Park Road-Oxford Intersection (Intersection)	2019	$2,230.0	$.0	$.0	$2,230.0	20.0%	$446.0	$1,784.0	8.0%	$142.7	$.0	$1,641.3	$.0	$1,641.3	69.3%	$1,137.4	11.3%	$185.5	8.4%	$137.9	11.0%	$180.5
DC14-RS00016	12 (1b): Sunningdale Road-Stage 1 - Phase 2 - Richmond/Sunningdale Intersection (2 to 4 through lanes)	2019	$3,297.5	$.0	$.0	$3,297.5	40.0%	$1,319.0	$1,978.5	4.4%	$88.0	$.0	$1,890.5	$.0	$1,890.5	69.3%	$1,310.1	11.3%	$213.6	8.4%	$158.8	11.0%	$208.0
DC14-RS00017	12 (2c): Sunningdale Road-Stage 2 - Phase 3 - Richmond to Wonderland (2 to 4 through lanes)	2020	$18,757.6	$.0	$.0	$18,757.6	40.0%	$7,503.0	$11,254.6	6.1%	$689.5	$.0	$10,565.1	$.0	$10,565.1	69.3%	$7,321.6	11.3%	$1,193.9	8.4%	$887.5	11.0%	$1,162.2
DC14-RS00018	21: Wharncliffe Road-Becher Street to Springbank Drive (2 to 4 through lanes)	2019	$16,427.5	$.0	$.0	$16,427.5	20.0%	$3,285.5	$13,142.0	37.2%	$4,893.4	$.0	$8,248.6	$.0	$8,248.6	69.3%	$5,716.3	11.3%	$932.1	8.4%	$692.9	11.0%	$907.4

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8) %	(9) benefit (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14) %	(15) $ (13) * (14)	(16) %	(17) $ (13) * (16)	(18) %	(19) $ (13) * (18)	(20) %	(21) $ (13) * (20)
			Note 1	Note 1			Note 1		Note 1							Note 1		Note 1		Note 1		Note 1	
DC14-RS00019	41: Adelaide Street North-Grenfell Drive to Sunningdale Road (2 to 4 through lanes)	2021	$5,655.0	$.0	$.0	$5,655.0	50.0%	$2,827.5	$2,827.5	8.6%	$244.5	$.0	$2,583.0	$.0	$2,583.0	69.3%	$1,790.0	11.3%	$291.9	8.4%	$217.0	11.0%	$284.1
DC14-RS00020	45: Pond Mills Road -Hwy 401 Bridge (Hwy 401 Bridge Expansion)	2019	$1,500.0	$.0	$.0	$1,500.0	50.0%	$750.0	$750.0	0.0%	$.0	$.0	$750.0	$.0	$750.0	69.3%	$519.8	11.3%	$84.8	8.4%	$63.0	11.0%	$82.5
DC14-RS00021	12 (2a): Sunningdale Road-Stage 2 - Phase 1 - Adelaide to Bluebell (2 to 4 through lanes)	2022	$10,957.5	$.0	$.0	$10,957.5	40.0%	$4,383.0	$6,574.5	4.9%	$322.7	$.0	$6,251.8	$.0	$6,251.8	69.3%	$4,332.5	11.3%	$706.4	8.4%	$525.1	11.0%	$687.7
DC14-RS00022	22a: Bradley Avenue Extension-Phase 1 - Jalna to Wharncliffe (4 through lanes)	2022	$10,755.0	$.0	$.0	$10,755.0	20.0%	$2,151.0	$8,604.0	0.0%	$.0	$.0	$8,604.0	$.0	$8,604.0	69.3%	$5,962.6	11.3%	$972.3	8.4%	$722.7	11.0%	$946.4
DC14-RS00023	34a: Wonderland Road-Phase 1 - Riverside to Springbank (4 to 6 through lanes)	2020	$20,712.5	$.0	$.0	$20,712.5	20.0%	$4,142.5	$16,570.0	7.1%	$1,174.8	$.0	$15,395.2	$.0	$15,395.2	69.3%	$10,668.9	11.3%	$1,739.7	8.4%	$1,293.2	11.0%	$1,693.5
DC14-RS00024	15b: Wonderland Road-Phase 2 - Oxford to Sarnia (4 to 6 through lanes)	2025	$12,320.0	$.0	$.0	$12,320.0	20.0%	$2,464.0	$9,856.0	12.7%	$1,253.1	$.0	$8,602.9	$.0	$8,602.9	69.3%	$5,961.8	11.3%	$972.1	8.4%	$722.6	11.0%	$946.3
DC14-RS00025	26: Clarke Road-VMP Extension to Fanshawe Park Road (2 to 4 through lanes)	2021	$24,710.9	$.0	$.0	$24,710.9	30.0%	$7,413.3	$17,297.7	2.7%	$470.7	$.0	$16,827.0	$.0	$16,827.0	69.3%	$11,661.1	11.3%	$1,901.5	8.4%	$1,413.5	11.0%	$1,851.0
DC14-RS00026	34b: Wonderland Road-Phase 2 - Springbank to Southdale (4 to 6 through lanes)	2022	$4,342.5	$.0	$.0	$4,342.5	20.0%	$868.5	$3,474.0	24.8%	$861.5	$.0	$2,612.5	$.0	$2,612.5	69.3%	$1,810.4	11.3%	$295.2	8.4%	$219.4	11.0%	$287.4
DC14-RS00027	10a: Bradley Avenue-Phase 1 - Dearness to Pond Mills (2 to 4 through lanes)	2024	$15,262.5	$.0	$.0	$15,262.5	20.0%	$3,052.5	$12,210.0	8.0%	$978.0	$.0	$11,232.0	$.0	$11,232.0	69.3%	$7,783.8	11.3%	$1,269.2	8.4%	$943.5	11.0%	$1,235.5
DC14-RS00028	15a: Wonderland Road-Phase 1 - Riverside to Oxford (4 to 6 through lanes)	2023	$19,615.0	$.0	$.0	$19,615.0	20.0%	$3,923.0	$15,692.0	41.9%	$6,578.5	$.0	$9,113.5	$.0	$9,113.5	69.3%	$6,315.6	11.3%	$1,029.8	8.4%	$765.5	11.0%	$1,002.5
DC14-RS00029	17b: Boler Road / Sanatorium Road-Phase 2- Riverside to Commissioners (2 to 4 through lanes)	2030	$12,133.8	$.0	$.0	$12,133.8	20.0%	$2,426.8	$9,707.0	2.2%	$215.2	$.0	$9,491.8	$.0	$9,491.8	69.3%	$6,577.8	11.3%	$1,072.6	8.4%	$797.3	11.0%	$1,044.1
DC14-RS00030	29b: Southdale Road West-Phase 2 - Farnham to Pine Valley (2 to 4 through lanes with centre turn lane)	2022	$3,150.0	$.0	$.0	$3,150.0	20.0%	$630.0	$2,520.0	9.3%	$234.7	$.0	$2,285.3	$.0	$2,285.3	69.3%	$1,583.7	11.3%	$258.2	8.4%	$192.0	11.0%	$251.4
DC14-RS00031	10b: Bradley Avenue-Phase 2 - Pond Mills to Jackson (2 to 4 through lanes)	2030	$18,715.0	$.0	$.0	$18,715.0	40.0%	$7,486.0	$11,229.0	6.0%	$674.8	$.0	$10,554.2	$.0	$10,554.2	69.3%	$7,314.0	11.3%	$1,192.6	8.4%	$886.6	11.0%	$1,161.0
DC14-RS00032	35a: Wonderland Road-Phase 1 - Exeter to Hwy 402 (2 to 4 through lanes)	2024	$13,400.0	$.0	$.0	$13,400.0	40.0%	$5,360.0	$8,040.0	7.3%	$586.8	$.0	$7,453.2	$.0	$7,453.2	69.3%	$5,165.1	11.3%	$842.2	8.4%	$626.1	11.0%	$819.9
DC14-RS00033	12 (2b): Sunningdale Road-Stage 2 - Phase 2 - Bluebell to Richmond (2 to 4 through lanes)	2025	$7,273.8	$.0	$.0	$7,273.8	40.0%	$2,909.5	$4,364.3	7.7%	$337.4	$.0	$4,026.8	$.0	$4,026.8	69.3%	$2,790.6	11.3%	$455.0	8.4%	$338.3	11.0%	$443.0
DC14-RS00034	20: Wonderland Road North-Sunningdale Road to Fanshawe Park Road (2 to 4 through lanes)	2027	$9,822.5	$.0	$.0	$9,822.5	50.0%	$4,911.3	$4,911.3	6.5%	$317.9	$.0	$4,593.4	$.0	$4,593.4	69.3%	$3,183.2	11.3%	$519.1	8.4%	$385.8	11.0%	$505.3
DC14-RS00035	7: Huron Street-Adelaide Street to Vesta Road (2 to 4 through lanes)	2025	$14,387.5	$.0	$.0	$14,387.5	30.0%	$4,316.3	$10,071.3	6.1%	$616.1	$.0	$9,455.1	$.0	$9,455.1	69.3%	$6,552.4	11.3%	$1,068.4	8.4%	$794.2	11.0%	$1,040.1
DC14-RS00036	13a: Oxford Street West-Phase 1 - Sanitorium to Commissioners (2 to 4 through lanes)	2029	$14,383.8	$.0	$.0	$14,383.8	40.0%	$5,753.5	$8,630.3	5.6%	$484.1	$.0	$8,146.1	$.0	$8,146.1	69.3%	$5,645.3	11.3%	$920.5	8.4%	$684.3	11.0%	$896.1
DC14-RS00037	27: Huron Street-Highbury to Clarke Road (2 to 4 through lanes)	2026	$15,160.0	$.0	$.0	$15,160.0	30.0%	$4,548.0	$10,612.0	7.7%	$821.5	$.0	$9,790.5	$.0	$9,790.5	69.3%	$6,784.8	11.3%	$1,106.3	8.4%	$822.4	11.0%	$1,077.0

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON-RESIDENTIAL					
																		Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	% (8)	benefit (9) (7) * (8)	(10)	(11) [(7) - (9)] * 10% - sum(9,10)	(12)	(13) (11) - (12)	% (14)	$ (15) (13) * (14)	% (16)	$ (17) (13) * (16)	% (18)	$ (19) (13) * (18)	% (20)	$ (21) (13) * (20)
			Note 1	Note 1			Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-RS00038	29a: Southdale Road West-Phase 1 - Colonel Talbot to Farnham (2 to 4 through lanes with centre turn lane)	2026	$13,865.0	$.0	$.0	$13,865.0	30.0%	$4,159.5	$9,705.5	7.8%	$753.1	$.0	$8,952.4	$.0	$8,952.4	69.3%	$6,204.0	11.3%	$1,011.6	8.4%	$752.0	11.0%	$984.8
DC14-RS00039	16b: Sarnia Road-Phase 2 - Hyde Park to Oakcrossing Gate (2 to 4 through lanes)	2027	$3,765.0	$.0	$.0	$3,765.0	40.0%	$1,506.0	$2,259.0	17.5%	$396.1	$.0	$1,862.9	$.0	$1,862.9	69.3%	$1,291.0	11.3%	$210.5	8.4%	$156.5	11.0%	$204.9
DC14-RS00040	17a: Boler Road / Sanatorium Road-Phase 1 - Oxford to Riverside (2 to 4 through lanes)	2027	$6,887.5	$.0	$.0	$6,887.5	30.0%	$2,066.3	$4,821.3	6.4%	$308.1	$.0	$4,513.2	$.0	$4,513.2	69.3%	$3,127.6	11.3%	$510.0	8.4%	$379.1	11.0%	$496.4
DC14-RS00042	37: Adelaide Street-Fanshawe Park Road to Hamilton Road (Optimization)	2027	$17,364.4	$.0	$.0	$17,364.4	30.0%	$5,209.3	$12,155.1	35.5%	$4,317.4	$.0	$7,837.7	$.0	$7,837.7	69.3%	$5,431.5	11.3%	$885.7	8.4%	$658.4	11.0%	$862.1
DC14-RS00043	3: Veterans Memorial Parkway-Oxford Street to Huron Street (2 to 4 through lanes)	2028	$7,920.0	$.0	$.0	$7,920.0	40.0%	$3,168.0	$4,752.0	11.1%	$528.1	$.0	$4,223.9	$.0	$4,223.9	69.3%	$2,927.1	11.3%	$477.3	8.4%	$354.8	11.0%	$464.6
DC14-RS00044	18: Commissioners Road East-Highbury Ave to Jackson Rd (2 to 4 through lanes)	2028	$6,600.0	$.0	$.0	$6,600.0	40.0%	$2,640.0	$3,960.0	11.1%	$440.1	$.0	$3,519.9	$.0	$3,519.9	69.3%	$2,439.3	11.3%	$397.7	8.4%	$295.7	11.0%	$387.2
DC14-RS00045	35b: Wonderland Road-Phase 2 - Hwy 402 to Hwy 401 (2 to 4 through lanes)	2028	$13,557.5	$.0	$.0	$13,557.5	50.0%	$6,778.8	$6,778.8	10.5%	$709.1	$.0	$6,069.7	$.0	$6,069.7	69.3%	$4,206.3	11.3%	$685.9	8.4%	$509.9	11.0%	$667.7
DC14-RS00047	22c: Bradley Avenue Extension-Phase 3 - Wonderland to Bostwick (2 through lanes)	2032	$6,090.0	$.0	$.0	$6,090.0	45.0%	$2,740.5	$3,349.5	0.0%	$.0	$.0	$3,349.5	$.0	$3,349.5	69.3%	$2,321.2	11.3%	$378.5	8.4%	$281.4	11.0%	$368.4
DC14-RS00048	24a: Hamilton Road-Old Victoria to Veterans Memorial Parkway (2 to 4 through lanes with centre turn lane)	2029	$6,232.2	$.0	$.0	$6,232.2	45.0%	$2,804.5	$3,427.7	7.3%	$248.8	$.0	$3,178.9	$.0	$3,178.9	69.3%	$2,203.0	11.3%	$359.2	8.4%	$267.0	11.0%	$349.7
DC14-RS00049	25: Hamilton Road-Highbury to River Run Terrace (2 to 4 through lanes)	2029	$18,372.5	$.0	$.0	$18,372.5	45.0%	$8,267.6	$10,104.9	6.1%	$618.6	$.0	$9,486.3	$.0	$9,486.3	69.3%	$6,574.0	11.3%	$1,072.0	8.4%	$796.8	11.0%	$1,043.5
DC14-RS00051	38: Hamilton Road-Adelaide Street to Highbury Avenue (Optimization)	2029	$8,717.5	$.0	$.0	$8,717.5	45.0%	$3,922.9	$4,794.6	31.4%	$1,507.7	$.0	$3,287.0	$.0	$3,287.0	69.3%	$2,277.9	11.3%	$371.4	8.4%	$276.1	11.0%	$361.6
DC14-RS00052	13b: Oxford Street West-Phase 2 - Commissioners to Westdel Bourne (2 to 4 through lanes)	2032	$4,675.0	$.0	$.0	$4,675.0	50.0%	$2,337.5	$2,337.5	10.5%	$244.5	$.0	$2,093.0	$.0	$2,093.0	69.3%	$1,450.4	11.3%	$236.5	8.4%	$175.8	11.0%	$230.2
DC14-RS00053	14a: Fanshawe Park Road-Phase 1 - Adelaide to Richmond (4 to 6 through lanes)	2033	$9,240.0	$.0	$.0	$9,240.0	45.0%	$4,158.0	$5,082.0	25.4%	$1,292.3	$.0	$3,789.7	$.0	$3,789.7	69.3%	$2,626.3	11.3%	$428.2	8.4%	$318.3	11.0%	$416.9
DC14-RS00055	31: Commissioners Road West-Cranbrook Road to Springbank Drive (4 through lanes with centre turn lane)	2031	$7,657.5	$.0	$.0	$7,657.5	45.0%	$3,445.9	$4,211.6	0.0%	$.0	$.0	$4,211.6	$.0	$4,211.6	69.3%	$2,918.7	11.3%	$475.9	8.4%	$353.8	11.0%	$463.3
DC14-RS00056	46: Adelaide Street-CPR Overpass (Overpass)	2031	$21,250.0	$.0	$.0	$21,250.0	50.0%	$10,625.0	$10,625.0	67.3%	$7,150.6	$.0	$3,474.4	$.0	$3,474.4	69.3%	$2,407.7	11.3%	$392.6	8.4%	$291.8	11.0%	$382.2
DC14-RS00058	23: Fanshawe Park Road East-Clarke to Highbury (2 to 4 through lanes)	2032	$16,312.5	$.0	$.0	$16,312.5	45.0%	$7,340.6	$8,971.9	7.5%	$672.4	$.0	$8,299.5	$.0	$8,299.5	69.3%	$5,751.6	11.3%	$937.8	8.4%	$697.2	11.0%	$912.9
DC14-RS00059	30: Commissioners Road West-Wonderland Road to Cranbrook Road (2 to 4 through lanes with centre turn lane)	2032	$6,270.0	$.0	$.0	$6,270.0	45.0%	$2,821.5	$3,448.5	7.8%	$269.0	$.0	$3,179.6	$.0	$3,179.6	69.3%	$2,203.4	11.3%	$359.3	8.4%	$267.1	11.0%	$349.8
DC14-RS00061	43: Veterans Memorial Parkway-Bradley Avenue (Interchange)	2033	$25,087.0	$.0	$.0	$25,087.0	80.0%	$20,069.6	$5,017.4	0.0%	$.0	$.0	$5,017.4	$.0	$5,017.4	69.3%	$3,477.1	11.3%	$567.0	8.4%	$421.5	11.0%	$551.9
DC14-RS00075	Intersection- Highbury/Hamilton	2019	$2,315.0	$.0	$.0	$2,315.0	10.0%	$231.5	$2,083.5	10.0%	$208.4	$.0	$1,875.2	$.0	$1,875.2	69.3%	$1,299.5	11.3%	$211.9	8.4%	$157.5	11.0%	$206.3

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	(all $'s in ,000's)					(1) - sum(2,3)		(4) * (5)	(4) - (6)	%	benefit (7) * (8)	[(7) - (9)] * 10%	(7) - sum(9,10)		(11) - (12)	%	$ (13) * (14)	%	$ (13) * (16)	%	$ (13) * (18)	%	$ (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-RS00076	Intersection- Western/Sarina	2017	$2,490.0	$.0	$.0	$2,490.0	10.0%	$249.0	$2,241.0	10.0%	$224.1	$.0	$2,016.9	$.0	$2,016.9	69.3%	$1,397.7	11.3%	$227.9	8.4%	$169.4	11.0%	$221.9
DC14-RS00077	Intersection- Richmond/Fanshawe	2018	$7,900.0	$.0	$.0	$7,900.0	10.0%	$790.0	$7,110.0	10.0%	$711.0	$.0	$6,399.0	$.0	$6,399.0	69.3%	$4,434.5	11.3%	$723.1	8.4%	$537.5	11.0%	$703.9
	SUBTOTAL		$648,395.2	$.0	$14,308.0	$634,087.2	31.9%	$197,441.8	$436,645.4	13.7%	$59,757.9	$.0	$376,887.4	$.0	$376,887.4	69.3%	$261,183.0	11.3%	$42,588.3	8.4%	$31,658.5	11.0%	$41,457.6
	Total Arterial Road Works: BRT Related																						
DC14-RS00101	BRT 1: Wellington Road-Bradley Avenue to Horton Street (4 to 6 through lanes)	2018	$89,793.7	$59,862.5	$3,250.0	$26,681.2	20.0%	$5,336.2	$21,345.0	6.0%	$1,280.0	$.0	$20,065.0	$.0	$20,065.0	69.3%	$13,905.1	11.3%	$2,267.3	8.4%	$1,685.5	11.0%	$2,207.2
DC14-RS00102	BRT 2: Richmond Street-Fanshawe Park Road to Raymond Avenue (4 to 6 through lanes)	2017	$36,109.5	$24,073.0	$.0	$12,036.5	20.0%	$2,407.3	$9,629.2	6.2%	$600.5	$.0	$9,028.7	$.0	$9,028.7	69.3%	$6,256.9	11.3%	$1,020.2	8.4%	$758.4	11.0%	$993.2
DC14-RS00103	BRT 3: Highbury Avenue-Dundas Street to Oxford Street (4 to 6 through lanes)	2019	$18,606.0	$12,404.0	$.0	$6,202.0	12.0%	$744.2	$5,457.8	6.8%	$373.3	$.0	$5,084.4	$.0	$5,084.4	69.3%	$3,523.5	11.3%	$574.5	8.4%	$427.1	11.0%	$559.3
DC14-RS00104	BRT 4: Dundas Street-Adelaide Street to Highbury Avenue (4 to 6 through lanes)	2019	$24,505.0	$16,336.7	$.0	$8,168.3	12.0%	$980.2	$7,188.1	10.0%	$717.9	$.0	$6,470.2	$.0	$6,470.2	69.3%	$4,483.8	11.3%	$731.1	8.4%	$543.5	11.0%	$711.7
DC14-RS00105	BRT 5: Oxford Street-Highbury Avenue to Clarke Road (4 to 6 through lanes)	2019	$26,677.1	$17,784.7	$.0	$8,892.4	12.0%	$1,067.1	$7,825.3	8.8%	$689.2	$.0	$7,136.1	$.0	$7,136.1	69.3%	$4,945.3	11.3%	$806.4	8.4%	$599.4	11.0%	$785.0
DC14-RS00106	BRT 6: Oxford Street West-Hyde Park Road to Richmond Street (4 to 6 through lanes)	2020	$82,896.0	$55,264.0	$.0	$27,632.0	12.0%	$3,315.8	$24,316.2	7.1%	$1,723.0	$.0	$22,593.1	$.0	$22,593.1	69.3%	$15,657.0	11.3%	$2,553.0	8.4%	$1,897.8	11.0%	$2,485.2
DC14-RS00107	BRT 7: Richmond Street-Raymond Avenue to York Street (Optimization)	2016	$14,542.0	$9,694.7	$.0	$4,847.3	20.0%	$969.5	$3,877.9	25.6%	$992.1	$.0	$2,885.8	$.0	$2,885.8	69.3%	$1,999.9	11.3%	$326.1	8.4%	$242.4	11.0%	$317.4
DC14-RS00108	BRT 8: York Street-Richmond Street to Colborne Street (Optimization)	2017	$3,454.0	$2,302.7	$.0	$1,151.3	12.0%	$138.2	$1,013.2	25.5%	$258.5	$.0	$754.7	$.0	$754.7	69.3%	$523.0	11.3%	$85.3	8.4%	$63.4	11.0%	$83.0
DC14-RS00109	BRT 9: Colborne Street-York Street to Dundas Street (Optimization)	2019	$1,191.0	$794.0	$.0	$397.0	12.0%	$47.6	$349.4	24.7%	$86.2	$.0	$263.2	$.0	$263.2	69.3%	$182.4	11.3%	$29.7	8.4%	$22.1	11.0%	$29.0
DC14-RS00110	BRT 10: Dundas Street-Colborne Street to Adelaide Street (Optimization)	2018	$2,699.0	$1,799.3	$.0	$899.7	12.0%	$108.0	$791.7	25.4%	$201.0	$.0	$590.7	$.0	$590.7	69.3%	$409.3	11.3%	$66.7	8.4%	$49.6	11.0%	$65.0
DC14-RS00111	BRT 11: Wellington Road-Horton Street to York Street (Optimization)	2020	$1,191.0	$794.0	$.0	$397.0	20.0%	$79.4	$317.6	24.7%	$78.3	$.0	$239.3	$.0	$239.3	69.3%	$165.8	11.3%	$27.0	8.4%	$20.1	11.0%	$26.3
	SUBTOTAL		$301,664.3	$201,109.5	$3,250.0	$97,304.8	15.6%	$15,193.5	$82,111.2	8.5%	$6,999.9	$.0	$75,111.3	$.0	$75,111.3	69.3%	$52,052.1	11.3%	$8,487.6	8.4%	$6,309.3	11.0%	$8,262.2
	Total Two-Lane Arterial Upgrades																						
DC14-RS00202	Sarnia Road - Stage 2 Phase 2 - Hyde Park to Oakcrossing Gate (2LUA)	2017	$5,060.0	$.0	$.0	$5,060.0	0.0%	$.0	$5,060.0	11.1%	$562.4	$.0	$4,497.7	$.0	$4,497.7	69.3%	$3,116.9	11.3%	$508.2	8.4%	$377.8	11.0%	$494.7
DC14-RS00203	Old Victoria - Hamilton to Bradley (2LRA)	2024	$5,005.0	$.0	$.0	$5,005.0	16.0%	$800.0	$4,205.0	12.7%	$534.1	$.0	$3,670.9	$.0	$3,670.9	69.3%	$2,543.9	11.3%	$414.8	8.4%	$308.4	11.0%	$403.8
DC14-RS00204	Sunningdale - South Winege to Highbury (2LUA)	2017	$3,520.0	$.0	$.0	$3,520.0	0.0%	$.0	$3,520.0	11.1%	$391.2	$.0	$3,128.8	$.0	$3,128.8	69.3%	$2,168.3	11.3%	$353.6	8.4%	$262.8	11.0%	$344.2
DC14-RS00205	Wonderland - 401 to 402 (2LRA)	2017	$10,395.0	$.0	$.0	$10,395.0	0.0%	$.0	$10,395.0	12.7%	$1,320.3	$.0	$9,074.7	$.0	$9,074.7	69.3%	$6,288.8	11.3%	$1,025.4	8.4%	$762.3	11.0%	$998.2
DC14-RS00206	Wickerson - Ironwood to Southdale (2LRA)	2018	$2,579.5	$.0	$.0	$2,579.5	15.5%	$400.0	$2,179.5	12.7%	$276.8	$.0	$1,902.7	$.0	$1,902.7	69.3%	$1,318.6	11.3%	$215.0	8.4%	$159.8	11.0%	$209.3

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL	NON-RESIDENTIAL					
																	Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	%	benefit (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-RS00207	Southdale - Wickerson to Bramblewood Place (2LRA)	2018	$4,042.5	$.0	$.0	$4,042.5	19.8%	$800.0	$3,242.5	12.7%	$411.8	$.0	$2,830.7	$.0	$2,830.7	69.3%	$1,961.6	11.3%	$319.9	8.4%	$237.8	11.0%	$311.4
DC14-RS00208	Southdale - Wickerson to Bramblewood Place (Fill)	2018	$2,750.0	$.0	$.0	$2,750.0	0.0%	$.0	$2,750.0	0.0%	$.0	$.0	$2,750.0	$.0	$2,750.0	69.3%	$1,905.8	11.3%	$310.8	8.4%	$231.0	11.0%	$302.5
DC14-RS00209	Southdale - Wickerson to Westdel Bourne (2LRA)	2018	$1,540.0	$.0	$.0	$1,540.0	0.0%	$.0	$1,540.0	12.7%	$195.6	$.0	$1,344.4	$.0	$1,344.4	69.3%	$931.7	11.3%	$151.9	8.4%	$112.9	11.0%	$147.9
DC14-RS00210	Bostwick - Pack to Southdale (2LRA)	2021	$2,887.5	$.0	$.0	$2,887.5	0.0%	$.0	$2,887.5	12.7%	$366.8	$.0	$2,520.8	$.0	$2,520.8	69.3%	$1,746.9	11.3%	$284.8	8.4%	$211.7	11.0%	$277.3
DC14-RS00211	Pack Rd - Colonel Talbot to Bostwick (2LRA)	2022	$7,700.0	$.0	$.0	$7,700.0	0.0%	$.0	$7,700.0	12.7%	$978.0	$.0	$6,722.0	$.0	$6,722.0	69.3%	$4,658.3	11.3%	$759.6	8.4%	$564.6	11.0%	$739.4
DC14-RS00212	Colonel Talbot - 300m South of Southdale toKilbourne (2LUA)	2026	$9,680.0	$.0	$.0	$9,680.0	8.3%	$800.0	$8,880.0	11.1%	$986.9	$.0	$7,893.1	$.0	$7,893.1	69.3%	$5,469.9	11.3%	$891.9	8.4%	$663.0	11.0%	$868.2
DC14-RS00213	Hamilton - Gore to Old Victoria (2LUA)	2023	$16,293.8	$.0	$.0	$16,293.8	0.0%	$.0	$16,293.8	10.8%	$1,760.4	$.0	$14,533.4	$.0	$14,533.4	69.3%	$10,071.6	11.3%	$1,642.3	8.4%	$1,220.8	11.0%	$1,598.7
DC14-RS00215	Kilally Road- Phase 1- 175 m west of Webster to 225m east of Webster (2LRA)	2016	$2,695.0	$.0	$.0	$2,695.0	0.0%	$.0	$2,695.0	12.7%	$342.3	$.0	$2,352.7	$.0	$2,352.7	69.3%	$1,630.4	11.3%	$265.9	8.4%	$197.6	11.0%	$258.8
DC14-RS00222	Kilally-Phase 2 Webster to Clarke (2LRA)	2030	$6,660.5	$.0	$.0	$6,660.5	0.0%	$.0	$6,660.5	12.7%	$846.0	$.0	$5,814.5	$.0	$5,814.5	69.3%	$4,029.5	11.3%	$657.0	8.4%	$488.4	11.0%	$639.6
DC14-RS00217	Byron Baseline - Wickerson to Westdel Bourne (2LRA)	2025	$2,502.5	$.0	$.0	$2,502.5	32.0%	$800.0	$1,702.5	12.7%	$216.2	$.0	$1,486.3	$.0	$1,486.3	69.3%	$1,030.0	11.3%	$167.9	8.4%	$124.8	11.0%	$163.5
DC14-RS00220	Wilton Grove - Commerce Road to VMP South extension (2LRA)	2019	$1,732.5	$.0	$.0	$1,732.5	0.0%	$.0	$1,732.5	12.7%	$220.1	$.0	$1,512.5	$.0	$1,512.5	69.3%	$1,048.1	11.3%	$170.9	8.4%	$127.0	11.0%	$166.4
DC14-RS00221	Huron -VMP westerly to Railway (2LRA)	2019	$12,551.0	$.0	$.0	$12,551.0	12.7%	$1,600.0	$10,951.0	12.7%	$1,390.9	$.0	$9,560.1	$.0	$9,560.1	69.3%	$6,625.1	11.3%	$1,080.3	8.4%	$803.0	11.0%	$1,051.6
	SUBTOTAL		$97,594.8	$.0	$.0	$97,594.8	3.3%	$5,200.0	$92,394.8	11.7%	$10,799.7	$.0	$81,595.0	$.0	$81,595.0	69.3%	$56,545.4	11.3%	$9,220.2	8.4%	$6,854.0	11.0%	$8,975.5
	Total Minor Road Works																						
DC14-RS00067	Channelization	2014-2033	$2,475.0	$.0	$.0	$2,475.0	0.0%	$.0	$2,475.0	0.0%	$.0	$.0	$2,475.0	$.0	$2,475.0	69.3%	$1,715.2	11.3%	$279.7	8.4%	$207.9	11.0%	$272.3
DC14-RS00068	Miscellaneous Works	2014-2033	$445.5	$.0	$.0	$445.5	0.0%	$.0	$445.5	0.0%	$.0	$.0	$445.5	$.0	$445.5	69.3%	$308.7	11.3%	$50.3	8.4%	$37.4	11.0%	$49.0
DC14-RS00069	Miscellaneous Works - Sidewalks	2014-2033	$1,590.3	$.0	$.0	$1,590.3	0.0%	$.0	$1,590.3	0.0%	$.0	$.0	$1,590.3	$.0	$1,590.3	69.3%	$1,102.0	11.3%	$179.7	8.4%	$133.6	11.0%	$174.9
DC14-RS00070	Miscellaneous Works - Streetlights	2014-2033	$2,413.3	$.0	$.0	$2,413.3	0.0%	$.0	$2,413.3	0.0%	$.0	$.0	$2,413.3	$.0	$2,413.3	69.3%	$1,672.4	11.3%	$272.7	8.4%	$202.7	11.0%	$265.5
DC14-RS00071	New Traffic Signals	2014-2033	$7,734.4	$.0	$.0	$7,734.4	0.0%	$.0	$7,734.4	0.0%	$.0	$.0	$7,734.4	$.0	$7,734.4	69.3%	$5,359.9	11.3%	$874.0	8.4%	$649.7	11.0%	$850.8
DC14-RS00072	Roundabouts	2014-2033	$2,250.0	$.0	$.0	$2,250.0	0.0%	$.0	$2,250.0	0.0%	$.0	$.0	$2,250.0	$.0	$2,250.0	69.3%	$1,559.3	11.3%	$254.3	8.4%	$189.0	11.0%	$247.5
	SUBTOTAL		$16,908.4	$.0	$.0	$16,908.4	0.0%	$.0	$16,908.4	0.0%	$.0	$.0	$16,908.4	$.0	$16,908.4	69.3%	$11,717.5	11.3%	$1,910.7	8.4%	$1,420.3	11.0%	$1,859.9

Service component : **Arterial Roads**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
										%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10)	(11) [(7) - (9)] * 10% - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Additional Programs																						
DC14-RS00063	Road class oversizing City Share	2014-2033	$2,000.0	$.0	$.0	$2,000.0	0.0%	$.0	$2,000.0	0.0%	$.0	$.0	$2,000.0	$.0	$2,000.0	69.3%	$1,386.0	11.3%	$226.0	8.4%	$168.0	11.0%	$220.0
DC14-RS00064	Rural Intersections	2014-2033	$2,000.0	$.0	$.0	$2,000.0	0.0%	$.0	$2,000.0	0.0%	$.0	$.0	$2,000.0	$.0	$2,000.0	69.3%	$1,386.0	11.3%	$226.0	8.4%	$168.0	11.0%	$220.0
DC14-RS00074	Urban Intersections	2014-2033	$8,080.0	$.0	$.0	$8,080.0	0.0%	$.0	$8,080.0	0.0%	$.0	$.0	$8,080.0	$.0	$8,080.0	69.3%	$5,599.4	11.3%	$913.0	8.4%	$678.7	11.0%	$888.8
DC14-RS00073	Active Transportation	2014-2033	$15,065.7	$.0	$.0	$15,065.7	0.0%	$.0	$15,065.7	49.7%	$7,492.9	$.0	$7,572.9	$.0	$7,572.9	69.3%	$5,248.0	11.3%	$855.7	8.4%	$636.1	11.0%	$833.0
DC14-RS00066	Veterans Memorial Pkwy Interchanges (Land)	2014-2023	$6,040.0	$.0	$840.0	$5,200.0	0.0%	$.0	$5,200.0	0.0%	$.0	$.0	$5,200.0	$.0	$5,200.0	69.3%	$3,603.6	11.3%	$587.6	8.4%	$436.8	11.0%	$572.0
	SUBTOTAL		$33,185.7	$.0	$840.0	$32,345.7	0.0%	$.0	$32,345.7	23.2%	$7,492.9	$.0	$24,852.9	$.0	$24,852.9	69.3%	$17,223.0	11.3%	$2,808.4	8.4%	$2,087.6	11.0%	$2,733.8
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (PRINCIPLE)		$893.0			$893.0			$893.0				$893.0		$893.0	82.0%	$732.3	12%	$107.2	6%	$53.6	0%	$.0
TOTAL			**$1,098,641.4**	**$201,109.5**	**$18,398.0**	**$879,133.8**	**24.6%**	**$217,835.4**	**$661,298.5**	**12.9%**	**$85,050.4**	**$.0**	**$576,248.0**	**$.0**	**$576,248.0**	**69.3%**	**$399,453.3**	**11.3%**	**$65,122.3**	**8.4%**	**$48,383.4**	**11.0%**	**$63,289.1**

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential		Commercial		Institutional		Industrial	
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$12,273.0	78.8%	$9,669.6	9.0%	$1,103.9	12.2%	$1,499.5	0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$563,975.0	69.1%	$389,783.7	11.4%	$64,018.4	8.3%	$46,883.9	11.2%	$63,289.1
Divided By: Total Gross Growth Projections			104,829		480,293		607,381		1,028,402
Calculated DC Rate - Pre-Financing			**$ 3,718.29** /person		**$ 133.29** /sq. m.		**$ 77.19** /sq. m.		**$ 61.54** /sq. m.

Pre- Financing Cost Residential Rates:

		Facilities	*Post Financing*
Single Family Dwelling	3.02	$ 11,229.23	$ 12,675.02
Multiple unit dwelling	2.28	$ 8,477.69	$ 9,569.22
Apartment - bach. & 1 bed	1.41	$ 5,242.78	$ 5,917.81
Apartment - ≥ 2 bedroom	1.90	$ 7,064.74	$ 7,974.35

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from the AECOM 2014 Transportation Development Charge Background Study (March 2014).

2014 Development Charges Background Study

Table H-2: Cash Flow Analysis and Final Rate Calculation Roads Services

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Arterial Roads**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
		Pre-Financing DC Rate	Post-Financing DC Rate	% Collected assumption	Growth projection for each year of forecast period																				
Planning Horizon - yrs	20																								
Growth - Res. (Persons In New Housing)	104,829	$ 3,718.29	$ 4,197.03	100%	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	104,828.8
Growth - Non-Res. (sq. m.)			$ -																						
Commercial	480,293	$ 133.29	$ 150.45	100%	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	480,293.0
Institutional	607,381	$ 77.19	$ 87.13	100%	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	607,381.0
C/I subtotal	1,087,674		$ -		54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	1,087,674.0
Industrial	1,028,402	$ 61.54	$ 69.46	100%	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	1,028,402.0
Total Non-Res.	2,116,076				105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	2,116,076.0
Reserve Fund Projections:																									
Opening Surplus / <Deficit>					$12,273.0	$21,904.0	$19,350.2	$20,320.4	-$4,706.6	-$43,073.7	-$73,223.9	-$109,833.3	-$116,079.6	-$124,878.1	-$125,749.3	-$131,113.8	-$139,032.5	-$149,412.9	-$154,617.3	-$154,986.6	-$173,210.7	-$184,633.6	-$175,431.2	-$182,737.0	-$191,143.4	$12,273.0
Revenues - Development Charge Collections																									
Residential					$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$21,998.5	$439,969.5
Non-Res.																									
Commercial					$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$3,613.0	$72,261.0
Institutional					$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$2,646.0	$52,920.4
C/I subtotal					$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$6,259.1	$125,181.3
Industrial					$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$3,571.9	$71,437.7
Total Non-Res.					$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$9,831.0	$196,619.1
Total revenues					$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$31,829.4	$636,588.6
Development Charge draws - calculated on separate page					$22,494.9	$34,741.1	$31,203.3	$56,991.8	$69,374.8	$59,979.4	$65,290.4	$34,190.2	$36,483.7	$28,390.1	$32,776.2	$35,101.8	$37,248.9	$31,804.8	$26,873.8	$44,408.9	$37,097.7	$16,434.3	$32,975.1	$33,805.4	$767,666.7
Closing surplus / <deficit> before interest					$21,607.5	$18,992.3	$19,976.3	-$4,842.0	-$42,252.0	-$71,223.7	-$106,684.9	-$112,194.1	-$120,733.8	-$121,438.7	-$126,696.0	-$134,386.2	-$144,452.0	-$149,388.3	-$149,661.7	-$167,566.1	-$178,479.0	-$169,238.5	-$176,576.9	-$184,713.0	-$118,805.1
Non-inflationary interest revenue /<expense>																									
on savings	1.75%				$296.5	$357.8	$344.1	$135.4																	$1,133.8
on borrowings	3.50%				-$821.8	-$2,000.2	-$3,148.4	-$3,885.5	-$4,144.2	-$4,310.5	-$4,417.8	-$4,646.3	-$4,961.0	-$5,229.0	-$5,324.9	-$5,644.7	-$6,154.6	-$6,192.8	-$6,160.1	-$6,430.4	-$73,472.1
Closing surplus / <deficit>					$21,904.0	$19,350.2	$20,320.4	-$4,706.6	-$43,073.7	-$73,223.9	-$109,833.3	-$116,079.6	-$124,878.1	-$125,749.3	-$131,113.8	-$139,032.5	-$149,412.9	-$154,617.3	-$154,986.6	-$173,210.7	-$184,633.6	-$175,431.2	-$182,737.0	-$191,143.4	-$191,143.4

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$191,143.4

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1. *Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.*
2. *Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.*
3. *Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".*

Other Information:	Pre	Post
Residential share	69%	69%
Non-residential		
Commercial	11%	11%
Institutional	8%	8%
C/I subtotal	20%	20%
Industrial	11%	11%

APPENDIX I –URBAN WORKS RESERVE FUND GRANDFATHERED WORKS

Background

The Urban Works Reserve Fund (UWRF) has been used by the City as the development charge fund used to finance oversized works (road works, sanitary pipe, storm pipe, storm water management facilities) where these works are triggered by, or necessary as a direct result of, development. One of the attributes of the fund is that it only paid claims for such works when sufficient funds existed in the reserve fund to finance the works.

In 2007, Council struck a "Blue Ribbon Panel" to review the workings of the fund, based in part, on its concerns about a persistent and growing backlog of claims. The "Blue Ribbon Panel" observed the uniqueness of the fund in Ontario, and recommended that the scope of works for which the fund was being used, be reduced. Accordingly, in the 2009 DC Study, steps were introduced to reduce the scope of UWRF works.

In 2013, during discussions on the UWRF Framework, it was determined that further steps were desirable to change the policy framework and eliminate the UWRF funding approach entirely. At the same time, alternate provisions were made in the form of policy, and a draft Municipal Servicing and Financing agreements (MSFA) that provided a framework for the assessing and potentially entering agreements that would provide financing to allow for the acceleration of growth works (funded by the City Services Reserve Fund (CSRF)). The following resolution was made by Council at its session held on July 30, 2013 (full report attached in Appendix "Q"):

> *That, on the recommendation of the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, with the concurrence of the Managing Director, Environmental and Engineering Services and City Engineer and the Managing Director, Development and Compliance Services and Chief Building Official, the following actions be taken:*
>
> *a) the following policies with respect to the retirement of the Urban Works Reserve Fund BE APPROVED; it being noted that a number of the recommendations in the May 13, 2013 report have been refined or redesigned in comparison to the May 13, 2013 report, based on discussions with the London Development Institute, the London Home Builders' Association and the Urban League:*
>
> *i) funding of all Urban Works Reserve Fund works be consolidated under the City Services Reserve Fund (CSRF); it being noted that suitable transitional provisions with respect to works currently included in draft plan conditions or under agreements will be addressed in the draft 2014 Development Charges(DC) By-law and Background Study;*
>
> *ii) the enhancements to the Growth Management Implementation Strategy Update Process as generally summarized in Appendix 'A' to the staff report dated July 29, 2013 be endorsed;*
>
> *iii) the new processes for Design and Construction of Storm Water Management Facilities (SWMF's), as amended, and as generally*

summarized in Appendix 'B' to the staff report dated July 29, 2013 be endorsed;

iv) the Municipal Service and Financing Agreements Policy as outlined in Appendix "D" to the staff report dated July 29, 2013 to be enacted as part of the 2014 Development Charges By-law be endorsed for accepting, assessing and administering applications for the acceleration of DC-funded works through Front-Ending Agreements under the Development Charges Act following the adoption of the 2014 Development Charges By-law;

v) the draft front-ending agreement prepared by external legal counsel as outlined in Appendix "E" to the staff report dated July 29, 2013 be received for information, it being noted that final agreements will be prepared at the time of Council approval of an application for a Municipal Service and Financing Agreement based on issues specific to the subject infrastructure project;

vi) the Civic Administration be directed to further develop the procedures governing construction of infrastructure undertaken by developers through development agreements; and

vii) the Civic Administration be directed to prepare by-law amendments and further refine administrative processes necessary to effect the above-noted changes coincident with the effective date of the 2014 DC By-law;

As per this resolution, the following sections will describe how the UWRF will be consolidated under the City Services Reserve Fund (CSRF).

Urban Work Reserve Fund Infrastructure

The previous Development Charges Background Studies included the following categories of UWRF infrastructure:

UWRF General Category:
- Oversized Sanitary Sewers (2009 Rules)
- Grandfathered Sanitary Sewer Claims (Pre 2009 Rules)
- Oversized Storm Sewers (2009 Rules)
- Grandfathered Storm Sewer Claims (Pre 2009 Rules)
- Minor Road Works

UWRF Storm Water Management Facilities Category
- UWRF Storm Water Management Facilities

The 2009 Development Charges By-law incorporated two sets of "rules":

- Schedule '6 Old Rules which are now referred to as "Pre 2009 Rules" and
- Schedule '7 New Rules which are now referred to as "2009 Rules".

The 2014 Development Charges By-law is being recommended to include three sets of "rules" two of which relate to UWRF claimable infrastructure:

- Schedule '6 Pre 2009 UWRF Rules,
- Schedule '7 2009 UWRF Rules, and
- Schedule '8 2014 CSRF Rules".

This section of the 2014 Development Charges Background Study establishes a rate based on the collection of the remaining UWRF costs over a 7-year period which has been based on the approximate benefiting period for the remaining infrastructure.

Policy Considerations

The various policy considerations used to establish the claimability of UWRF infrastructure outlined in Schedule 6 and 7 of the Development Charges By-law is well documented in the 2009 Development Charges Background Study. The policy considerations for inclusion of UWRF claimable works in the 2014 Development Charges Background Study are outlined below.

UWRF General Category

The following categories of works included in :

- either Appendix 6B (subject to pre-2009 rules) or
- Appendix 7B (subject to 2009 rules) or
- in a development agreement signed prior to the passing of the 2014 Development Charges By-law (subject to 2009 rules)

will be claimable from the Urban Works Reserve Fund:

- Oversized Sanitary Sewers (2009 Rules),
- Grandfathered Sanitary Sewer Claims (Pre 2009 Rules),
- Oversized Storm Sewers (2009 Rules),
- Grandfathered Storm Sewer Claims (Pre 2009 Rules), and

UWRF Storm Water Management Facilities Category

UWRF Storm Water Management Facility works included in either Appendix 6B (subject to pre-2009 rules) or Appendix 7B (subject to 2009 rules) or considered in a draft plan signed prior to the passing of the 2014 Development Charges By-law (subject to 2009 rules) will be claimable from the Urban Works Reserve Fund.

UWRF Administration

This section summarizes the working rules of the UWRF funds with respect to claimable works. Additional details on the administration of DC Funds can be found in the 2014 DC by-law (Schedules 6 & 7).

The key operating tenets of the Urban Works Reserve Fund are:

a) Works must ultimately appear in an executed Subdivision, Development or Consent agreement to be considered eligible for claim.
b) Developers may construct claimable works identified in applicable development agreements in accordance with the terms of the agreement. Subject to the works qualifying as claimable, the developer that constructs the works may submit claims for completed works against the UWRF.
c) The UWRF does not pay any claim unless there are sufficient funds to reimburse the claim. If the fund is depleted, all submitted and approved claims will be placed onto a chronological waiting list until the fund balance is replenished and claims can be paid.
d) The initiating developer bears the cost of financing constructed works until the claim is paid out. Financing costs are not eligible for claim from the fund.
e) Claims within the General Category are subject to an annual payment limit of $1M. Claims within the Storm Water Management Facilities Category are subject to an annual payment limit of $250k.

Project Identification

The current UWRF claimable works under the 2014 Development Charges policy framework were identified based on the following criteria:

- UWRF General Category: works are in a development agreement signed prior to the passing of the 2014 Development Charges By-law.

- UWRF Storm Water Management Facilities Category works are in a signed agreement or considered in a draft plan prior to the passing of the 2014 Development Charges By-law.

The initial basis for inclusion as a UWRF recoverable work is further discussed in the 2009 Development Charges Background Study.

Establishing Costing Estimates

Cost estimates are provided by the developer's engineer prior to an agreement being forwarded to Council. If UWRF works are awaiting payment or subject to a sewer oversizing subsidy, the costs associated with the works has been included as is. Cost estimates currently on file for works that are currently under agreement have been adjusted with a 10% cost increase. This 10% provision represents a proxy for cost escalation from earlier estimates. Storm Water Management Facilities costs associated with works currently in draft plans have been updated based on estimates provided in the 2014 Stormwater Development Charge Update Study completed by Delcan. It should be noted that costs of works included in the UWRF project tables reflect the residual value of claims paid as of January 1st, 2014.

Post-Period Benefit (PPB) Adjustments

As noted in an earlier section, the 2014 Development Charges Background Study establishes a rate based on the collection of the remaining UWRF costs over a 7-year period which has been based on the approximate benefiting period for the remaining infrastructure. The intent of the UWRF rate is to liquidate claims over there approximate remaining benefit period. Therefore, there is not PPB provided for in the rate calculation.

Allocation Splits

(a) Growth/Non-Growth

Works currently claimable from the UWRF are entirely driven by growth. Table I-1 "Urban Works Reserve Fund - General Works" and Table I-2 "Urban Works Reserve Fund - Minor Storm Water Management Works" shows the growth/non-growth allocations identified for works funded from UWRF.

(b) Residential/ICI

Net growth costs for identified UWRF must be apportioned to the various benefiting land uses (ie. Residential, Institutional, Commercial, Industrial). Overall Res I/C/I allocations from the 2009 Development Charges Background Study were used as the basis for the RICI calculation of the 2014 UWRF works allocations. These allocations are as follows:

	Residential	**Commercial**	**Institutional**	**Industrial**
SWM Component	82.0%	12.0%	6.0%	0.0%

	Residential	**Commercial**	**Institutional**	**Industrial**
Roads	74.0%	11.0%	5.0%	10.0%
Sanitary	89.9%	6.7%	3.0%	0.4%
Strom Sewers	82.0%	12.0%	6.0%	0.0%
Total General Component (1)	**79.4%**	**9.8%**	**4.5%**	**6.4%**

(1) General Component RICI allocation calculated on a weighted basis. Allocations are weighted using the "Net Amount Eligible for DC rate" for UWRF Claimable Minor Road Works, UWRF Oversized Sanitary Sewers or UWRF Oversized Storm Sewer Costs as included in the 2009 Development Charges Background Study.

Final Costs for DC Rate Calculation

The required Urban Works Reserve Fund works as identified in the Development Charges By-law Schedules form the basis for determining the development charges for UWRF rate and represent the numerator in the rate calculation. The works are reproduced for DC rate calculation purposes in Table I-1. The final anticipated Urban Works Reserve Fund infrastructure cost recoverable through DC rates is described in Table I-1.

Uncommitted Reserve Funds

The uncommitted reserve fund balance has been incorporated in Table I-1 as of January 1st, 2014. As noted above, that costs of works included in the UWRF project tables reflect the residual value of claims paid as of January 1st, 2014 which is consistent with the value used to reflect the uncommitted reserve fund balance.

Financing Costs

For the purpose of calculating the final development charge rate for Urban Works Reserve Fund works costs, financing costs have been ignored. This is justified since one of the key operating tenets of the UWRF is that the developer will finance the cost of the claimable work until such time as the fund is able to reimburse that cost.

Council Intention to Meet Growth Needs

The growth needs identified within this Appendix incorporates UWRF claimable works outlined in the 2009 Development Charges Background Study. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3). By providing for development to initiate works approved in executed subdivision and development agreements, but not commit to payment until sufficient funds have accumulated to honour the next approved claim, Council meets the stated objective.

NOTE:
An examination of long term Urban Works Reserve Fund Grandfathered works operating costs for growth needs is included in Appendix O in this Background Study.

Table I-1: Urban Works Reserve Fund - General Works

Service component : **Urban Works Reserve Fund - General Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Non-growth share		Subtotal	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL	NON - RESIDENTIAL		
															Commercial	Institutional	Industrial
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8) %	(9) benefit (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14) %	(15) $ (13) * (14)	(16) %	(17) $ (17) * (16)	(18) %	(19) $ (19) * (18)	(20) %	(21) $ (21) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total UWRF Minor Road Works (Schedule 7)																						
DC14-UR00007	M-596 - 810 WESTDEL BOURNE (WEST KAINS LAND C) - Widening on Kains and intersection improvements	2014-2021	$11.0	$.0	$.0	$11.0	0.0%	$.0	$11.0	0.0%	$.0	$.0	$11.0	$.0	$11.0	74%	$8.1	11.0%	$1.2	5.0%	$.6	10.0%	$1.1
DC14-UR00008	M-407 - HANROSE PARK PH II (HANROSE DEV) - Top asphalt on Hamilton Rd	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00018	M-391 - CRESTWOOD DRIVE SUBDIVISION (CRESTWOOD EST) - Traffic signals at Commissioners	2014-2021	$104.5	$.0	$.0	$104.5	0.0%	$.0	$104.5	0.0%	$.0	$.0	$104.5	$.0	$104.5	74%	$77.3	11.0%	$11.5	5.0%	$5.2	10.0%	$10.5
DC14-UR00030	M-517 - RIVERBEND WEST SUBDIVISION (PEMIC / SIFTON) - sidewalk on Westdel, widening on Kains & Shore	2014-2021	$22.0	$.0	$.0	$22.0	0.0%	$.0	$22.0	0.0%	$.0	$.0	$22.0	$.0	$22.0	74%	$16.3	11.0%	$2.4	5.0%	$1.1	10.0%	$2.2
DC14-UR00051	M-602 - BOSTWICK PHASE 2 (SIFTON) - Traffic signals, sidewalk	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00062	M-529 - SUMMERSIDE PHASE 10 A (JACKSON LAND CORP) - Roadworks on Commissioners Road & land purchase - Phase 2	2014-2021	$1,312.5	$.0	$.0	$1,312.5	0.0%	$.0	$1,312.5	0.0%	$.0	$.0	$1,312.5	$.0	$1,312.5	74%	$971.3	11.0%	$144.4	5.0%	$65.6	10.0%	$131.3
DC14-UR00120	M-592 - INNOVATION PARK PHASE 2 (CITY OF LONDON) - Left turn lane on Bradley, street lights and traffic signals	2014-2021	$297.0	$.0	$.0	$297.0	0.0%	$.0	$297.0	0.0%	$.0	$.0	$297.0	$.0	$297.0	74%	$219.8	11.0%	$32.7	5.0%	$14.9	10.0%	$29.7
DC14-UR00132	SP-07024 - FANSHAWE PARK ROAD WEST (CALLOWAY REIT) - Traffic signals @ Dalmagarry & internal widening (also in M-6-- Drewlo - Hyde Park Ph2)	2014-2021	$194.7	$.0	$.0	$194.7	0.0%	$.0	$194.7	0.0%	$.0	$.0	$194.7	$.0	$194.7	74%	$144.1	11.0%	$21.4	5.0%	$9.7	10.0%	$19.5
DC14-UR00177	M-364 - SUMMERSIDE PH II (Z-REALTY) - Internal widening on Meadowgate Blvd	2014-2021	$20.8	$.0	$.0	$20.8	0.0%	$.0	$20.8	0.0%	$.0	$.0	$20.8	$.0	$20.8	74%	$15.4	11.0%	$2.3	5.0%	$1.0	10.0%	$2.1
DC14-UR00224	SP-98040 - 800 COMMISSIONERS ROAD EAST (LONDON HEALTH S C) - Roadworks on Wellington and Commissioners	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00266	M-501 - 801 COMMISSIONERS RD E (LONDON HEALTH S C) - Sidewalks,bikeways,c&g,turn lanes,signals Well & Comm	2014-2021	$577.5	$.0	$.0	$577.5	0.0%	$.0	$577.5	0.0%	$.0	$.0	$577.5	$.0	$577.5	74%	$427.4	11.0%	$63.5	5.0%	$28.9	10.0%	$57.8
DC14-UR00298	M-566 - 796 SARNIA ROAD (SIFTON) - Street lights on Sarnia Rd	2014-2021	$11.0	$.0	$.0	$11.0	0.0%	$.0	$11.0	0.0%	$.0	$.0	$11.0	$.0	$11.0	74%	$8.1	11.0%	$1.2	5.0%	$.6	10.0%	$1.1
DC14-UR00314	M-405 - NORTH CENTRE ROAD SUBDIVISION (SIFTON) - Intersection improvements (double left turn lane)	2014-2021	$22.0	$.0	$.0	$22.0	0.0%	$.0	$22.0	0.0%	$.0	$.0	$22.0	$.0	$22.0	74%	$16.3	11.0%	$2.4	5.0%	$1.1	10.0%	$2.2
DC14-UR00356	M-622 - FOXHOLLOW PHASE 2 (FOXHOLLOW) - Channelization on Sunningdale	2014-2021	$237.6	$.0	$.0	$237.6	0.0%	$.0	$237.6	0.0%	$.0	$.0	$237.6	$.0	$237.6	74%	$175.8	11.0%	$26.1	5.0%	$11.9	10.0%	$23.8
DC14-UR00369	M-396 - W SIDE OF WHITE OAK RD S OF BRADLEY (SOUTH LONDON IND) - Top asphalt and widening on Roe & Dowell	2014-2021	$22.0	$.0	$.0	$22.0	0.0%	$.0	$22.0	0.0%	$.0	$.0	$22.0	$.0	$22.0	74%	$16.3	11.0%	$2.4	5.0%	$1.1	10.0%	$2.2
DC14-UR00377	M-395 - RICHMOND HILL N PH II (SIFTON) - Traffic signals at Plane Tree & Richmond	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	74%	$81.4	11.0%	$12.1	5.0%	$5.5	10.0%	$11.0
DC14-UR00420	M-475 - 1259 SUNNINGDALE RD E (NORTH GREN LAND) - Signals @ South Wenige (west leg)	2014-2021	$120.0	$.0	$.0	$120.0	0.0%	$.0	$120.0	0.0%	$.0	$.0	$120.0	$.0	$120.0	74%	$88.8	11.0%	$13.2	5.0%	$6.0	10.0%	$12.0
DC14-UR00426	M-647 - 312 SUNNINGDALE ROAD WEST (CORLON) - Channelization at main access	2014-2021	$417.4	$.0	$.0	$417.4	0.0%	$.0	$417.4	0.0%	$.0	$.0	$417.4	$.0	$417.4	74%	$308.9	11.0%	$45.9	5.0%	$20.9	10.0%	$41.7
DC14-UR00457	M-548 - FANSHAWE AT HIGHBURY NE CRNR (SIFTON) - Left turn lane on Highbury, sidewalk, streetlights and traffics signals @ Blackwell	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00486	M-541 - HYDE PARK WEST SUB PH 1 (WALLOY) - Traffic signals @ Gains/Corn and internal widening	2014-2021	$120.0	$.0	$.0	$120.0	0.0%	$.0	$120.0	0.0%	$.0	$.0	$120.0	$.0	$120.0	74%	$88.8	11.0%	$13.2	5.0%	$6.0	10.0%	$12.0
DC14-UR00497	M-603 - MEADOWLILLY WOODS (Z GROUP) - North side Commissioners Rd - sw, bike path, street lights - Phase 3	2014-2021	$160.6	$.0	$.0	$160.6	0.0%	$.0	$160.6	0.0%	$.0	$.0	$160.6	$.0	$160.6	74%	$118.8	11.0%	$17.7	5.0%	$8.0	10.0%	$16.1
DC14-UR00501	M-463 - UPLAND HILLS PH 3 (SIFTON) - Signals at Fanshawe & Hastings (east leg)	2014-2021	$108.9	$.0	$.0	$108.9	0.0%	$.0	$108.9	0.0%	$.0	$.0	$108.9	$.0	$108.9	74%	$80.6	11.0%	$12.0	5.0%	$5.4	10.0%	$10.9

Service component : **Urban Works Reserve Fund - General Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL	NON - RESIDENTIAL					
																	Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8) %	(9) (7) * (8) benefit	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14) %	(15) $ (13) * (14)	(16) %	(17) $ (13) * (16)	(18) %	(19) $ (13) * (18)	(20) %	(21) $ (13) * (20)
			Note 1	Note 1			Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-UR00525	M-457 - FOREST CITY IND PARK I (CITY OF LONDON) - Sidewalk, signals, street lights	2014-2021	$93.5	$.0	$.0	$93.5	0.0%	$.0	$93.5	0.0%	$.0	$.0	$93.5	$.0	$93.5	74%	$69.2	11.0%	$10.3	5.0%	$4.7	10.0%	$9.4
DC14-UR00559	M-500 - SUMMERSIDE PH 7 (JACKSON LAND CORP) - Sidewalk on Jackson	2014-2021	$20.9	$.0	$.0	$20.9	0.0%	$.0	$20.9	0.0%	$.0	$.0	$20.9	$.0	$20.9	74%	$15.5	11.0%	$2.3	5.0%	$1.0	10.0%	$2.1
DC14-UR00565	M-544 - AIRPORT ROAD SOUTH INDUSTRIAL PARK (CITY OF LONDON) - 50 % cost of signals, streetlights and turn lanes on Old Victoria (50% from IORF)	2014-2021	$312.4	$.0	$.0	$312.4	0.0%	$.0	$312.4	0.0%	$.0	$.0	$312.4	$.0	$312.4	74%	$231.2	11.0%	$34.4	5.0%	$15.6	10.0%	$31.2
DC14-UR00605	M-595 - 1000 SARNIA ROAD (HAMPTON GROUP) - Sidewalk, street lights, top asphalt	2014-2021	$275.0	$.0	$.0	$275.0	0.0%	$.0	$275.0	0.0%	$.0	$.0	$275.0	$.0	$275.0	74%	$203.5	11.0%	$30.3	5.0%	$13.8	10.0%	$27.5
DC14-UR00606	M-600 - NW BEAVERBROOK & OAKCROSSING PH 6 (DREWLO) - Widening on Street A	2014-2021	$33.0	$.0	$.0	$33.0	0.0%	$.0	$33.0	0.0%	$.0	$.0	$33.0	$.0	$33.0	74%	$24.4	11.0%	$3.6	5.0%	$1.7	10.0%	$3.3
DC14-UR00607	M-524 - NORTH LAMBETH SUB PHASE II (NORTH LAMBETH INC.) - Traffic signals	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	74%	$81.4	11.0%	$12.1	5.0%	$5.5	10.0%	$11.0
DC14-UR00608	M-638 - 1826 & 1788 OXFORD STREET WEST (SWEENEY / HOPEDALE) - Traffic signals, street lights, sidewalk and left turn lane on Oxford	2014-2021	$534.6	$.0	$.0	$534.6	0.0%	$.0	$534.6	0.0%	$.0	$.0	$534.6	$.0	$534.6	74%	$395.6	11.0%	$58.8	5.0%	$26.7	10.0%	$53.5
DC14-UR00611	SP-06004 - 955 GAINSBOROUGH ROAD (WEST PARK BAPTIST) - lane markings on Gainsborough	2014-2021	$4.3	$.0	$.0	$4.3	0.0%	$.0	$4.3	0.0%	$.0	$.0	$4.3	$.0	$4.3	74%	$3.2	11.0%	$.5	5.0%	$.2	10.0%	$.4
DC14-UR00620	M-593 - 800 SUNNINGDALE ROAD WEST (SUNNINGDALE G.C.) - Traffic signals	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00622	M-520 - DEER RIDGE SUBDIVISION (SIFTON) - Streetlights and signals	2014-2021	$220.0	$.0	$.0	$220.0	0.0%	$.0	$220.0	0.0%	$.0	$.0	$220.0	$.0	$220.0	74%	$162.8	11.0%	$24.2	5.0%	$11.0	10.0%	$22.0
DC14-UR00624	M-643 - 530 SUNNINGDALE ROAD EAST (2047790 ONTARIO INC.) - Traffic signals	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00629	M-562 - TALBOT VILLAGE PH 3 (SPEYSIDE EAST CORP.) - Street lights on Pack Rd	2014-2021	$26.9	$.0	$.0	$26.9	0.0%	$.0	$26.9	0.0%	$.0	$.0	$26.9	$.0	$26.9	74%	$19.9	11.0%	$3.0	5.0%	$1.3	10.0%	$2.7
DC14-UR00646	M-549 - 1851 & 1871 SHORE ROAD (SIFTON) - Asphalt	2014-2021	$1.1	$.0	$.0	$1.1	0.0%	$.0	$1.1	0.0%	$.0	$.0	$1.1	$.0	$1.1	74%	$.8	11.0%	$.1	5.0%	$.1	10.0%	$.1
DC14-UR00660	M-542 - W SIDE OF WHITE OAK RD - S OF SOUTHDALE (LONGWOOD OAKS) - Traffic signals	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	74%	$81.4	11.0%	$12.1	5.0%	$5.5	10.0%	$11.0
DC14-UR00661	M-609 - INNOVATION PARK PHASE 4 (CITY OF LONDON) - Turn lanes, street lights and signals on Bradley Ave (50% UWRF)	2014-2021	$332.2	$.0	$.0	$332.2	0.0%	$.0	$332.2	0.0%	$.0	$.0	$332.2	$.0	$332.2	74%	$245.8	11.0%	$36.5	5.0%	$16.6	10.0%	$33.2
DC14-UR00671	M-554 - STONEYCREEK SUB PH 4 (CRICH) - Street lights on Sunningdale Rd	2014-2021	$33.0	$.0	$.0	$33.0	0.0%	$.0	$33.0	0.0%	$.0	$.0	$33.0	$.0	$33.0	74%	$24.4	11.0%	$3.6	5.0%	$1.7	10.0%	$3.3
DC14-UR00677	M-617 - HYDE PARK WEST PH 4 (WALLOY EXCAVATING) - Traffic signals @ North Routledge	2014-2021	$165.0	$.0	$.0	$165.0	0.0%	$.0	$165.0	0.0%	$.0	$.0	$165.0	$.0	$165.0	74%	$122.1	11.0%	$18.2	5.0%	$8.3	10.0%	$16.5
DC14-UR00688	SP-05105 - 890 SARNIA ROAD (GLAD TIDINGS) - Sidewalk and street lights	2014-2021	$15.4	$.0	$.0	$15.4	0.0%	$.0	$15.4	0.0%	$.0	$.0	$15.4	$.0	$15.4	74%	$11.4	11.0%	$1.7	5.0%	$.8	10.0%	$1.5
DC14-UR00701	M-529 - SUMMERSIDE PHASE 10 A (JACKSON LAND CORP) - Top asphalt	2014-2021	$164.4	$.0	$.0	$164.4	0.0%	$.0	$164.4	0.0%	$.0	$.0	$164.4	$.0	$164.4	74%	$121.7	11.0%	$18.1	5.0%	$8.2	10.0%	$16.4
DC14-UR00704	M-633 - NW CRNR RICHMOND & SUNNINGDALE (AUBURN / CORLON) - LTL on Sunningdale and on Richmond	2014-2021	$474.1	$.0	$.0	$474.1	0.0%	$.0	$474.1	0.0%	$.0	$.0	$474.1	$.0	$474.1	74%	$350.8	11.0%	$52.2	5.0%	$23.7	10.0%	$47.4
DC14-UR00708	M-617 - HYDE PARK WEST PH 4 (WALLOY EXCAVATING) - Streetlights	2014-2021	$126.3	$.0	$.0	$126.3	0.0%	$.0	$126.3	0.0%	$.0	$.0	$126.3	$.0	$126.3	74%	$93.5	11.0%	$13.9	5.0%	$6.3	10.0%	$12.6
DC14-UR00710	M-640 - CEDARHOLLOW PHASE 2 (CEDAR HOLLOW DEV) - Left turn lane, street lights, signals, sidewalk on Fanshawe Park Rd	2014-2021	$533.0	$.0	$.0	$533.0	0.0%	$.0	$533.0	0.0%	$.0	$.0	$533.0	$.0	$533.0	74%	$394.4	11.0%	$58.6	5.0%	$26.6	10.0%	$53.3
DC14-UR00712	M-528 - SUMMERSIDE PH 9 (JACKSON LAND CORP) - Jackson & Bradley	2014-2021	$478.5	$.0	$.0	$478.5	0.0%	$.0	$478.5	0.0%	$.0	$.0	$478.5	$.0	$478.5	74%	$354.1	11.0%	$52.6	5.0%	$23.9	10.0%	$47.8
DC14-UR00718	M-529 - SUMMERSIDE PHASE 10 A (JACKSON LAND CORP) -	2014-2021	$671.7	$.0	$.0	$671.7	0.0%	$.0	$671.7	0.0%	$.0	$.0	$671.7	$.0	$671.7	74%	$497.0	11.0%	$73.9	5.0%	$33.6	10.0%	$67.2
DC14-UR00737	M-661 - WHARNCLIFFE ROAD S (SIFTON) - Channelization & internal widening	2014-2021	$168.3	$.0	$.0	$168.3	0.0%	$.0	$168.3	0.0%	$.0	$.0	$168.3	$.0	$168.3	74%	$124.5	11.0%	$18.5	5.0%	$8.4	10.0%	$16.8
DC14-UR00739	M-429 - RIVERBEND (SIFTON) - Kains Road	2014-2021	$70.4	$.0	$.0	$70.4	0.0%	$.0	$70.4	0.0%	$.0	$.0	$70.4	$.0	$70.4	74%	$52.1	11.0%	$7.7	5.0%	$3.5	10.0%	$7.0

Service component : **Urban Works Reserve Fund - General Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
										%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-UR00747	M-659 - 2362 DUNDAS STREET (SHREW SPORTS) - Left turn lanes on Dundas & Crumlin & internal widening	2014-2021	$325.6	$.0	$.0	$325.6	0.0%	$.0	$325.6	0.0%	$.0	$.0	$325.6	$.0	$325.6	74%	$240.9	11.0%	$35.8	5.0%	$16.3	10.0%	$32.6
DC14-UR00752	M-476 - FOREST CITY IND PARK - PH 2 (CITY OF LONDON) - Sidewalk & street lights	2014-2021	$27.5	$.0	$.0	$27.5	0.0%	$.0	$27.5	0.0%	$.0	$.0	$27.5	$.0	$27.5	74%	$20.4	11.0%	$3.0	5.0%	$1.4	10.0%	$2.8
DC14-UR00758	M-621 - 849 SOUTHDALE ROAD WEST (WESTFIELD VILLAGE) - Sidewalk on Southdale & traffic signals	2014-2021	$269.5	$.0	$.0	$269.5	0.0%	$.0	$269.5	0.0%	$.0	$.0	$269.5	$.0	$269.5	74%	$199.4	11.0%	$29.6	5.0%	$13.5	10.0%	$27.0
DC14-UR00759	SP-07095 - 3000 COLONEL TALBOT ROAD (SOUTHSIDE) - Streetlights on Colonel Talbot	2014-2021	$150.9	$.0	$.0	$150.9	0.0%	$.0	$150.9	0.0%	$.0	$.0	$150.9	$.0	$150.9	74%	$111.7	11.0%	$16.6	5.0%	$7.5	10.0%	$15.1
DC14-UR00761	M-522 - UPLANDS PH 5 (SIFTON) - Streetlights	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	74%	$81.4	11.0%	$12.1	5.0%	$5.5	10.0%	$11.0
DC14-UR00768	M-664 - 160 SUNNINGDALE ROAD WEST - PH1 (TRICAR) - Left turn channelization @ street A and internal widening	2014-2021	$308.0	$.0	$.0	$308.0	0.0%	$.0	$308.0	0.0%	$.0	$.0	$308.0	$.0	$308.0	74%	$227.9	11.0%	$33.9	5.0%	$15.4	10.0%	$30.8
DC14-UR00779	M-652 - 995 FANSHAWE PARK RD W (LANDEA) - Internal widening	2014-2021	$11.0	$.0	$.0	$11.0	0.0%	$.0	$11.0	0.0%	$.0	$.0	$11.0	$.0	$11.0	74%	$8.1	11.0%	$1.2	5.0%	$.6	10.0%	$1.1
DC14-UR00780	M-541 - HYDE PARK WEST SUB PH 1 (WALLOY) - Sidewalk & streetlights on Hyde Park Rd	2014-2021	$117.4	$.0	$.0	$117.4	0.0%	$.0	$117.4	0.0%	$.0	$.0	$117.4	$.0	$117.4	74%	$86.9	11.0%	$12.9	5.0%	$5.9	10.0%	$11.7
DC14-UR00781	M-562 - TALBOT VILLAGE PH 3 (SPEYSIDE EAST CORP) - Traffic signals on Pack Rd @ Pioneer	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	74%	$81.4	11.0%	$12.1	5.0%	$5.5	10.0%	$11.0
	SUBTOTAL		$11,263.3	$.0	$.0	$11,263.3	0.0%	$.0	$11,263.3	0.0%	$.0	$.0	$11,263.3	$.0	$11,263.3	74.0%	$8,334.8	11.0%	$1,239.0	5.0%	$563.2	10.0%	$1,126.3
	Total UWRF Minor Sanitary Sewerage Works-Sewer (Schedule 6)																						
DC14-UW00141	M-353 - TALLTREE ESTATES (SHERGAR DEV) - INTERNAL OVERSIZING	2014-2021	$4.4	$.0	$.0	$4.4	0.0%	$.0	$4.4	0.0%	$.0	$.0	$4.4	$.0	$4.4	90%	$4.0	6.7%	$.3	3.0%	$.1	0.4%	$.0
DC14-UW00209	M-429 - RIVERBEND (SIFTON) -	2014-2021	$74.1	$.0	$.0	$74.1	0.0%	$.0	$74.1	0.0%	$.0	$.0	$74.1	$.0	$74.1	90%	$66.6	6.7%	$5.0	3.0%	$2.2	0.4%	$.3
DC14-UW00280	M-551 - SUMMERSIDE PHASE 14 (JACKSON LAND CORP.) - Internal oversizing	2014-2021	$16.5	$.0	$.0	$16.5	0.0%	$.0	$16.5	0.0%	$.0	$.0	$16.5	$.0	$16.5	90%	$14.8	6.7%	$1.1	3.0%	$.5	0.4%	$.1
DC14-UW00436	M-429 - RIVERBEND (SIFTON) - > 30 ha	2014-2021	$600.7	$.0	$.0	$600.7	0.0%	$.0	$600.7	0.0%	$.0	$.0	$600.7	$.0	$600.7	90%	$540.0	6.7%	$40.2	3.0%	$18.0	0.4%	$2.4
DC14-UW00496	M-603 - MEADOWLILLY WOODS (Z GROUP) - > 30 ha	2014-2021	$15.4	$.0	$.0	$15.4	0.0%	$.0	$15.4	0.0%	$.0	$.0	$15.4	$.0	$15.4	90%	$13.8	6.7%	$1.0	3.0%	$.5	0.4%	$.1
DC14-UW00552	M-605 - 1128 FANSHAWE PARK ROAD W (DREWLO) - > 30 ha	2014-2021	$82.5	$.0	$.0	$82.5	0.0%	$.0	$82.5	0.0%	$.0	$.0	$82.5	$.0	$82.5	90%	$74.2	6.7%	$5.5	3.0%	$2.5	0.4%	$.3
DC14-UW00595	M-528 - SUMMERSIDE PH 9 (JACKSON LAND CORP) - Internal and external oversizing	2014-2021	$280.7	$.0	$.0	$280.7	0.0%	$.0	$280.7	0.0%	$.0	$.0	$280.7	$.0	$280.7	90%	$252.4	6.7%	$18.8	3.0%	$8.4	0.4%	$1.1
DC14-UW00601	M-529 - SUMMERSIDE PHASE 10 A (JACKSON LAND CORP) - Internal oversizing	2014-2021	$7.7	$.0	$.0	$7.7	0.0%	$.0	$7.7	0.0%	$.0	$.0	$7.7	$.0	$7.7	90%	$6.9	6.7%	$.5	3.0%	$.2	0.4%	$.0
DC14-UW00604	M-593 - 800 SUNNINGDALE ROAD WEST (SUNNINGDALE G.C.) - External sewers > 30 ha - Medway Trunk Agreement	2014-2021	$1,000.0	$.0	$.0	$1,000.0	0.0%	$.0	$1,000.0	0.0%	$.0	$.0	$1,000.0	$.0	$1,000.0	90%	$899.0	6.7%	$67.0	3.0%	$30.0	0.4%	$4.0
DC14-UW00621	M-643 - 530 SUNNINGDALE ROAD EAST (2047790 ONTARIO INC.) - >30 ha	2014-2021	$456.5	$.0	$.0	$456.5	0.0%	$.0	$456.5	0.0%	$.0	$.0	$456.5	$.0	$456.5	90%	$410.4	6.7%	$30.6	3.0%	$13.7	0.4%	$1.8
DC14-UW00652	M-564 - FOXHOLLOW SUBDIVISION PH 1 (FOXHOLLOW DEV INC) - Snake Creek Trunk	2014-2021	$1,566.5	$.0	$.0	$1,566.5	0.0%	$.0	$1,566.5	0.0%	$.0	$.0	$1,566.5	$.0	$1,566.5	90%	$1,408.3	6.7%	$105.0	3.0%	$47.0	0.4%	$6.3
DC14-UW00653	M-564 - FOXHOLLOW SUBDIVISION PH 1 (FOXHOLLOW DEV INC) - Snake Creek Trunk	2014-2021	$1,000.0	$.0	$.0	$1,000.0	0.0%	$.0	$1,000.0	0.0%	$.0	$.0	$1,000.0	$.0	$1,000.0	90%	$899.0	6.7%	$67.0	3.0%	$30.0	0.4%	$4.0
DC14-UW00687	M-593 - 800 SUNNINGDALE ROAD WEST (SUNNINGDALE G.C.) - External sewers >30 ha - Medway Trunk Agreement	2014-2021	$68.8	$.0	$.0	$68.8	0.0%	$.0	$68.8	0.0%	$.0	$.0	$68.8	$.0	$68.8	90%	$61.8	6.7%	$4.6	3.0%	$2.1	0.4%	$.3
DC14-UW00749	39T-05500 - N SIDE OF SUNNINGDALE ROAD (NLCC) (AUBURN) - > 30ha	2014-2021	$176.0	$.0	$.0	$176.0	0.0%	$.0	$176.0	0.0%	$.0	$.0	$176.0	$.0	$176.0	90%	$158.2	6.7%	$11.8	3.0%	$5.3	0.4%	$.7
DC14-UW00757	M-624 - NORTH TALBOT SUBDIVISION - PH2 (SPEYSIDE EAST CORP) - > 30ha	2014-2021	$133.3	$.0	$.0	$133.3	0.0%	$.0	$133.3	0.0%	$.0	$.0	$133.3	$.0	$133.3	90%	$119.8	6.7%	$8.9	3.0%	$4.0	0.4%	$.5
	SUBTOTAL		$5,483.0	$.0	$.0	$5,483.0	0.0%	$.0	$5,483.0	0.0%	$.0	$.0	$5,483.0	$.0	$5,483.0	89.9%	$4,929.3	6.7%	$367.4	3.0%	$164.5	0.4%	$21.9

Service component : **Urban Works Reserve Fund - General Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	% (8)	benefit (9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	% (14)	$ (15) (13) * (14)	% (16)	$ (17) (13) * (16)	% (18)	$ (19) (13) * (18)	% (20)	$ (21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total UWRF Minor Sanitary Sewerage Works-Sewer (Schedule 7)																						
DC14-UR00772	M-652 - 995 FANSHAWE PARK RD W (LANDEA) - Sanitary Oversizing subsidy	2014-2021	$28.6	$.0	$.0	$28.6	0.0%	$.0	$28.6	0.0%	$.0	$.0	$28.6	$.0	$28.6	90%	$25.7	6.7%	$1.9	3.0%	$.9	0.4%	$.1
	SUBTOTAL		$28.6	$.0	$.0	$28.6	0.0%	$.0	$28.6	0.0%	$.0	$.0	$28.6	$.0	$28.6	89.9%	$25.7	6.7%	$1.9	3.0%	$.9	0.4%	$.1
	Total UWRF Minor Sanitary Sewerage Works-Sanitary Pumping Station Works																						
DC14-UW00549	M-490 - SOUTHDALE AT BOLER NE CRNR (HAMPTON GROUP) - Pumping station upgrades	2014-2021	$187.0	$.0	$.0	$187.0	0.0%	$.0	$187.0	0.0%	$.0	$.0	$187.0	$.0	$187.0	90%	$168.1	6.7%	$12.5	3.0%	$5.6	0.4%	$.7
	SUBTOTAL		$187.0	$.0	$.0	$187.0	0.0%	$.0	$187.0	0.0%	$.0	$.0	$187.0	$.0	$187.0	89.9%	$168.1	6.7%	$12.5	3.0%	$5.6	0.4%	$.7
	Total UWRF Minor Storm Sewerage Works - Sewer (Schedule 6)																						
DC14-US00238	M-605 - 1128 FANSHAWE PARK ROAD W (DREWLO) - > 20 ha	2014-2021	$808.5	$.0	$.0	$808.5	0.0%	$.0	$808.5	0.0%	$.0	$.0	$808.5	$.0	$808.5	82%	$663.0	12.0%	$97.0	6.0%	$48.5	0.0%	$.0
DC14-US00248	M-501 - 801 COMMISSIONERS RD E (LONDON HEALTH S C) - External on Wellington Rd	2014-2021	$82.5	$.0	$.0	$82.5	0.0%	$.0	$82.5	0.0%	$.0	$.0	$82.5	$.0	$82.5	82%	$67.7	12.0%	$9.9	6.0%	$5.0	0.0%	$.0
DC14-US00367	M-429 - RIVERBEND (SIFTON) - > 20 ha	2014-2021	$643.3	$.0	$.0	$643.3	0.0%	$.0	$643.3	0.0%	$.0	$.0	$643.3	$.0	$643.3	82%	$527.5	12.0%	$77.2	6.0%	$38.6	0.0%	$.0
DC14-US00393	M-429 - RIVERBEND (SIFTON) - > 20 ha	2014-2021	$329.0	$.0	$.0	$329.0	0.0%	$.0	$329.0	0.0%	$.0	$.0	$329.0	$.0	$329.0	82%	$269.7	12.0%	$39.5	6.0%	$19.7	0.0%	$.0
DC14-US00418	M-475 - 1259 SUNNINGDALE RD E (NORTH GREN LAND) - > 20 ha	2014-2021	$11.0	$.0	$.0	$11.0	0.0%	$.0	$11.0	0.0%	$.0	$.0	$11.0	$.0	$11.0	82%	$9.0	12.0%	$1.3	6.0%	$.7	0.0%	$.0
DC14-US00495	M-603 - MEADOWLILLY WOODS (Z GROUP) - > 20 ha	2014-2021	$4.4	$.0	$.0	$4.4	0.0%	$.0	$4.4	0.0%	$.0	$.0	$4.4	$.0	$4.4	82%	$3.6	12.0%	$.5	6.0%	$.3	0.0%	$.0
DC14-US00670	SP-05132 - 517 FANSHAWE PARK ROAD W (AMICA) -	2014-2021	$271.5	$.0	$.0	$271.5	0.0%	$.0	$271.5	0.0%	$.0	$.0	$271.5	$.0	$271.5	82%	$222.6	12.0%	$32.6	6.0%	$16.3	0.0%	$.0
DC14-US00709	M-640 - CEDARHOLLOW PHASE 2 (CEDAR HOLLOW DEV) - > 20 ha	2014-2021	$31.6	$.0	$.0	$31.6	0.0%	$.0	$31.6	0.0%	$.0	$.0	$31.6	$.0	$31.6	82%	$25.9	12.0%	$3.8	6.0%	$1.9	0.0%	$.0
	SUBTOTAL		$2,181.7	$.0	$.0	$2,181.7	0.0%	$.0	$2,181.7	0.0%	$.0	$.0	$2,181.7	$.0	$2,181.7	82.0%	$1,789.0	12.0%	$261.8	6.0%	$130.9	0.0%	$.0
	Total UWRF Minor Storm Sewerage Works-Sewer (Schedule 7)																						
DC14-US00422	M-652 - 995 FANSHAWE PARK RD W (LANDEA) - Storm Oversizing subsidy	2014-2021	$285.9	$.0	$.0	$285.9	0.0%	$.0	$285.9	0.0%	$.0	$.0	$285.9	$.0	$285.9	82%	$234.4	12.0%	$34.3	6.0%	$17.2	0.0%	$.0
DC14-US00521	M-661 - WHARNCLIFFE ROAD S (SIFTON) - Oversizing subsidy	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	82%	$90.2	12.0%	$13.2	6.0%	$6.6	0.0%	$.0
DC14-US00719	M-638 - 1826 & 1788 OXFORD STREET WEST (SIFTON) - Oversizing subsidy	2014-2021	$153.1	$.0	$.0	$153.1	0.0%	$.0	$153.1	0.0%	$.0	$.0	$153.1	$.0	$153.1	82%	$125.5	12.0%	$18.4	6.0%	$9.2	0.0%	$.0
DC14-US00730	M-659 - 2362 DUNDAS STREET (SHREW SPORTS) - Oversizing subsidy	2014-2021	$227.8	$.0	$.0	$227.8	0.0%	$.0	$227.8	0.0%	$.0	$.0	$227.8	$.0	$227.8	82%	$186.8	12.0%	$27.3	6.0%	$13.7	0.0%	$.0
DC14-US00767	M-664 - 160 SUNNINGDALE ROAD WEST - PH1 (TRICAR) - Oversizing subsidy	2014-2021	$54.7	$.0	$.0	$54.7	0.0%	$.0	$54.7	0.0%	$.0	$.0	$54.7	$.0	$54.7	82%	$44.8	12.0%	$6.6	6.0%	$3.3	0.0%	$.0
DC14-US00771	M-655 - CLAYBAR SUBDIVISION PH 2 (AUBURN) - Oversizing subsidy	2014-2021	$168.3	$.0	$.0	$168.3	0.0%	$.0	$168.3	0.0%	$.0	$.0	$168.3	$.0	$168.3	82%	$138.0	12.0%	$20.2	6.0%	$10.1	0.0%	$.0
	SUBTOTAL		$999.7	$.0	$.0	$999.7	0.0%	$.0	$999.7	0.0%	$.0	$.0	$999.7	$.0	$999.7	82.0%	$819.8	12.0%	$120.0	6.0%	$60.0	0.0%	$.0

Service component : **Urban Works Reserve Fund - General Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded in Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8) %	(9) benefit (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total UWRF Minor Storm Sewerage Works (Historical Cost Calculation)																					
DC14-US00237	M-551 - SUMMERSIDE PHASE 14 (JACKSON LAND CORP.) - Internal oversizing	2014-2021	$33.0	$.0	$.0	$33.0	0.0%	$.0	$33.0	0.0%	$.0	$.0	$33.0	$.0	$33.0	82%	$27.1	12.0%	$4.0	6.0%	$2.0	0.0%	$.0
DC14-US00273	M-525 - SUMMERSIDE SUB PH 11 (JACKSON LAND CORP.) - Internal oversizing	2014-2021	$56.5	$.0	$.0	$56.5	0.0%	$.0	$56.5	0.0%	$.0	$.0	$56.5	$.0	$56.5	82%	$46.3	12.0%	$6.8	6.0%	$3.4	0.0%	$.0
DC14-US00600	M-529 - SUMMERSIDE PHASE 10 A (JACKSON LAND CORP) - Internal oversizing	2014-2021	$53.9	$.0	$.0	$53.9	0.0%	$.0	$53.9	0.0%	$.0	$.0	$53.9	$.0	$53.9	82%	$44.2	12.0%	$6.5	6.0%	$3.2	0.0%	$.0
DC14-US00713	M-528 - SUMMERSIDE PH 9 (JACKSON LAND CORP) - Internal oversizing	2014-2021	$140.6	$.0	$.0	$140.6	0.0%	$.0	$140.6	0.0%	$.0	$.0	$140.6	$.0	$140.6	82%	$115.3	12.0%	$16.9	6.0%	$8.4	0.0%	$.0
DC14-US00136	M-394 - CRESTWOOD PH 1 (DREWLO) - Landscape pond	2014-2021	$44.0	$.0	$.0	$44.0	0.0%	$.0	$44.0	0.0%	$.0	$.0	$44.0	$.0	$44.0	82%	$36.1	12.0%	$5.3	6.0%	$2.6	0.0%	$.0
DC14-US00408	M-435 - OAKRIDGE CROSSING (AUBURN) - Pond - landscape	2014-2021	$137.5	$.0	$.0	$137.5	0.0%	$.0	$137.5	0.0%	$.0	$.0	$137.5	$.0	$137.5	82%	$112.8	12.0%	$16.5	6.0%	$8.3	0.0%	$.0
DC14-US00594	M-528 - SUMMERSIDE PH 9 (JACKSON LAND CORP) - External oversizing, pond landscape	2014-2021	$1,236.4	$.0	$.0	$1,236.4	0.0%	$.0	$1,236.4	0.0%	$.0	$.0	$1,236.4	$.0	$1,236.4	82%	$1,013.8	12.0%	$148.4	6.0%	$74.2	0.0%	$.0
	SUBTOTAL		$1,701.9	$.0	$.0	$1,701.9	0.0%	$.0	$1,701.9	0.0%	$.0	$.0	$1,701.9	$.0	$1,701.9	82.0%	$1,395.5	12.0%	$204.2	6.0%	$102.1	0.0%	$.0
	TOTAL		**$21,845.2**	**$.0**	**$.0**	**$21,845.2**	**0.0%**	**$.0**	**$21,845.2**	**0.0%**	**$.0**	**$.0**	**$21,845.2**	**$.0**	**$21,845.2**	**79.9%**	**$17,462.2**	**10.1%**	**$2,206.8**	**4.7%**	**$1,027.1**	**5.3%**	**$1,149.1**

Development Charge Rate Calculation (Pre-Financing Cost)

	Residential		Commercial		Institutional		Industrial	
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$13.6	80.0%	$10.9	10.1%	$1.4	4.7%	$.6	5.2%	$.7
Total net cost eligible for DC rate calculation purposes	$21,831.6	79.9%	$17,451.3	12.6%	$2,205.4	4.7%	$1,026.5	5.3%	$1,148.4
Divided By: Total Gross Growth Projections			38,636		118,540		221,177		320,170
Calculated DC Rate - Pre-Financing			**$ 451.69** /person		**$ 18.60** /sq. m.		**$ 4.64** /sq. m.		**$ 3.59** /sq. m.

Pre- Financing Cost Residential Rates:

		Total General	Minor Roadworks	Minor San. Sewers	Minor Storm Sewers
Single Family Dwelling	3.02	$ 1,364.11	$ 651.10	$400.20	$ 312.81
Multiple unit dwelling	2.28	$ 1,029.85	$ 491.56	$302.14	$ 236.16
Apartment - bach. & 1 bed	1.41	$ 636.88	$ 303.99	$186.85	$ 146.05
Apartment - ≥ 2 bedroom	1.90	$ 858.21	$ 409.63	$251.78	$ 196.80
Commercial		$ 18.60	$ 8.88	$5.46	$ 4.27
Institutional		$ 4.64	$ 2.22	$1.36	$ 1.06
Industrial		$ 3.59	$ 1.71	$1.05	$ 0.82

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from previous development charges background study and City UWRF claim database as of December 2013.
2) Claims within the section titled "Total UWRF Minor Storm Sewerage Works (Historical Cost Calculation)" use a historical cost split methodology which was also used for previous portions of the claim. Schedule 6 applies with regard to all non-cost split aspects of the claim.

Table I-2: Urban Works Reserve Fund - Minor Storm Water Management Works

Service component : **Urban Works Reserve Fund - Minor Storm Water Management Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																	Commercial		Institutional		Industrial	
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	% (8)	benefit (9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	% (14)	$ (15) (13) * (14)	% (16)	$ (17) (13) * (16)	% (18)	$ (19) (13) * (18)	% (20)	$ (21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total UWRF Storm Water Management Works (Schedule 7)																					
DC14-UP00003	M-540 - FOREST HILL PHASE 3 (MONARCH) - Pond and land in M-451 SWMF 1N (T83)	2014-2021	$666.3	$.0	$.0	$666.3	0.0%	$.0	$666.3	0.0%	$.0	$.0	$666.3	$.0	$666.3	82%	$546.4	12.0%	$80.0	6.0%	$40.0	0.0%	$.0
DC14-UP00152	SP-01082 - WONDERLAND POWER CENTRE PH II (SOUTHSIDE) - Pond & land cost	2014-2021	$151.9	$.0	$.0	$151.9	0.0%	$.0	$151.9	0.0%	$.0	$.0	$151.9	$.0	$151.9	82%	$124.6	12.0%	$18.2	6.0%	$9.1	0.0%	$.0
DC14-UP00344	M-624 - NORTH TALBOT SUBDIVISION - PH2 (SPEYSIDE EAST CORP) - SWMF construction	2014-2021	$838.6	$.0	$.0	$838.6	0.0%	$.0	$838.6	0.0%	$.0	$.0	$838.6	$.0	$838.6	82%	$687.7	12.0%	$100.6	6.0%	$50.3	0.0%	$.0
DC14-UP00421	39T-07002 - ON LINE SUBDIVISION (DREWBROMAR) - Pond	2014-2021	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	82%	$205.0	12.0%	$30.0	6.0%	$15.0	0.0%	$.0
DC14-UP00425	M-624 - NORTH TALBOT SUBDIVISION - PH2 (SPEYSIDE EAST CORP) - SWM	2014-2021	$54.8	$.0	$.0	$54.8	0.0%	$.0	$54.8	0.0%	$.0	$.0	$54.8	$.0	$54.8	82%	$44.9	12.0%	$6.6	6.0%	$3.3	0.0%	$.0
DC14-UP00514	M-564 - FOXHOLLOW SUBDIVISION PH 1 (FOXHOLLOW DEV INC) - Pond Construction	2014-2021	$747.7	$.0	$.0	$747.7	0.0%	$.0	$747.7	0.0%	$.0	$.0	$747.7	$.0	$747.7	82%	$613.1	12.0%	$89.7	6.0%	$44.9	0.0%	$.0
DC14-UP00548	39T-07002 - ON LINE SUBDIVISION (DREWBROMAR) - Pond	2014-2021	$181.7	$.0	$.0	$181.7	0.0%	$.0	$181.7	0.0%	$.0	$.0	$181.7	$.0	$181.7	82%	$149.0	12.0%	$21.8	6.0%	$10.9	0.0%	$.0
DC14-UP00566	M-491 - HYDE PARK WOODS PH II (WALLOY EXCAVATING) - Pond Land	2014-2021	$62.5	$.0	$.0	$62.5	0.0%	$.0	$62.5	0.0%	$.0	$.0	$62.5	$.0	$62.5	82%	$51.3	12.0%	$7.5	6.0%	$3.8	0.0%	$.0
DC14-UP00603	39T-05505 - 1522 KILALLY ROAD (DREWLO HOLDINGS) - Kilally SW Basin	2014-2021	$5,228.0	$.0	$.0	$5,228.0	0.0%	$.0	$5,228.0	0.0%	$.0	$.0	$5,228.0	$.0	$5,228.0	82%	$4,287.0	12.0%	$627.4	6.0%	$313.7	0.0%	$.0
DC14-UP00617	M-593 - 800 SUNNINGDALE ROAD WEST (SUNNINGDALE G.C.) - Pond construction	2014-2021	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	82%	$205.0	12.0%	$30.0	6.0%	$15.0	0.0%	$.0
DC14-UP00631	M-540 - FOREST HILL PHASE 3 (MONARCH) - Pond outlet sewer	2014-2021	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	82%	$205.0	12.0%	$30.0	6.0%	$15.0	0.0%	$.0
DC14-UP00633	M-596 - 810 WESTDEL BOURNE (WEST KAINS LAND C) - Pond adjustments	2014-2021	$16.5	$.0	$.0	$16.5	0.0%	$.0	$16.5	0.0%	$.0	$.0	$16.5	$.0	$16.5	82%	$13.5	12.0%	$2.0	6.0%	$1.0	0.0%	$.0
DC14-UP00637	39T-04512 - 1300 FANSHAWE PARK ROAD EAST (700531 ONTARIO LTD.) - Pond & land SWMF 4 (T22) Page 200	2014-2021	$2,314.0	$.0	$.0	$2,314.0	0.0%	$.0	$2,314.0	0.0%	$.0	$.0	$2,314.0	$.0	$2,314.0	82%	$1,897.5	12.0%	$277.7	6.0%	$138.8	0.0%	$.0
DC14-UP00647	M-593 - 800 SUNNINGDALE ROAD WEST (SUNNINGDALE G.C.) - Pond	2014-2021	$7.6	$.0	$.0	$7.6	0.0%	$.0	$7.6	0.0%	$.0	$.0	$7.6	$.0	$7.6	82%	$6.3	12.0%	$.9	6.0%	$.5	0.0%	$.0
DC14-UP00658	M-564 - FOXHOLLOW SUBDIVISION PH 1 (FOXHOLLOW DEV INC) - Pond Construction	2014-2021	$250.0	$.0	$.0	$250.0	0.0%	$.0	$250.0	0.0%	$.0	$.0	$250.0	$.0	$250.0	82%	$205.0	12.0%	$30.0	6.0%	$15.0	0.0%	$.0
DC14-UP00665	M-583 - UPLANDS CROSSING PH 2 (DREWLO) -	2014-2021	$275.0	$.0	$.0	$275.0	0.0%	$.0	$275.0	0.0%	$.0	$.0	$275.0	$.0	$275.0	82%	$225.5	12.0%	$33.0	6.0%	$16.5	0.0%	$.0
DC14-UP00682	M-624 - NORTH TALBOT SUBDIVISION - PH2 (SPEYSIDE EAST CORP) - SWM land	2014-2021	$195.2	$.0	$.0	$195.2	0.0%	$.0	$195.2	0.0%	$.0	$.0	$195.2	$.0	$195.2	82%	$160.1	12.0%	$23.4	6.0%	$11.7	0.0%	$.0
DC14-UP00686	M-583 - UPLANDS CROSSING PH 2 (DREWLO) - Pond	2014-2021	$110.0	$.0	$.0	$110.0	0.0%	$.0	$110.0	0.0%	$.0	$.0	$110.0	$.0	$110.0	82%	$90.2	12.0%	$13.2	6.0%	$6.6	0.0%	$.0
DC14-UP00690	M-649 - 1812 WONDERLAND ROAD NORTH (DREWLO) - Construction	2014-2021	$213.9	$.0	$.0	$213.9	0.0%	$.0	$213.9	0.0%	$.0	$.0	$213.9	$.0	$213.9	82%	$175.4	12.0%	$25.7	6.0%	$12.8	0.0%	$.0
DC14-UP00693	M-649 - 1812 WONDERLAND ROAD NORTH (DREWLO) - Land cost	2014-2021	$36.1	$.0	$.0	$36.1	0.0%	$.0	$36.1	0.0%	$.0	$.0	$36.1	$.0	$36.1	82%	$29.6	12.0%	$4.3	6.0%	$2.2	0.0%	$.0
DC14-UP00696	M-649 - 1812 WONDERLAND ROAD NORTH (DREWLO) - Pond SWMF 7 (T13)	2014-2021	$354.8	$.0	$.0	$354.8	0.0%	$.0	$354.8	0.0%	$.0	$.0	$354.8	$.0	$354.8	82%	$291.0	12.0%	$42.6	6.0%	$21.3	0.0%	$.0
DC14-UP00705	M-633 - NW CRNR RICHMOND & SUNNINGDALE (AUBURN / CORLON) - Pond & Land SWMF 8A (T16)	2014-2021	$1,405.4	$.0	$.0	$1,405.4	0.0%	$.0	$1,405.4	0.0%	$.0	$.0	$1,405.4	$.0	$1,405.4	82%	$1,152.4	12.0%	$168.6	6.0%	$84.3	0.0%	$.0
DC14-UP00715	39T-07507 - 1959 WHARNCLIFFE ROAD SOUTH (ALI SOUFAN) - Inlet pipe	2014-2021	$49.8	$.0	$.0	$49.8	0.0%	$.0	$49.8	0.0%	$.0	$.0	$49.8	$.0	$49.8	82%	$40.9	12.0%	$6.0	6.0%	$3.0	0.0%	$.0

Service component : **Urban Works Reserve Fund - Minor Storm Water Management Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON-RESIDENTIAL Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
DC14-UP00763	M-491 - HYDE PARK WOODS PH II (WALLOY EXCAVATING) - Pond landscape	2014-2021	$88.0	$.0	$.0	$88.0	0.0%	$.0	$88.0	0.0%	$.0	$.0	$88.0	$.0	$88.0	82%	$72.2	12.0%	$10.6	6.0%	$5.3	0.0%	$.0
DC14-UP00766	M-633 - NW CRNR RICHMOND & SUNNINGDALE (AUBURN / CORLON) - Land cost	2014-2021	$54.0	$.0	$.0	$54.0	0.0%	$.0	$54.0	0.0%	$.0	$.0	$54.0	$.0	$54.0	82%	$44.3	12.0%	$6.5	6.0%	$3.2	0.0%	$.0
DC14-UP00770	M-546 - FOXWOOD CROSSINGS (ALI SOUFAN) - Landscaping	2014-2021	$55.0	$.0	$.0	$55.0	0.0%	$.0	$55.0	0.0%	$.0	$.0	$55.0	$.0	$55.0	82%	$45.1	12.0%	$6.6	6.0%	$3.3	0.0%	$.0
DC14-UP01000	SWM Facility Remediation Contingency	2014-2021	$1,500.0	$.0	$.0	$1,500.0	0.0%	$.0	$1,500.0	0.0%	$.0	$.0	$1,500.0	$.0	$1,500.0	82%	$1,230.0	12.0%	$180.0	6.0%	$90.0	0.0%	$.0
	SUBTOTAL		$15,606.9	$.0	$.0	$15,606.9	0.0%	$.0	$15,606.9	0.0%	$.0	$.0	$15,606.9	$.0	$15,606.9	82.0%	$12,797.7	12.0%	$1,872.8	6.0%	$936.4	0.0%	$.0
TOTAL			**$15,606.9**	**$.0**	**$.0**	**$15,606.9**	**0.0%**	**$.0**	**$15,606.9**	**0.0%**	**$.0**	**$.0**	**$15,606.9**	**$.0**	**$15,606.9**	**82.0%**	**$12,797.7**	**12.0%**	**$1,872.8**	**6.0%**	**$936.4**	**0.0%**	**$.0**

Development Charge Rate Calculation (Pre-Financing Cost)

	Residential	Commercial	Institutional	Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$1,458.4 82.0% $1,195.9	12.0% $175.0	6.0% $87.5	0.0% $.0
Total net cost eligible for DC rate calculation purposes	$14,148.5 82.0% $11,601.8	12.0% $1,697.8	6.0% $848.9	0.0% $.0
Divided By: Total Gross Growth Projections	38,636	118,540	221,177	320,170
Calculated DC Rate - Pre-Financing	**$ 300.29** /person	**$ 14.32** /sq. m.	**$ 3.84** /sq. m.	**$ -** /sq. m.

Pre- Financing Cost Residential Rates:

		SWM Facilities
Single Family Dwelling	3.02	$ 906.87
Multiple unit dwelling	2.28	$ 684.65
Apartment - bach. & 1 bed	1.41	$ 423.40
Apartment - ≥ 2 bedroom	1.90	$ 570.55

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from previous development charges background study and City UWRF claim database as of December 2013.

APPENDIX J - SANITARY SEWERS, POLLUTION CONTROL PLANTS, AND OTHER FACILITIES- CSRF FUNDED

The 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study prepared by AECOM formed the basis for determining the City's sanitary system growth needs used in the DC rate calculation. The update looked at the full system including sanitary sewerage collection system, Pumping Station (PS) and Pollution Control Plant (PCP) facilities. The AECOM report met the following objectives:

- Updated the City of London Sanitary Sewerage Servicing Plan Update 2008 to address 20 year growth per the information provided by the City with consideration of the ultimate requirements over 50 years.
- Confirmed existing wastewater system operating conditions, related regulatory requirements and service level needs and reconfirm/identify any new growth related requirements.
- Identify up-to-date costs (2014), for the trunk sewer upsizing, new collection works required, including pumping station/forcemain and Wastewater Treatment Plants (WTPs) . Identify any benefit to existing developed areas (growth/non-growth) and allocate growth components to residential, institutional, commercial and industrial (RICI) land uses for DC determination.
- Address peer review comments from the previous DC background work; incorporate outputs from more recently completed works, environmental assessments, and/or community plans; ensure consistency with the City's Water and Transportation DC Updates (2014), and support/assist in development of the City's Growth Management Implementation Strategy (GMIS); and remove redundancies in restoration costs where appropriate.
- Reconfirm permanent needs and triggers related to the timing of the future Southside WTP and optimal/timely servicing for Southwest London.
- Reconfirm WTP requirements based on regulatory, optimization, industrial pre-treatment, and future capacity needs to accommodate growth on a 5 year incremental basis over the 20 year growth period.

This Appendix summarizes the methods applied to the above work. More detailed information is available in the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study Update.

Policy Considerations

The Wastewater Servicing Master Plan and Development Charge Background Study Update was prepared to ensure the provision of sufficient funding for future growth related wastewater servicing works. The following policies were used to establish the quantum of works included in the Wastewater development charge:

(a) Regional Trunk Sewers (CSRF- Sanitary Sewerage)

All sewers required to service future development with a diameter greater than 450mm are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF-Sanitary Sewerage.

All sewers of any diameter required to service future development and that are identified as a strategic need by the City Engineer are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage.

In order to be eligible for a claim as a Regional Trunk Sewer, the sewer must have no Private Drain Connections to individual residential units otherwise the "Sewer Oversizing" policy applies.

(b) Sewer Oversizing (CSRF - Minor Sanitary Sewers)

Sanitary Sewers, which are not Regional Trunk Sewers, with all of the following attributes are eligible for a subsidy from the CSRF - Minor Sanitary Sewers:

- The sewer services external developable areas, and
- The sewer is greater than 250mm in diameter.

The oversized portion (>250mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts are to be reflected in an appendix of the DC Bylaw. The oversizing subsidy amounts cover the cost per metre of all associated eligible costs including engineering, manholes, restoration, etc.

(c) Pumping Stations (CSRF- Sanitary Sewerage)

The upgrading or construction of new regional pumping stations are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage. These projects must also be identified in the Development Charges Background Study. A figure showing the location of all of these pumping stations is provided in the Sanitary Master Servicing Study.

(d) Temporary Pumping Stations (Developer Cost)

The cost of any temporary pumping stations or forcemains is borne by the developer. Approval of temporary works is at the discretion of the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. provide land for permanent facility) as a condition of approval for the temporary facility. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

(e) Wastewater Treatment Upgrades (CSRF- Sanitary Sewerage)

All wastewater treatment upgrades which serve to increase capacity, or are necessitated by growth, are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage.

(f) Temporary Sanitary Sewerage Systems (Developer Cost)

Costs of all sanitary sewage systems that are temporary or are not defined in the DC Background Charge Study shall be borne by the Developer. Approval of temporary works is at the discretion of the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. In order for a

temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

(g) Local Service Costs (Developer Cost)
Any pipe or portion of a larger pipe that is less than or equal to 250mm in diameter are referred to as local works, and undertaken at the Developer's expense.

Project Identification
In assessing sanitary growth needs for the current planning period, AECOM incorporated the Altus growth projections; City provided planning and development information and sewerage system modeling. Sanitary sewer system analysis was completed for each sewershed as follows:

- Modeling and analysis was reconfirmed to address sewage flows and the required works to service Build Out (675,000 population);
- Modeling and analysis was then completed for the sewage flows determined to service UGB areas. The required works were identified to satisfy the design constraints for those trunk sewer and/or forcemain components needed to extend beyond these boundaries for Build Out purposes. Pipe sizing for the Build Out condition was used with lengths reduced to service only the Growth Management Implement Strategy (GMIS) area;
- Modeling of the sewers needed to service areas down to 30 hectares within the UGB was then completed to identify all of the sewer system related works needed to fully service the lands within the UGB.
- The final modeling analysis utilized the projected 2014 - 2033 growth information to reduce trunk sewer lengths to service growth within those areas identified within the GMIS Boundary for DC purposes. In those instances where works are to be extended in the future to service the UGB, sizing was maintained per previous modeling.

Analyzing future flows beyond the current 20-year planning period ensures efficient progression of services over the City's ultimate buildout. Sewage flow forecasts also included allowances for industrial added demand of 2.0 MLD, primarily in the core area of the City, over the 20-year period as well as future capacity for septage/leachate and biosolids management sources.

Each required DC Sanitary Servicing work has been identified in Table J-1 along with key details. The methods used in identifying Sanitary Sewerage System works for the 2014-2033 review period are described below.

(a) Required Trunk Sewer Works
AECOM completed an analysis of the sanitary sewerage system using the Infosewer Sewer Model. The model determines future flows for trunk sewer, pumping station and forcemains to determine constraints for future growth and identify upsizing/extension solutions. Sewer segments, manhole nodes and profiles representing future works were added to the model based on the latest community planning and development information. Based on the model results, major trunk sewer extension or upsizing works were identified as CSRF funded DC projects.

Table J-1 outlines the major trunk sewer works required to service the population and ICI growth to 2033 within the City's GMIS boundary. Each Sanitary Trunk Sewer work is clearly identified in Table J-1 with a distinct ID as well as location information (PCP sewershed, growth area), sewer description (average depth, diameter and length), timing (consistent with the City's GMIS), and Growth/Non-growth allocations.

(b) Sewer Oversizing

Anticipated Sanitary Sewer Oversizing needs were determined as part of the Infosewer sewer model, prepared by AECOM, used to project the needs for the sanitary servicing system within the 2014-2033 horizon and Growth Management Implementation Strategy(GMIS) Boundary. Cost estimates for sewer oversizing for the study period are included on Table J-1. The local component of the sewer installation will not be claimable. Directions on eligibility for sewer oversizing claims can be found in the DC By-law Schedule 8 and includes a Pipe Size Credit Amount included from the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study.

(c) Pumping Station / Forcemain Works

Required Pumping Station and Forcemain works were determined using projected sewage flow information to 2033. Table J-1 (appended to this section) outlines the required upgrades to existing pumping station or new pumping stations to service growth in the 20-year planning period. Further detailed information provided in the AECOM study identify pumping stations by name along with a rated capacity, operating ceiling, current running average flows, available capacity, expansion requirements to 2023, timing (consistent with the City's Growth Management Implementation Strategy) and growth/non-growth allocations.

(d) Required Pollution Control Plant Works

WTP expansions and improvements will be needed to handle future sewage flows, plus future more stringent effluent requirements. Given the size of the WTP facilities involved and the fact that sewage flows are conveyed to these facilities under varying conditions, expansion needs were driven by the following:

- Average existing and future sewage flows (i.e. not peaked);
- An I&I allowance of 8,640 L/ha/day per the standard design parameter;
- Expansion needs being closely matched to the 2034 sewage flow requirements with minimal oversizing;
- Sewage flows being balanced, wherever possible, among the WTP's to maximize the utilization of available sewage treatment capacity and minimize the need for added expansions unless absolutely necessary.

The AECOM study outlines the Pollution Control Plant works required to service the residential population and ICI growth to 2033 within the City's GMIS boundary. Each PCP work is identified by name in the project lists with a rated capacity, operational ceiling, current running average flows, available capacity, expansion requirements to 2033, timing, and Growth/Non-growth allocations. The key elements required for rate calculations are reproduced in Table J-1.

Establishing Costing Estimates

The DC rate setting process requires the estimated costs assigned to identified growth works be reasonable and defensible. Prior to assigning costs, AECOM undertook a detailed costing analysis using previous project pricing, industry pricing indexes, and recent tenders, incorporating adjustments for inflation. All works have been cost estimated in 2014 dollars. Engineering (15%) and contingency (20%) were added to all sanitary servicing works.

Trunk sewer costing was based on pipe size and depth with the total cost of purchasing and installing sewer pipe broken down into three components: pipe, construction and restoration costs. Redundancies with other transportation, storm drainage and water works were removed where applicable. The oversizing sewer subsidy table included in the Development Charges By-

law was created based on the trunk sewer unit cost estimates and includes provisions for engineering costs.

Post-Period Benefit Adjustments

For pumping stations and PCP's, projected upgrades were considered and compared with the estimated flow generation between 2014-2033. Capacity created beyond the 2033 needs was then calculated and used to determine the amount of post period benefit related to the proposed upgrade. The portion of each work which benefited growth beyond the 20-year horizon (post period benefit) was removed from the rate calculations.

Allocation Splits

(a) Growth/Non-Growth

The growth and non-growth allocations for sanitary servicing works vary by project and were determined using static modelling techniques. A further description of the process involved is discussed in the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study.

(b) Residential/ICI

RES/ICI allocations were determined using anticipated flows from various forms of development in each sub-sewershed as provided by wastewater static modelling. A full description of the process involved is discussed in the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study.

Final Costs for DC Rate Calculation

The required Sanitary Sewerage System Works identified in the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study form the basis for determining development charges for the CSRF and represent the numerator in the rate calculation.

The DC funded portion of certain Sanitary Sewer works funded in prior years from debt has also been incorporated into the DC rate calculations.

The final total costs calculated for Sanitary Sewerage System Works are reflected in Table J-1.

Uncommitted Reserve Funds

The uncommitted balance of the reserve funds is netted against the determined total growth servicing costs to take into account funds that have been collected in the past. The above costs figures are reduced by the uncommitted roads balance in order to determine the final calculated DC rate.

Financing Costs

Table J-2 was produced to simulate cash flows for CSRF funded Sanitary Servicing works for the purpose of calculating the final DC rate inclusive of financing costs. Forecasting cash flow and financing costs involved:

a) Starting with the 2014 opening balance, which reflects accumulated funds for growth projects identified in past DC studies that remain as capital needs in this study;
b) Projecting DC revenues using the "pre-finance" rate;
c) Incorporating DC drawdowns in the cash flow projection based on the growth projects identified in the 20-year study period;

d) Incorporating provisions for debt payments for previously approved commitments on growth works funded by debt; and
e) Estimating annual interest revenues to be earned and/or financing costs to be incurred due to fund deficits throughout the 20-year planning horizon.

Any deficit in the cash flow analysis at the end of the planning period equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e. the post period benefit). All figures are presented on an un-inflated, constant (2014) dollar basis and interest rates exclude the inflationary component (2%). The rates generated from this cash flow analysis reflect the appropriate cost recovery from growth for the 20-year planning horizon.

Council Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

NOTE:
An examination of long term Sanitary Services operating costs for growth needs is included in Appendix O of this Background Study.

Table J-1: Wastewater Servicing

Service component : **Wastewater Servicing**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																	Commercial		Institutional		Industrial	
									%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10)	(11) [(7) - (9)] * 10(7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Sanitary Trunk Sewers																					
DC14-WW00001	HP7A - Hyde Park Growth Area Oxford PCP sewershed	2014	$2,000.0	$0.0	$1,326.0	$674.0	0.0%	$0.0	$674.0	15.0%	$101.1	$0.0	$572.9	$0.0	$572.9	100%	$572.9	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00002	RB1B - River Bend Growth Area Oxford PCP sewershed	2014	$2,117.7	$0.0	$1,713.0	$404.8	0.0%	$0.0	$404.8	0.0%	$0.0	$0.0	$404.8	$0.0	$404.8	100%	$404.8	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00003	SS14A - Wonderland Growth Area Greenway PCP sewershed	2015	$4,582.3	$0.0	$0.0	$4,582.3	3.0%	$139.4	$4,442.9	4.9%	$218.0	$0.0	$4,225.0	$0.0	$4,225.0	89%	$3,756.7	7.9%	$334.7	2.8%	$116.5	0.4%	$17.0
DC14-WW00004	SS3A - Lambeth Growth Area Greenway PCP sewershed	2015	$7,940.5	$0.0	$350.0	$7,590.5	2.3%	$172.3	$7,418.3	4.0%	$296.7	$0.0	$7,121.5	$0.0	$7,121.5	100%	$7,121.5	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00005	SS15A - Lambeth Growth Area Greenway PCP sewershed	2016	$2,765.7	$0.0	$0.0	$2,765.7	9.2%	$254.1	$2,511.6	0.0%	$0.0	$0.0	$2,511.6	$0.0	$2,511.6	100%	$2,511.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00006	SS15C - North Talbot Growth Area Greenway PCP sewershed	2017	$4,025.8	$0.0	$0.0	$4,025.8	2.5%	$99.7	$3,926.0	0.0%	$0.0	$0.0	$3,926.0	$0.0	$3,926.0	100%	$3,926.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00007	SS12B - Longwoods Growth Area Greenway PCP sewershed	2016	$5,442.4	$0.0	$0.0	$5,442.4	0.0%	$0.0	$5,442.4	0.0%	$0.0	$0.0	$5,442.4	$0.0	$5,442.4	90%	$4,904.1	5.9%	$320.2	3.7%	$202.0	0.3%	$16.0
DC14-WW00008	KL1B - Killaly Growth Area Adelaide PCP sewershed	2017	$1,198.6	$0.0	$0.0	$1,198.6	0.0%	$0.0	$1,198.6	0.0%	$0.0	$0.0	$1,198.6	$0.0	$1,198.6	100%	$1,198.6	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00009	SS13B - Wonderland/ Bostwisk E Growth Area Greenway PCP sewershed	2018	$3,226.3	$0.0	$0.0	$3,226.3	0.0%	$0.0	$3,226.3	0.0%	$0.0	$0.0	$3,226.3	$0.0	$3,226.3	93%	$3,004.1	5.2%	$168.9	0.0%	$0.0	1.7%	$53.3
DC14-WW00010	SS15B - North Talbot Growth Area Greenway PCP sewershed	2025	$2,745.7	$0.0	$0.0	$2,745.7	3.2%	$88.7	$2,657.0	0.0%	$0.0	$0.0	$2,657.0	$0.0	$2,657.0	100%	$2,657.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WW00011	SS14B - Bostwick W Growth Area Greenway PCP sewershed	2030	$12,807.6	$0.0	$0.0	$12,807.6	0.0%	$0.0	$12,807.6	0.0%	$0.0	$0.0	$12,807.6	$0.0	$12,807.6	82%	$10,526.3	13.5%	$1,723.7	0.0%	$0.0	4.4%	$557.5
	SUBTOTAL		$48,852.5	$0.0	$3,389.0	$45,463.5	1.7%	$754.1	$44,709.4	1.4%	$615.8	$0.0	$44,093.6	$0.0	$44,093.6	92.0%	$40,583.6	5.8%	$2,547.6	0.7%	$318.6	1.5%	$643.9
	Total Greenway PCP\Wonderland Pump Station Sewer Capacity Works																					
DC14-WW01008	Southwest Capacity Improvements	2024	$15,000.0	$0.0	$0.0	$15,000.0	62.2%	$9,336.0	$5,664.0	0.0%	$0.0	$0.0	$5,664.0	$0.0	$5,664.0	96%	$5,443.1	2.7%	$152.9	0.2%	$11.3	1.0%	$56.6
	SUBTOTAL		$15,000.0	$0.0	$0.0	$15,000.0	62.2%	$9,336.0	$5,664.0	0.0%	$0.0	$0.0	$5,664.0	$0.0	$5,664.0	96.1%	$5,443.1	2.7%	$152.9	0.2%	$11.3	1.0%	$56.6
	Total Sanitary Sewer Internal Oversizing Subsidy																					
DC14-WW02001	Sanitary Sewer Internal Oversizing Subsidy	2014-2033	$1,786.5	$0.0	$0.0	$1,786.5	0.0%	$0.0	$1,786.5	0.0%	$0.0	$0.0	$1,786.5	$0.0	$1,786.5	83%	$1,475.6	10.0%	$178.7	7.4%	$132.2	0.0%	$0.0
	SUBTOTAL		$1,786.5	$0.0	$0.0	$1,786.5	0.0%	$0.0	$1,786.5	0.0%	$0.0	$0.0	$1,786.5	$0.0	$1,786.5	82.6%	$1,475.6	10.0%	$178.7	7.4%	$132.2	0.0%	$0.0
	Total Sanitary Sewers - Infill and Intensification Nodes																					
DC14-WW02002	Infill and Intensification Nodes Sanitary Sewer Servicing	2014-2033	$4,862.3	$486.2	$0.0	$4,376.1	0.0%	$0.0	$4,376.1	14.9%	$653.5	$0.0	$3,722.6	$0.0	$3,722.6	83%	$3,074.9	10.0%	$372.3	7.4%	$275.5	0.0%	$0.0
DC14-WW02003	Infill and Intensification Corridors Sanitary Sewer Servicing	2014-2033	$3,279.4	$0.0	$0.0	$3,279.4	32.0%	$1,050.2	$2,229.2	10.0%	$222.9	$0.0	$2,006.3	$0.0	$2,006.3	83%	$1,657.2	10.0%	$200.6	7.4%	$148.5	0.0%	$0.0
	SUBTOTAL		$8,141.7	$486.2	$0.0	$7,655.5	13.7%	$1,050.2	$6,605.3	13.3%	$876.4	$0.0	$5,728.9	$0.0	$5,728.9	82.6%	$4,732.1	10.0%	$572.9	7.4%	$423.9	0.0%	$0.0
	Total Sanitary Treatment Plant Upgrades																					
DC14-WW01001	Greenway PCP Treatment Capacity Upgrades	2014	$46,166.8	$0.0	$26,680.0	$19,486.8	26.2%	$5,101.5	$14,385.3	12.5%	$1,792.4	$0.0	$12,592.9	$0.0	$12,592.9	79%	$9,952.4	5.6%	$704.6	6.0%	$752.2	9.4%	$1,183.7
DC14-WW01002	Vauxhall PCP Treatment Capacity Upgrades	2023	$6,000.0	$0.0	$0.0	$6,000.0	94.3%	$5,656.0	$344.0	50.0%	$172.0	$0.0	$172.0	$0.0	$172.0	91%	$156.1	1.1%	$1.9	8.1%	$14.0	0.0%	$0.0
DC14-WW01003	Adelaide PCP Treatment Capacity Upgrades	2025	$10,900.0	$0.0	$0.0	$10,900.0	90.4%	$9,859.0	$1,041.0	0.0%	$0.0	$0.0	$1,041.0	$0.0	$1,041.0	81%	$848.2	2.0%	$20.7	9.9%	$103.0	6.6%	$69.1
	SUBTOTAL		$63,066.8	$0.0	$26,680.0	$36,386.8	56.7%	$20,616.5	$15,770.3	12.5%	$1,964.4	$0.0	$13,805.9	$0.0	$13,805.9	79.4%	$10,956.7	5.3%	$727.1	6.3%	$869.2	9.1%	$1,252.8
	Total Sanitary Pumping Station Works																					
DC14-WW01004	Hyde Park Pumping Station Upgrade	2014	$198.5	$0.0	$0.0	$198.5	0.0%	$0.0	$198.5	0.0%	$0.0	$0.0	$198.5	$0.0	$198.5	94%	$186.5	6.0%	$11.9	0.0%	$0.0	0.0%	$0.0
DC14-WW01005	East Park Pumping Station Upgrade	2016	$1,653.0	$0.0	$200.0	$1,453.0	0.0%	$0.0	$1,453.0	0.0%	$0.0	$0.0	$1,453.0	$0.0	$1,453.0	18%	$261.5	2.0%	$29.1	0.0%	$0.0	80.0%	$1,162.4
DC14-WW01006	Colonel Talbot Pumping Station	2017	$6,100.0	$0.0	$0.0	$6,100.0	0.0%	$0.0	$6,100.0	0.0%	$0.0	$0.0	$6,100.0	$0.0	$6,100.0	96%	$5,862.1	2.7%	$164.7	0.2%	$12.2	1.0%	$61.0
DC14-WW01011	Wonderland Pumping Station Upgrade	2024	$2,500.0	$0.0	$0.0	$2,500.0	74.7%	$1,867.0	$633.0	0.0%	$0.0	$0.0	$633.0	$0.0	$633.0	96%	$608.3	2.7%	$17.1	0.2%	$1.3	1.0%	$6.3
DC14-WW01010	Wonderland Pumping Station Optimization	2014	$500.0	$0.0	$0.0	$500.0	0.0%	$0.0	$500.0	0.0%	$0.0	$0.0	$500.0	$0.0	$500.0	96%	$480.5	2.7%	$13.5	0.2%	$1.0	1.0%	$5.0
	SUBTOTAL		$10,951.5	$0.0	$200.0	$10,751.5	17.4%	$1,867.0	$8,884.5	0.0%	$0.0	$0.0	$8,884.5	$0.0	$8,884.5	83.3%	$7,399.0	2.7%	$236.3	0.2%	$14.5	13.9%	$1,234.7

Service component : **Wastewater Servicing**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON-RESIDENTIAL Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Industrial Sanitary Servicing Works																						
DC14-WW00080	Industrial Sanitary Servicing Internal Oversizing (250ha)	2014-2024	$450.0	$.0	$.0	$450.0	0.0%	$.0	$450.0	0.0%	$.0	$.0	$450.0	$.0	$450.0	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$450.0
DC14-WW00081	Industrial Sanitary Servicing (250ha)	2014-2024	$13,500.0	$.0	$.0	$13,500.0	0.0%	$.0	$13,500.0	0.0%	$.0	$.0	$13,500.0	$.0	$13,500.0	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$13,500.0
DC14-WW00082	Industrial Trunk Sanitary Servicing (300ha)	2025-2033	$9,600.0	$.0	$.0	$9,600.0	52.3%	$5,019.3	$4,580.7	0.0%	$.0	$.0	$4,580.7	$.0	$4,580.7	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$4,580.7
DC14-WW00083	Industrial Sanitary Servicing Internal Oversizing (300ha)	2025-2033	$200.0	$.0	$.0	$200.0	52.3%	$104.6	$95.4	0.0%	$.0	$.0	$95.4	$.0	$95.4	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$95.4
	SUBTOTAL		$23,750.0	$.0	$.0	$23,750.0	21.6%	$5,123.9	$18,626.1	0.0%	$.0	$.0	$18,626.1	$.0	$18,626.1	0.0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$18,626.1
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (TREATMENT) PRINCIPLE		$28,023.3			$28,023.3			$28,023.3				$28,023.3		$28,023.3	86%	$23,969.5	8%	$2,253.0	6%	$1,800.8	0%	$.0
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (COLLECTION) PRINCIPLE		$3,761.0			$3,761.0			$3,761.0				$3,761.0		$3,761.0	97%	$3,663.2	2%	$90.4	0%	$7.4	0%	$.0
TOTAL			**$203,333.2**	**$486.2**	**$30,269.0**	**$172,578.0**	**22.5%**	**$38,747.7**	**$133,830.3**	**2.6%**	**$3,456.6**	**$.0**	**$130,373.8**	**$.0**	**$130,373.8**	**75.3%**	**$98,222.8**	**5.2%**	**$6,758.8**	**2.7%**	**$3,577.9**	**16.7%**	**$21,814.2**

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential	Commercial	Institutional	Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$5,992.8 90.3%	$5,414.5 6.1%	$364.3 3.6%	$214.0 0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$124,380.9 74.6%	$92,808.3 5.1%	$6,394.5 2.7%	$3,363.9 17.5%	$21,814.2
Divided By: Total Gross Growth Projections		104,829	480,293	607,381	1,028,402
Calculated DC Rate - Pre-Financing		**$ 885.33** /person	**$ 13.31** /sq. m.	**$ 5.54** /sq. m.	**$ 21.21** /sq. m.

Pre- Financing Cost Residential Rates:

		Facilities
Single Family Dwelling	3.02	$ 2,673.70
Multiple unit dwelling	2.28	$ 2,018.56
Apartment - bach. & 1 bed	1.41	$ 1,248.32
Apartment - ≥ 2 bedroom	1.90	$ 1,682.13

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from the AECOM 2014 Wastewater Servicing Master Plan Update and Development Charge Background Study (March 2014).

2014 Development Charges Background Study

Table J-2: Cash Flow Analysis and Final Rate Calculation Wastewater Servicing

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Wastewater Servicing**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
		Pre-Financing DC Rate	Post-Financing DC Rate	% Collected assumption	Growth projection for each year of forecast period																				
Planning Horizon - yrs	20																								
Growth - Res. (Persons In New Housing)	104,829	$ 885.33	$ 1,116.07	100%	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	104,828.8
Growth - Non-Res. (sq. m.)			$ -																						
Commercial	480,293	$ 13.31	$ 16.78	100%	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	480,293.0
Institutional	607,381	$ 5.54	$ 6.98	100%	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	607,381.0
C/I subtotal	1,087,674		$ -		54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	1,087,674.0
Industrial	1,028,402	$ 21.21	$ 26.74	100%	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	1,028,402.0
Total Non-Res.	2,116,076				105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	2,116,076.0
Reserve Fund Projections:																									
Opening Surplus / <Deficit>					$5,992.8	-$8,733.9	-$16,668.4	-$23,486.3	-$32,211.9	-$32,197.3	-$31,104.4	-$29,953.9	-$28,740.3	-$26,756.4	-$27,557.0	-$42,717.1	-$54,486.1	-$52,103.8	-$49,602.8	-$47,014.3	-$42,110.3	-$50,066.4	-$45,269.2	-$40,304.1	$5,992.8
Revenues - Development Charge Collections																									
Residential					$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$5,849.8	$116,996.6
Non-Res.																									
Commercial					$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$403.1	$8,061.1
Institutional					$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$212.0	$4,240.6
C/I subtotal					$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$615.1	$12,301.7
Industrial					$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$1,375.0	$27,499.5
Total Non-Res.					$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$1,990.1	$39,801.2
Total revenues					$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$7,839.9	$156,797.8
Development Charge draws - calculated on separate page					$22,519.5	$15,337.4	$13,967.2	$15,607.6	$6,717.5	$5,658.3	$5,639.3	$5,616.8	$4,901.5	$7,706.4	$21,791.4	$17,937.1	$3,624.3	$3,589.7	$3,589.7	$1,403.0	$14,210.6	$1,403.0	$1,403.0	$1,403.0	$174,026.2
Closing surplus / <deficit> before interest					-$8,686.8	-$16,231.5	-$22,795.6	-$31,253.9	-$31,089.5	-$30,015.7	-$28,903.8	-$27,730.8	-$25,801.9	-$26,622.9	-$41,508.5	-$52,814.3	-$50,270.5	-$47,853.6	-$45,352.6	-$40,577.5	-$48,481.0	-$43,629.5	-$38,832.3	-$33,867.3	-$11,235.6
Non-inflationary interest revenue /<expense>																									$.0
on savings	1.75%																								
on borrowings	3.50%				-$47.1	-$436.9	-$690.6	-$958.0	-$1,107.8	-$1,088.7	-$1,050.1	-$1,009.5	-$954.5	-$934.1	-$1,208.6	-$1,671.8	-$1,833.2	-$1,749.3	-$1,661.7	-$1,532.9	-$1,585.3	-$1,639.7	-$1,471.8	-$1,298.0	-$23,929.7
Closing surplus / <deficit>					-$8,733.9	-$16,668.4	-$23,486.3	-$32,211.9	-$32,197.3	-$31,104.4	-$29,953.9	-$28,740.3	-$26,756.4	-$27,557.0	-$42,717.1	-$54,486.1	-$52,103.8	-$49,602.8	-$47,014.3	-$42,110.3	-$50,066.4	-$45,269.2	-$40,304.1	-$35,165.3	-$35,165.3

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$35,165.3

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1 Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.
2 Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.
3 Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".

Other Information:	Pre	Post
Residential share	75%	74%
Non-residential		
Commercial	5%	5%
Institutional	3%	3%
C/I subtotal	8%	8%
Industrial	18%	18%

APPENDIX K – WATER SUPPLY SYSTEM

Various documents were used to inform the Water Supply System Development Charge calculation and include:

- 2014 Water Servicing Development Charge Background Study prepared by AECOM.
- 2009 Water Servicing Development Charge Background Study prepared by AECOM.
- Elgin Area Primary Water Supply System Joint Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast.
- Lake Huron Primary Water Supply System Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast.
- Elgin Area Primary Water Supply System 2008 Master Plan, Delcan.
- Lake Huron Primary Water Supply System 2008 Master Plan, Delcan.
- Elgin Area Primary Water Supply System Financial Plan, December 2011.
- Lake Huron Primary Water Supply System 2008 Master Plan, October 2013.

These documents formed the basis for determining the City's water supply needs to satisfy growth and used in the DC rate calculation. The update looked at both the Lake Huron Primary Water Supply System and the Elgin Area Primary Water Supply System.

This Appendix summarizes the methods applied to develop the Development Charge rate.

Policy Considerations

The following policies were used to establish the quantum of works included in the Water Supply development charge:

(a) Lake Huron Primary Water Supply System (CSRF-Water Supply)

All major infrastructure required within the Lake Huron Primary Water Supply System that services the City of London and provides future growth capacity has been included in the schedule of development charges financed works..

(b) Elgin Area Primary Water Supply System (CSRF-Water Supply)

All major infrastructure required within the Lake Huron Primary Water Supply System that services the City of London and provides future growth capacity has been included in the schedule of development charges financed works..

Project Identification

In assessing the Water supply growth needs for the current planning period, growth related works that service the City of London were identified in the 2014 Elgin Area Primary Water Supply System 2014 Capital Budget and 9-year forecast and Lake Huron Primary Water Supply 2014 Capital Budget and 9-year forecast. The project needs were verified through an analysis of future water demands estimated on an average day basis using the Altus Growth Forecast.

Each required water supply project has been clearly identified in the DC Update project lists along with key details.

Master planning for the Lake Huron and Elgin Area water supply systems was last completed in 2011. The need to expand the Elgin Area system is forecasted for the 2019 to 2023 time frame in order to meet future demands to 2033 for both London and Elgin area users. Flows will be transferred from the Lake Huron system to the Elgin Area system to prevent the need for further expansion of the Lake Huron facility within the 20-year planning horizon. These needs are identified for Water Supply DC rate calculation purposes in Table L-2.

Establishing Costing Estimates

The DC rate setting process requires the estimated costs assigned to identified growth works be reasonable and defensible. Cost estimates as provided in the Elgin Area Primary Water Supply System Joint Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast and Lake Huron Primary Water Supply System Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast have been included for rate setting purposes.

Contributions by Others

Costs related to the capital and operating contributions to the Lake Huron Primary Supply and Elgin Area Primary Water Supply Systems Boards are paid on the basis of the usage of the existing system. The following values indicate the City's current usage of the Lake Huron Primary Supply and Elgin Area Primary Water Supply Systems. These percentages have been used to remove the portion of the growth costs payable by others (included in the column titled "Less: future capital grants, subsidies or other contributions anticipated") from the DC Water Supply rate calculation:

Board	**Usage by London (2012 end of year)**	**Usage by Others (2012 end of year)**
Lake Huron Primary Supply System	84.40%	15.60%
Elgin Area Primary Water Supply Systems	54.69%	45.31%

Post-Period Benefit Adjustments

Adjustments were applied to rate calculations for works considered to benefit post-period growth to ensure the calculated growth burden incorporated into the DC rate calculation matches the planning horizon for this study.

- In the case of the Lake Huron Primary Water Supply System, as growth capacity is not required within the 20 year benefiting period a 100% post period benefit for all Lake Huron Primary Supply System projects.
- In the case of Elgin Area Primary Water Supply System a global post period benefit was applied that represents the citywide capacity required (over and above the current capacity of the existing system) versus the capacity provided by the various projects outlined in the DC rate calculation.

Allocation Splits

(a) Growth/Non-Growth

Growth/Non-Growth splits for these projects based on the splits provided in the 2009 Water Servicing Development Charge Background Study prepared by AECOM. These Growth/Non-Growth splits were reviewed given the most recent information available and deemed to still be appropriate. Works required in the Elgin Area Primary Water Supply System fulfill strictly a growth driven capacity expansion need and have a 100% growth share

(b) Residential/ICI

As there is flexibility between both the Lake Huron Primary Supply and Elgin Area Primary Water Supply Systems to provide growth capacity to the City of London a city-wide Residential/ICI allocations was used. The Residential/ICI allocation was developed based on the 20 year total average daily demands based on the Altus growth projections. The following table summarizes these values:

Residential	Institutional	Commercial	Industrial
19.67 ML/D	2.13 ML/D	1.15 ML/D	9.24 ML/D
61%	7%	4%	29%

In addition, an industrial demand add-in equivalent to 2.0 MLD over the 20-year growth period, primarily in the core area of the City, was added as provided by the City of London through the Sanitary DC Update.

Table K-1 incorporates these Growth/Non-growth and Residential/ICI allocations.

Final Costs for DC Rate Calculation

The required Water Supply Works identified in the Development Charge Background Study form the basis for determining development charges for the CSRF and represent the numerator in the rate calculation. The final total net costs incorporated into the DC rate calculation for Water Supply works is shown in Table K-1.

Financing Costs

Tables K-2 was produced to simulate cash flows for CSRF funded Water Supply works for the purpose of calculating the final DC rate inclusive of financing costs. Forecasting cash flow and financing costs involved:

a) There is no 2014 opening balance to offset the DC rate calculations, as the Water Supply rate has not been recovered in the past.;
b) Projecting DC revenues using the “pre-finance” rate;
c) Incorporating DC drawdowns in the cash flow projection based on London’s share of the growth projects identified in the 20-year study period; and
d) Estimating annual interest revenues to be earned and/or financing costs to be incurred due to fund deficits throughout the 20-year planning horizon.

Any deficit in the cash flow analysis at the end of the planning period equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e. the post period benefit). All figures are presented on an un-inflated, constant (2014) dollar basis and interest rates exclude the inflationary component (2%). The rates generated from this cash flow analysis reflect the appropriate cost recovery from growth for the 20-year planning horizon.

Council Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the Elgin Area Primary Water Supply System Joint Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast and the Lake Huron Primary Water Supply System Board of Management 2014 Operating and Capital Budgets and Nine Year Capital Forecast. The capital items reflected herein will be subject to final approval of Joint Boards through their annual capital budget approval process. It is Council’s stated intention to “provide for the needs of

growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

NOTE:
An examination of long term Water Supply operating costs for growth needs is included in Appendix O of this Background Study.

Table K-1: Water Supply System Needs

Service component : **WATER SUPPLY SYSTEM NEEDS**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON - RESIDENTIAL Commercial %	Commercial $	Institutional %	Institutional $	Industrial %	Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10(7) - sum(9,10)	(11)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Lake Huron Primary Water Supply System																					
DC14-WS00001	Huron Transmission Main Twinning	2019	$18,700.0	$2,917.2	$.0	$15,782.8	100.0%	$15,782.8	$.0	74.0%	$.0	$.0	$.0	$.0	$.0	61%	$.0	4%	$.0	7%	$.0	29%	$.0
DC14-WS00007	Lake Huron Primary Water Supply System Growth Master Water Plan Update	2014	$100.0	$15.6	$.0	$84.4	0.0%	$.0	$84.4	0.0%	$.0	$.0	$84.4	$.0	$84.4	61%	$51.5	4%	$3.0	7%	$5.6	29%	$24.3
	SUBTOTAL		$18,800.0	$2,932.8	$.0	$15,867.2	99.5%	$15,782.8	$84.4	0.0%	$.0	$.0	$84.4	$.0	$84.4	61.0%	$51.5	3.6%	$3.0	6.6%	$5.6	28.8%	$24.3
	Elgin Area Primary Water Supply System																					
DC14-WS00002	Elgin-Low Lift Pump Station	2023	$3,000.0	$1,359.0	$.0	$1,641.0	64.7%	$1,062.1	$578.9	0.0%	$.0	$.0	$578.9	$.0	$578.9	61%	$353.4	3.6%	$20.8	6.6%	$38.3	28.8%	$166.5
DC14-WS00003	Elgin-Raw Water Transmission Main	2019	$3,000.0	$1,359.0	$.0	$1,641.0	64.7%	$1,062.1	$578.9	0.0%	$.0	$.0	$578.9	$.0	$578.9	61%	$353.4	3.6%	$20.8	6.6%	$38.3	28.8%	$166.5
DC14-WS00004	Elgin-Water Treatment Plant	2023	$60,000.0	$27,180.0	$.0	$32,820.0	64.7%	$21,241.8	$11,578.2	0.0%	$.0	$.0	$11,578.2	$.0	$11,578.2	61%	$7,067.0	3.6%	$415.3	6.6%	$765.8	28.8%	$3,330.0
DC14-WS00006	Elgin Area Primary Water Supply System Growth Master Water Plan Update	2014	$100.0	$45.3	$.0	$54.7	0.0%	$.0	$54.7	0.0%	$.0	$.0	$54.7	$.0	$54.7	61%	$33.4	3.6%	$2.0	6.6%	$3.6	28.8%	$15.7
DC14-WS00005	Elgin-System Expansion Class EA	2019	$500.0	$226.5	$.0	$273.5	64.7%	$177.0	$96.5	0.0%	$.0	$.0	$96.5	$.0	$96.5	61%	$58.9	3.6%	$3.5	6.6%	$6.4	28.8%	$27.8
	SUBTOTAL		$66,600.0	$30,169.8	$.0	$36,430.2	64.6%	$23,543.0	$12,887.2	0.0%	$.0	$.0	$12,887.2	$.0	$12,887.2	61.0%	$7,866.0	3.6%	$462.2	6.6%	$852.4	28.8%	$3,706.5
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (TREATMENT)	$.0				$.0							$.0		$.0	61%	$.0	4%	$.0	7%	$.0	29%	$.0
	TOTAL	**$85,400.0**	**$33,102.6**	**$.0**	**$52,297.4**	**75.2%**	**$39,325.8**	**$12,971.6**	**0.0%**	**$.0**	**$.0**	**$12,971.6**	**$.0**	**$12,971.6**	**61.0%**	**$7,917.5**	**3.6%**	**$465.2**	**6.6%**	**$858.0**	**28.8%**	**$3,730.8**

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from Elgin and Huron Primary Waster Supply system 2014 Capital Budget and AECOM 2014 Water Servicing Development Charge Background Study.

Development Charge Rate Calculation (Pre-Financing Cost)

		Residential	Commercial	Institutional	Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$.0 0.0%	$.0 0.0%	$.0 0.0%	$.0 0.0%	$.0
Total net cost eligible for DC rate calculation purposes	$12,971.6 61.0%	$7,917.5 3.6%	$465.2 6.6%	$858.0 28.8%	$3,730.8
Divided By: Total Gross Growth Projections		104,829	480,293	607,381	1,028,402
Calculated DC Rate - Pre-Financing		**$ 75.53** /person	**$ 0.97** /sq. m.	**$ 1.41** /sq. m.	**$ 3.63** /sq. m.

Pre- Financing Cost Residential Rates:

		Pre-Financing	*Post-Financing*
Single Family Dwelling	3.02	$228.10	$400.03
Multiple unit dwelling	2.28	$172.20	$302.01
Apartment - bach. & 1 bed	1.41	$106.49	$186.77
Apartment - ≥ 2 bedroom	1.90	$143.50	$251.68

Table K-2: Cash Flow Analysis and Final Rate Calculation Water Supply System Needs

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **WATER SUPPLY SYSTEM NEEDS**
($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
		Pre-Financing DC Rate	Post-Financing DC Rate	% Collected assumption	Growth projection for each year of forecast period																				
Planning Horizon - yrs	20																								
Growth - Res. (Persons In New Housing)	104,829	$ 75.53	$ 132.46	100%	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	104,828.8
Growth - Non-Res. (sq. m.)			$ -																						
Commercial	480,293	$ 0.97	$ 1.70	100%	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	480,293.0
Institutional	607,381	$ 1.41	$ 2.48	100%	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	607,381.0
C/I subtotal	1,087,674		$ -		54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	1,087,674.0
Industrial	1,028,402	$ 3.63	$ 6.36	100%	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	1,028,402.0
Total Non-Res.	2,116,076				105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	2,116,076.0
Reserve Fund Projections:																									
Opening Surplus / <Deficit>					$.0	$1,007.1	$2,172.2	$3,357.6	$4,563.8	$5,791.1	$969.1	$2,133.5	$3,318.3	$4,523.8	-$29,224.6	-$29,090.1	-$28,950.9	-$28,806.8	-$28,657.6	-$28,503.3	-$28,343.5	-$28,178.2	-$28,007.0	-$27,829.9	$.0
Revenues - Development Charge Collections																									
Residential					$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$694.3	$13,885.7
Non-Res.																									
Commercial					$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$40.8	$815.9
Institutional					$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$75.2	$1,504.8
C/I subtotal					$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$116.0	$2,320.7
Industrial					$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$327.1	$6,543.0
Total Non-Res.					$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$443.2	$8,863.7
Total revenues					$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$1,137.5	$22,749.4
Development Charge draws - calculated on separate page					$139.1	$.0	$.0	$.0	$.0	$6,018.0	$.0	$.0	$.0	$34,461.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$.0	$40,618.1
Closing surplus / <deficit> before interest					$998.4	$2,144.6	$3,309.6	$4,495.1	$5,701.2	$910.5	$2,106.6	$3,271.0	$4,455.7	-$28,799.8	-$28,087.1	-$27,952.6	-$27,813.4	-$27,669.3	-$27,520.2	-$27,365.8	-$27,206.1	-$27,040.7	-$26,869.6	-$26,692.4	-$17,868.8
Non-inflationary interest revenue /<expense>																									
on savings	1.75%				$8.7	$27.6	$48.0	$68.7	$89.8	$58.6	$26.9	$47.3	$68.0												$443.7
on borrowings	3.50%													-$424.8	-$1,003.0	-$998.2	-$993.4	-$988.3	-$983.1	-$977.7	-$972.1	-$966.3	-$960.3	-$954.1	-$10,221.5
Closing surplus / <deficit>					$1,007.1	$2,172.2	$3,357.6	$4,563.8	$5,791.1	$969.1	$2,133.5	$3,318.3	$4,523.8	-$29,224.6	-$29,090.1	-$28,950.9	-$28,806.8	-$28,657.6	-$28,503.3	-$28,343.5	-$28,178.2	-$28,007.0	-$27,829.9	-$27,646.6	-$27,646.6

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$27,646.6

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1 Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.
2 Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.
3 Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".

Other Information:	Pre	Post
Residential share	61.0%	61.0%
Non-residential		
Commercial	3.6%	3.6%
Institutional	6.6%	6.6%
C/I subtotal	10.2%	10.2%
Industrial	28.8%	28.8%

APPENDIX L – WATER DISTRIBUTION SYSTEM

The 2014 Water Servicing Development Charge Background Study prepared by AECOM formed the basis for determining the City's water distribution needs to satisfy growth as used in the DC rate calculation. The update looked at the full system including the Southeast, low and high pressure systems, pumping and storage systems and the Lake Huron and Elgin Area supply systems. The DC update reached its conclusions by:

- Updating the City's water distribution system needs to identify growth related requirements on a 5-year incremental basis for 20 years, with consideration to the ultimate requirements over 50 years (City water distribution mains, pressure control chambers, pumping and storage systems, etc.).

- Confirming service levels based on previous work, recent regulatory and future anticipated regulatory requirements and historical demand patterns for residential, institutional, commercial and industrial users in the City of London.

- Confirming costs to 2014 for required growth works, growth/non-growth components and appropriate residential, institutional, commercial and industrial allocations for both the City's water distribution system and facilities.

- Considering ultimate build-out requirements to ensure appropriate distribution system components and facilities are identified and post 2033 development can be determined.

- Co-ordinating with concurrent DC updates for Sanitary Servicing, Transportation and Stormwater Management/Servicing. This also included support and assistance in the development of the City's Growth Management Implementation Strategy (GMIS).

- Consulting with the City of London's Environmental and Engineering Services Department, Finance Department and Development Charges personnel at key stages of the project to reduce potential cost and time implications and obtain agreement with the results of the work to develop the City's GMIS.

This Appendix summarizes the methods applied to the above work. More detailed information is available in the AECOM 2014 Water Servicing Development Charge Background Study.

Policy Considerations

The Water Servicing Development Charge Background Study was prepared to ensure the provision of sufficient funding for future growth related works for water distribution. The following policies were used to establish the quantum of works included in the Water Distribution development charge:

(a) Major Watermains (CSRF-Water Distribution)

All watermains required to service future development greater than or equal to 400mm in diameter are considered to satisfy a network wide benefit to growth and are to be identified separately as projects in the Development Charges Background Study and are eligible for a claim from the CSRF-Water Distribution.

(b) Watermain Oversizing (CSRF-Water Distribution**)**

Watermains with the all of the following attributes are eligible for a subsidy from the CSRF-Water Distribution:

- The watermain services external developable areas, and
- The watermain is greater than 250mm in diameter and less than 400mm in diameter.

The oversized portion (>250mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts will be identified in a schedule provided in the approved Development Charges By-law from the City Services Reserve Fund. Payment of claims from the City Services Reserve fund is subject to budget approval.

(c) Water Facilities (CSRF-Water Distribution)

Where the upgrading or construction of new public water booster pumping stations and reservoir projects are designed to increase capacity or improve service to acceptable standards and as a result of growth, these works are eligible for a claim from the CSRF-Water Distribution. These projects must also be identified in the Development Charges Background Study.

(d) Temporary Facilities (Developer Cost)

Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. Approval of temporary works is at the discretion of the City Engineer. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

(e) Local Service Costs (Developer Cost)

Any watermain or portion of a larger watermain that is less than or equal to 250mm in diameter is referred to as “local works”, and undertaken at the Developer’s expense.

Project Identification

In assessing Water distribution growth needs for the current planning period, AECOM incorporated future population growth information for the 2014-2033 planning period.

Modeling was completed for the following growth scenarios:

- 2014, 2019, 2024, 2029 and 2033;
- Full build out of the City’s Urban Growth Boundary (UGB)
- Ultimate build out for a future population of 675,000 people.

Future water demands were estimated for Average Day, Maximum Day and Peak Hour uses. In addition, an industrial demand add-in equivalent to 2.0 MLD over the 20-year growth period, primarily in the core area of the City, was added as provided by the City of London through the Sanitary DC Update. No other allowances were put in place.

Each required water servicing project has been clearly identified in the DC Update project lists along with key details. The methods used in identifying required watermains and water facilities for the 2014-2033 review period are described below.

(a) Required Watermain Works

AECOM completed an analysis of the water distribution system using the H2ONET modeling software. AECOM updated the City's H2ONET model and used it to determine growth related works. Some key watermains, 300 mm in diameter and all trunk watermains greater than or equal to 400 mm in diameter were included in the model, along with pumping stations and reservoirs to service growth areas of the City, and the water demands to be met over the next 20 years and beyond. Both low and high level water system conditions were modeled separately and collectively using H2ONET.

Based on the model results, new watermains were added to either upsize (or twin) existing watermains, to provide looping, to add or upgrade facilities, and to service new growth areas. System analysis was completed for each of the above scenarios as follows.

- An analysis was initially completed for the complete build out water demands. Required works were then identified to satisfy design constraints, and for input to the model.

- Assessed works were then staged for the 20 year period through 2033 by assessing the scenarios in the order identified above and defining the timing of each required work item. Works in 5 year increments were then interpolated from this.

With this information in place, the analysis was completed for both the Year 2033 and Ultimate Build Out demand scenarios on a phased basis. Growth and non-growth related demand information, complete with related residential and ICI allocations are available from the model on this basis. Oversizing needs for the next 20 years and beyond were also determined in this manner (if significant).

AECOM *Tables 2.3, 2.4 and 2.5* outline the future low, southeast and high level watermains required to service growth to 2033. Each required watermain work is clearly identified in the project list with a distinct ID as well as location information (growth area, street segment), applicable details (pipe length and diameter), cost estimates (pipe, construction, restoration), timing consistent with the City's GMIS and growth/non-growth allocations. Table L-1 of this Appendix reflects selected information from the AECOM tables for DC rate calculation purposes.

(b) Required Facility Works

In addition to the watermain related works, facility related works are also required for the City's water distribution system. **Table 2-8** of the AECOM report identifies the major work City of London water distribution facilities; work at water supply facilities. City facility related costs have been updated to 2014 to which engineering at 15% and contingency at 20% were added. Where deemed appropriate, a post period benefit was provided.

The water facility works anticipated in the 20 year planning period includes the implementation of upgrades and/or pump additions to the Wickerson, Hyde Park, Uplands and Arva pumping stations. Additionally, a lump sum budget for valve chambers, controls, communications, etc. for the implementation of the Southeast pressure zone. All expansions are 100% growth driven.

Establishing Costing Estimates

The DC rate setting process requires the estimated costs assigned to identified growth works be reasonable and defensible. Prior to assigning costs, AECOM undertook a detailed costing analysis using previous project pricing, industry pricing indexes, and recent tenders, incorporating adjustments for inflation.

Watermain costs are based on updated pipe and construction tendered costs over the last 5 years to 2012. Redundancies in road restoration with other transportation, storm drainage or sanitary sewer works were removed where applicable. To these costs, engineering at 15% and contingency at 20%, and indexing from 2009 to 2014 was added. Where deemed appropriate, a post period benefit was provided.

Post-Period Benefit Adjustments

Adjustments were applied to rate calculations for works considered to benefit post-period growth to ensure the calculated growth burden incorporated into the DC rate calculation matches the planning horizon for this study. In the case of watermains, those works outside the GMIS boundary but within the Modified UGB were removed for the purpose of rate calculations. • Post period benefit beyond 2033 was identified on a case-by-case basis.

Allocation Splits

(a) Growth/Non-Growth

The growth and non-growth allocations for water servicing works vary by project. Growth/Non-Growth splits for watermains were determined as follows:

- City allocated their growth forecast (residential/ICI) across the City's transportation planning zones based on the 2012 Altus report and 2014 revision memo.
- Sub-divided the transportation zones by water service areas and tied to existing or new watermain nodes in the water model.
- For new works added as part of this DC update, existing water demands were determined based on 2012 flow information within the GMIS Boundary and then Non-Growth/Growth and residential/ICI splits were determined based on applying design criteria for residential and ICI water demands.

(b) Residential/ICI

The City's H2ONet Model was used by AECOM for determination of works for the 20-year growth horizon. The works identified are to service the GMIS boundary as established by the City of London. Res/ICI splits are based on model outputs for watermain and/or pumping station components based on existing (2008) percentages for works carried over from the previous Water Master Plan Update 2008. For new works, new percentages were identified based on the 2012 Altus report and revision memo.

Tables L-1 & L-2 incorporate these Growth/Non-growth and Residential/ICI allocations.

Final Costs for DC Rate Calculation

The required Water Distribution Works identified in the AECOM 2014 Water Servicing Development Charge Background Study form the basis for determining development charges for the CSRF and represent the numerator in the rate calculation. The final total net costs incorporated into the DC rate calculation for Water Distribution works is shown in Table L-1.

Financing Costs

Tables L-2 was produced to simulate cash flows for CSRF funded Water Distribution works for the purpose of calculating the final DC rate inclusive of financing costs. Forecasting cash flow and financing costs involved:

e) Starting with the 2014 opening balance (if any), which reflects accumulated funds for growth projects identified in past DC studies that remain as capital needs in this study;
f) Projecting DC revenues using the "pre-finance" rate;
g) Incorporating DC drawdowns in the cash flow projection based on the growth projects identified in the 20-year study period;
h) Incorporating provisions for debt payments for previously approved commitments on growth works funded by debt; and
i) Estimating annual interest revenues to be earned and/or financing costs to be incurred due to fund deficits throughout the 20-year planning horizon.

Any deficit in the cash flow analysis at the end of the planning period equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e. the post period benefit). All figures are presented on an un-inflated, constant (2014) dollar basis and interest rates exclude the inflationary component (2%). The rates generated from this cash flow analysis reflect the appropriate cost recovery from growth for the 20-year planning horizon.

Council Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the AECOM 2014 Water Servicing Development Charge Background Study. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

NOTE:
An examination of long term Water Distribution operating costs for growth needs is included in

Table L-1: Water Distribution System

Service component : **WATER DISTRIBUTION SYSTEM NEEDS**

Planning horizon for this component : **2014-2034**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Post Period Benefit (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
										%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
						(1) - sum(2,3)	Note 1	(4) * (5)	(4) - (6)	Note 1	(7) * (8)	[(7) - (9)] * 10%	(7) - sum(9,10)		(11) - (12)	Note 1	(13) * (14)	Note 1	(13) * (16)	Note 1	(13) * (18)	Note 1	(13) * (20)
	Total Watermains - Low Level system																						
DC14-WD00001	Growth Needs (A1) (New Pipe) - Medway Road (Arva PS to Wonderland)	2019	$3,870.2	$.0	$.0	$3,870.2	24.2%	$938.3	$2,931.9	0.0%	$.0	$.0	$2,931.9	$.0	$2,931.9	88%	$2,566.5	6.6%	$192.3	2.0%	$57.7	3.9%	$115.3
DC14-WD00002	Growth Needs (A2) (New Pipe) - Wonderland (Medway Road to City Limit)	2019	$3,866.0	$.0	$.0	$3,866.0	24.2%	$937.3	$2,928.7	0.0%	$.0	$.0	$2,928.7	$.0	$2,928.7	88%	$2,563.7	6.6%	$192.1	2.0%	$57.6	3.9%	$115.2
DC14-WD00003	Growth Needs (A3) (New Pipe) - Wonderland (City Limit to Sunningdale)	2019	$3,395.4	$.0	$.0	$3,395.4	24.2%	$823.2	$2,572.2	0.0%	$.0	$.0	$2,572.2	$.0	$2,572.2	88%	$2,251.7	6.6%	$168.7	2.0%	$50.6	3.9%	$101.2
DC14-WD00004	Growth Needs (A8) (Upsizing) - Wonderland (Sunningdale to Fanshawe Park)	2024	$4,080.3	$.0	$.0	$4,080.3	0.0%	$.0	$4,080.3	55.0%	$2,244.2	$.0	$1,836.2	$.0	$1,836.2	80%	$1,461.1	14.7%	$269.4	5.8%	$105.6	0.0%	$.0
DC14-WD00005	Growth Needs (ADD1) (Upsizing) - Hyde Park (Royal York to Sarnia)	2014	$2,652.3	$.0	$227.0	$2,425.3	19.1%	$462.2	$1,963.2	64.5%	$1,267.2	$.0	$696.0	$.0	$696.0	87%	$607.3	7.8%	$54.6	4.9%	$34.1	0.0%	$.0
DC14-WD00006	Growth Needs (ADD 2) - Wonderland (Gainsborough to Lawson)	2029	$1,868.1	$.0	$.0	$1,868.1	18.3%	$341.7	$1,526.4	54.1%	$825.9	$.0	$700.5	$.0	$700.5	80%	$560.9	14.2%	$99.1	5.8%	$40.5	0.0%	$.0
DC14-WD00007	Growth Needs (ADD 3) - Wonderland (Lawson to Sarnia)	2029	$1,508.5	$.0	$.0	$1,508.5	18.3%	$275.9	$1,232.6	54.1%	$666.9	$.0	$565.7	$.0	$565.7	80%	$452.9	14.2%	$80.1	5.8%	$32.7	0.0%	$.0
DC14-WD00008	Growth Needs (New-6) (Upsizing) - Western Road (Oxford to Platt's Lane)	2017	$1,444.1	$.0	$.0	$1,444.1	0.0%	$.0	$1,444.1	90.0%	$1,299.7	$.0	$144.4	$.0	$144.4	80%	$114.9	14.7%	$21.2	5.8%	$8.3	0.0%	$.0
DC14-WD00009	Longwoods (A20) Growth Area - Dingman (Wonderland to White Oak)	2028	$2,874.8	$.0	$.0	$2,874.8	6.0%	$173.3	$2,701.4	0.0%	$.0	$.0	$2,701.4	$.0	$2,701.4	96%	$2,594.4	4.0%	$107.0	0.0%	$.0	0.0%	$.0
DC14-WD00010	Lambeth (A21) Growth Area - Wonderland (Dingman to Exeter)	2024	$1,681.1	$.0	$.0	$1,681.1	0.0%	$.0	$1,681.1	5.0%	$84.1	$.0	$1,597.1	$.0	$1,597.1	96%	$1,533.2	4.0%	$63.9	0.0%	$.0	0.0%	$.0
DC14-WD00032	Growth Needs (A8a) (Upsizing) - Wonderland (Fanshawe Park to Gainsborough)	2024	$3,603.9	$.0	$.0	$3,603.9	0.0%	$.0	$3,603.9	55.0%	$1,982.1	$.0	$1,621.8	$.0	$1,621.8	80%	$1,290.5	14.7%	$237.9	5.8%	$93.3	0.0%	$.0
DC14-WD00033	Growth Needs (New-14) - Wonderland (Sarnia to Greenway Park)	2033	$5,153.7	$.0	$.0	$5,153.7	11.4%	$585.4	$4,568.3	54.1%	$2,471.7	$.0	$2,096.6	$.0	$2,096.6	80%	$1,678.5	14.2%	$296.7	5.8%	$121.3	0.0%	$.0
DC14-WD00034	Growth Needs (New-7) (Upsizing) - Western Road (Platt's Lane to Sarnia Road)	2017	$635.3	$.0	$.0	$635.3	0.0%	$.0	$635.3	90.0%	$571.8	$.0	$63.5	$.0	$63.5	80%	$50.6	14.7%	$9.3	5.8%	$3.7	0.0%	$.0
DC14-WD00012	Kilally (A30) Growth Area - Kilally Rd. (Highbury to Clarke) Phase 1	2016	$1,268.9	$.0	$.0	$1,268.9	0.0%	$.0	$1,268.9	0.0%	$.0	$.0	$1,268.9	$.0	$1,268.9	100%	$1,268.9	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00040	Kilally (A30) Growth Area - Kilally Rd. (Highbury to Clarke) Phase 2	2030	$1,331.0	$.0	$.0	$1,331.0	0.0%	$.0	$1,331.0	0.0%	$.0	$.0	$1,331.0	$.0	$1,331.0	100%	$1,331.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
	SUBTOTAL		$39,233.7	$.0	$227.0	$39,006.7	11.6%	$4,537.4	$34,469.2	33.1%	$11,413.5	$.0	$23,055.7	$.0	$23,055.7	88.2%	$20,326.0	7.8%	$1,792.5	2.6%	$605.5	1.4%	$331.8
	Total Watermains - Southeast Pressure Zone																						
DC14-WD00013	Growth Needs (B3) (New additional pipe) - Highbury (Southeast PS to Dingman)	2033	$6,762.7	$.0	$.0	$6,762.7	26.1%	$1,765.4	$4,997.4	0.0%	$.0	$.0	$4,997.4	$.0	$4,997.4	28%	$1,416.1	9.1%	$455.9	2.9%	$146.5	59.6%	$2,978.8
DC14-WD00014	Growth Needs (B5) (Upsizing) - White Oak (Dingman to Exeter)	2019	$2,671.5	$.0	$642.4	$2,029.1	0.0%	$.0	$2,029.1	0.0%	$.0	$.0	$2,029.1	$.0	$2,029.1	5%	$95.5	20.0%	$406.0	12.2%	$248.2	63.1%	$1,279.4
DC14-WD00019	Wilton Grove (New-4) Growth Area - Wilton Grove (Hubrey to Pond Mills Rd.)	2029	$669.5	$.0	$.0	$669.5	7.0%	$46.6	$622.9	0.0%	$.0	$.0	$622.9	$.0	$622.9	90%	$560.6	0.0%	$.0	0.0%	$.0	10.0%	$62.3
DC14-WD00037	Green Valley (New-3) Growth Area - Green Valley (Hubrey to Hubrey)	2019	$66.1	$.0	$.0	$66.1	0.0%	$.0	$66.1	0.0%	$.0	$.0	$66.1	$.0	$66.1	3%	$2.0	0.0%	$.0	0.0%	$.0	97.0%	$64.1
DC14-WD00020	Pond Mills (New-5) Growth Area - Pond Mills Rd. (Wilton Grove to Southdale Rd.)	2029	$2,744.1	$.0	$.0	$2,744.1	7.0%	$190.9	$2,553.1	0.0%	$.0	$.0	$2,553.1	$.0	$2,553.1	95%	$2,425.5	0.0%	$.0	0.0%	$.0	5.0%	$127.7
	SUBTOTAL		$12,913.9	$.0	$642.4	$12,271.5	16.3%	$2,002.9	$10,268.7	0.0%	$.0	$.0	$10,268.7	$.0	$10,268.7	43.8%	$4,499.7	8.4%	$861.9	3.8%	$394.7	43.9%	$4,512.3

Service component : **WATER DISTRIBUTION SYSTEM NEEDS**

Planning horizon for this component : **2014-2034**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Post Period Benefit (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON-RESIDENTIAL					
																	Commercial		Institutional		Industrial	
									%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
			Note 1	Note 1			Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Watermains - High Level System																					
DC14-WD00021	Summercrest Growth Area - Southdale (Bramblewood to Wickerson)	2018	$1,257.2	$.0	$.0	$1,257.2	0.0%	$.0	$1,257.2	0.0%	$.0	$.0	$1,257.2	$.0	$1,257.2	99%	$1,240.4	1.3%	$16.8	0.0%	$.0	0.0%	$.0
DC14-WD00022	Summercrest Growth Area - Wickerson (Southdale to Wickerson Gate)	2024	$1,361.0	$.0	$.0	$1,361.0	0.0%	$.0	$1,361.0	0.0%	$.0	$.0	$1,361.0	$.0	$1,361.0	99%	$1,342.9	1.3%	$18.2	0.0%	$.0	0.0%	$.0
DC14-WD00023	River Bend Growth Area - Westdel Bourne (Mid Westdel Bourne to Oxford)	2014	$458.2	$.0	$458.2	$.0	0.0%	$.0	$.0	0.0%	$.0	$.0	$.0	$.0	$.0	99%	$.0	1.3%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00025	Bostwick Growth Area - Southdale (Bostwick to Wonderland)	2024	$769.7	$.0	$.0	$769.7	0.0%	$.0	$769.7	0.0%	$.0	$.0	$769.7	$.0	$769.7	100%	$769.7	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00026	Westmount Growth Area - Wonderland (Commissioners to Viscount)	2019	$1,347.6	$.0	$.0	$1,347.6	0.0%	$.0	$1,347.6	0.0%	$.0	$.0	$1,347.6	$.0	$1,347.6	100%	$1,347.6	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00027	Westmount Growth Area - Viscount (Wonderland to Andover Dr.)	2024	$1,427.0	$.0	$.0	$1,427.0	0.0%	$.0	$1,427.0	0.0%	$.0	$.0	$1,427.0	$.0	$1,427.0	100%	$1,427.0	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00038	Growth Needs (2028) - Sarnia (West of Deer Ridge to Hyde Park)	2014	$879.7	$.0	$218.0	$661.7	6.6%	$44.0	$617.7	0.0%	$.0	$.0	$617.7	$.0	$617.7	99%	$609.5	1.3%	$8.2	0.0%	$.0	0.0%	$.0
DC14-WD00039	Growth Needs (2032) - Hyde Park (Sarnia to Ensign Dr.)	2014	$1,130.3	$.0	$.0	$1,130.3	6.1%	$68.7	$1,061.6	0.0%	$.0	$.0	$1,061.6	$.0	$1,061.6	99%	$1,047.5	1.3%	$14.1	0.0%	$.0	0.0%	$.0
DC14-WD00028	Westmount Growth Area - Andover Dr. (Viscount to Ensign Dr.)	2029	$252.9	$.0	$.0	$252.9	7.0%	$17.6	$235.3	0.0%	$.0	$.0	$235.3	$.0	$235.3	100%	$235.3	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00029	Westmount Growth Area - Ensign Dr. (Andover Dr. to Notre Dame Dr.)	2029	$498.5	$.0	$.0	$498.5	7.0%	$34.7	$463.8	0.0%	$.0	$.0	$463.8	$.0	$463.8	100%	$463.8	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00030	Westmount Growth Area - Notre Dame Dr. (Ensign Dr. to Belmont Dr.)	2029	$208.9	$.0	$.0	$208.9	7.0%	$14.5	$194.4	0.0%	$.0	$.0	$194.4	$.0	$194.4	100%	$194.4	0.0%	$.0	0.0%	$.0	0.0%	$.0
DC14-WD00031	Talbot Growth Area - Tillman Road (Southdale to End)	2014	$688.5	$.0	$.0	$688.5	0.0%	$.0	$688.5	0.0%	$.0	$.0	$688.5	$.0	$688.5	100%	$688.5	0.0%	$.0	0.0%	$.0	0.0%	$.0
	SUBTOTAL		$10,279.4	$.0	$676.2	$9,603.3	1.9%	$179.5	$9,423.8	0.0%	$.0	$.0	$9,423.8	$.0	$9,423.8	99.4%	$9,366.5	0.6%	$57.2	0.0%	$.0	0.0%	$.0
	Total Watermains - Internal Oversizing Subsidy																					
DC14-WD01001	Watermain Internal Oversizing Subsidy	2014-2033	$1,000.0	$.0	$.0	$1,000.0	0.0%	$.0	$1,000.0	0.0%	$.0	$.0	$1,000.0	$.0	$1,000.0	97%	$968.1	1.6%	$15.9	0.0%	$.0	1.6%	$16.0
	SUBTOTAL		$1,000.0	$.0	$.0	$1,000.0	0.0%	$.0	$1,000.0	0.0%	$.0	$.0	$1,000.0	$.0	$1,000.0	96.8%	$968.1	1.6%	$15.9	0.0%	$.0	1.6%	$16.0
	Total Watermains- Infill and Intensification Nodes																					
DC14-WD01002	Infill and Intensification Nodes Water Servicing	2014-2033	$10,990.4	$968.2	$.0	$10,022.2	0.0%	$.0	$10,022.2	5.5%	$551.2	$.0	$9,471.0	$.0	$9,471.0	83%	$7,823.0	10.0%	$947.1	7.4%	$700.9	0.0%	$.0
	SUBTOTAL		$10,990.4	$968.2	$.0	$10,022.2	0.0%	$.0	$10,022.2	5.5%	$551.2	$.0	$9,471.0	$.0	$9,471.0	82.6%	$7,823.0	10.0%	$947.1	7.4%	$700.9	0.0%	$.0
	Total Watermains - Industrial																					
DC14-WD00091	Industrial Water Servicing Internal Oversizing	2014-2024	$100.0	$.0	$.0	$100.0	0.0%	$.0	$100.0	0.0%	$.0	$.0	$100.0	$.0	$100.0	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$100.0
DC14-WD00092	Industrial Water Servicing Internal Oversizing	2025-2033	$200.0	$.0	$.0	$200.0	52.3%	$104.6	$95.4	0.0%	$.0	$.0	$95.4	$.0	$95.4	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$95.4
DC14-WD00093	Industrial Water Servicing Internal Oversizing	2019-2029	$29,700.0	$.0	$.0	$29,700.0	23.0%	$6,843.6	$22,856.4	0.0%	$.0	$.0	$22,856.4	$.0	$22,856.4	0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$22,856.4
	SUBTOTAL		$30,000.0	$.0	$.0	$30,000.0	23.2%	$6,948.2	$23,051.8	0.0%	$.0	$.0	$23,051.8	$.0	$23,051.8	0.0%	$.0	0.0%	$.0	0.0%	$.0	100.0%	$23,051.8

Service component : **WATER DISTRIBUTION SYSTEM NEEDS**

Planning horizon for this component : **2014-2034**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Post Period Benefit (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
										%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10%	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Watermains - Water Distribution Facilities																						
DC14-WD02002	Uplands PS	2015	$360.0	$0.0	$0.0	$360.0	0.0%	$0.0	$360.0	0.0%	$0.0	$0.0	$360.0	$0.0	$360.0	99%	$356.4	1.0%	$3.6	0.0%	$0.0	0.0%	$0.0
DC14-WD02003	Hyde Park PS	2015	$700.0	$0.0	$0.0	$700.0	0.0%	$0.0	$700.0	0.0%	$0.0	$0.0	$700.0	$0.0	$700.0	100%	$700.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0
DC14-WD02005	Southeast Pressure Zone	2014	$2,700.0	$0.0	$2,008.3	$691.7	0.0%	$0.0	$691.7	60.0%	$415.0	$0.0	$276.7	$0.0	$276.7	56%	$154.9	5.0%	$13.8	7.0%	$19.4	32.0%	$88.5
DC14-WD02006	Arva PS	2020	$3,320.0	$0.0	$0.0	$3,320.0	0.0%	$0.0	$3,320.0	50.0%	$1,660.0	$0.0	$1,660.0	$0.0	$1,660.0	89%	$1,477.4	5.0%	$83.0	1.0%	$16.6	5.0%	$83.0
	SUBTOTAL		$7,080.0	$0.0	$2,008.3	$5,071.7	0.0%	$0.0	$5,071.7	40.9%	$2,075.0	$0.0	$2,996.7	$0.0	$2,996.7	89.7%	$2,688.7	3.4%	$100.4	1.2%	$36.0	5.7%	$171.5
	PORTION OF GROWTH PROJECTS FINANCED WITH DEBT (TREATMENT)		$0.0						$0.0				$0.0		$0.0		$0.0		$0.0		$0.0		$0.0
	TOTAL		**$111,497.4**	**$968.2**	**$3,553.8**	**$106,975.3**	**12.8%**	**$13,668.0**	**$93,307.3**	**15.0%**	**$14,039.7**	**$0.0**	**$79,267.6**	**$0.0**	**$79,267.6**	**57.6%**	**$45,672.0**	**4.8%**	**$3,775.1**	**2.2%**	**$1,737.1**	**35.4%**	**$28,083.4**

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31,	$8,802.0	92.3%	$8,127.2	3.7%	$324.4	4.0%	$350.5	0.0%	$0.0
Total net cost eligible for DC rate calculation purposes	$70,465.6	53.3%	$37,544.9	4.9%	$3,450.8	2.0%	$1,386.6	39.9%	$28,083.4
Divided By: Total Gross Growth Projections			104,829		480,293		607,381		1,028,402
Calculated DC Rate - Pre-Financing			**$ 358.15** /person		**$ 7.18** /sq. m.		**$ 2.28** /sq. m.		**$ 27.31** /sq. m.

Pre- Financing Cost Residential Rates:

		Facilities
Single Family Dwelling	3.02	$ 1,081.63
Multiple unit dwelling	2.28	$ 816.59
Apartment - bach. & 1 bed	1.41	$ 505.00
Apartment - ≥ 2 bedroom	1.90	$ 680.49

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from the AECOM 2014 Water Servicing Development Charge Background Study (March 2014).

Table L-2: Cash Flow Analysis and Final Rate Calculation Water Distribution System

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **WATER DISTRIBUTION SYSTEM NEEDS**

($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
		Pre-Financing DC Rate	Post-Financing DC Rate	% Collected assumption	Growth projection for each year of forecast period																				
Planning Horizon - yrs	20																								
Growth - Res. (Persons In New Housing)	104,829	$ 358.15	$ 363.15	100%	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	104,828.8
Growth - Non-Res. (sq. m.)			$ -																						
Commercial	480,293	$ 7.18	$ 7.28	100%	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	480,293.0
Institutional	607,381	$ 2.28	$ 2.31	100%	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	607,381.0
C/I subtotal	1,087,674		$ -		54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	1,087,674.0
Industrial	1,028,402	$ 27.31	$ 27.69	100%	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	1,028,402.0
Total Non-Res.	2,116,076				105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	2,116,076.0
Reserve Fund Projections:																									
Opening Surplus / <Deficit>					$8,802.0	$8,372.8	$10,515.5	$12,485.0	$15,559.1	$17,628.6	$3,577.0	$2,306.9	$2,689.0	$3,077.9	$3,473.6	-$4,833.7	-$4,668.3	-$4,497.1	-$4,319.9	-$7,061.6	-$13,001.4	-$11,728.8	-$9,057.5	-$6,292.7	$8,802.0
Revenues - Development Charge Collections																									
Residential					$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$1,903.4	$38,068.1
Non-Res.																									
Commercial					$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$174.9	$3,498.9
Institutional					$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$70.3	$1,405.9
C/I subtotal					$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$245.2	$4,904.8
Industrial					$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$1,423.7	$28,474.8
Total Non-Res.					$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$1,669.0	$33,379.6
Total revenues					$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$3,572.4	$71,447.7
Development Charge draws - calculated on separate page					$4,150.5	$1,593.5	$1,802.5	$741.5	$1,790.7	$17,808.0	$4,893.5	$3,233.5	$3,233.5	$3,233.5	$11,856.3	$3,243.5	$3,243.5	$3,243.5	$6,118.3	$9,167.1	$1,874.5	$543.5	$543.5	$9,671.5	$91,986.4
Closing surplus / <deficit> before interest					$8,223.9	$10,351.7	$12,285.5	$15,315.9	$17,340.8	$3,393.0	$2,255.8	$2,645.7	$3,027.9	$3,416.7	-$4,810.3	-$4,504.9	-$4,339.5	-$4,168.3	-$6,865.8	-$12,656.3	-$11,303.5	-$8,700.0	-$6,028.6	-$12,391.8	-$11,736.6
Non-inflationary interest revenue /<expense>																									
on savings	1.75%				$149.0	$163.8	$199.5	$243.3	$287.9	$183.9	$51.0	$43.3	$50.0	$56.8											$1,428.6
on borrowings	3.50%														-$23.4	-$163.4	-$157.6	-$151.6	-$195.8	-$345.1	-$425.3	-$357.5	-$264.0	-$327.0	-$2,410.7
Closing surplus / <deficit>					$8,372.8	$10,515.5	$12,485.0	$15,559.1	$17,628.6	$3,577.0	$2,306.9	$2,689.0	$3,077.9	$3,473.6	-$4,833.7	-$4,668.3	-$4,497.1	-$4,319.9	-$7,061.6	-$13,001.4	-$11,728.8	-$9,057.5	-$6,292.7	-$12,718.8	-$12,718.8

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$12,718.8

Other Information:	Pre	Post
Residential share	53%	53%
Non-residential		
Commercial	5%	5%
Institutional	2%	2%
C/I subtotal	7%	7%
Industrial	40%	40%

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1 Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.
2 Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.
3 Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".

APPENDIX M –MAJOR STORMWATER MANAGEMENT WORKS

The 2014 Stormwater Development Charge Update Study prepared by Delcan formed the basis for determining the Stormwater Management Works growth costs component of the DC rate calculation. The consultant completed a compilation and assessment of existing information representing the City of London's technical needs and associated costs to provide for stormwater management within the 2014 - 2033 GMIS defined development boundaries (20 year growth boundaries) and other identified growth areas in the City of London.

The approach to preparing the study was to bring forward existing information and incorporate new information regarding policies, calculation methodologies, projects and current costs including as follows:

- remove funded and completed works from the previous stormwater works listing;
- add works identified in studies completed since 2008;
- identify, at a master plan level, any additional works required to service lands in the 20 year development area boundary and in City of London growth areas;
- update cost calculation methodologies to reflect City policies adopted since 2008;
- determine appropriate allowances for other charges applicable to stormwater services and as permitted under the *Development Charges Act, 1997;*
- provide costs for all works and charges in 2014 dollars;
- align the timing of works with the timing of works for sanitary, water and transportation planning as per GMIS;
- determine the growth related and post period benefits applicable to the planning period and beyond the planning period costs;
- apply growth/non-growth and residential/industrial/commercial/institutional cost allocations to establish the 2014 stormwater component of development charge and by-law;

Storm drainage and stormwater management (SWM) facility work supporting new development is growth related and therefore DC recoverable. The Stormwater Development Charge Update Study prepared by Delcan provided the storm drainage costs attributable to growth to be incorporated in the DC rate calculations. The storm drainage works included for cost determination can be categorized as:

- Stormwater Management Facilities;
- Trunk Storm Sewers;
- Stormwater Conveyance Oversizing; and
- Open Watercourse Works.

More detailed information is available in the Delcan 2014 Stormwater Development Charge Update Study.

Policy Considerations

The Stormwater Development Charge Update Study was prepared to ensure the provision of sufficient funding for future growth related works for water distribution. The following policies

were used to establish the quantum of works included in the Major SWM Services component of the development charge:

(a) Regional Trunk Sewers (CSRF- Major SWM Works)
All sewers to be constructed within existing City owned lands that service multiple new development areas are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

(b) Regional Open Channels (CSRF- Major SWM Works)
Any open channel works identified through the Environmental Assessment process that are considered to satisfy a regional benefit to growth are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

(c) Storm Sewer Oversizing (CSRF- Minor Storm Works)
Storm Sewers with all of the following attributes are eligible for a subsidy from the CSRF - Minor Storm Works:

- The sewer services external developable areas, and
- The sewer is greater than 1050mm in diameter.

The oversized portion (>1050mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts are to be reflected in an appendix of the DC Bylaw. The oversizing subsidy amounts cover the cost per metre of all associated eligible costs including engineering, manholes, restoration, etc.

(d) Open Channel Oversizing (CSRF- Minor Storm Works)
Open Channels with all of the following attributes are eligible for a subsidy from the CSRF - Minor Storm Works:

- An open channel design is required for the reason of inherent site drainage constraints and the design has been accepted by the City Engineer,
- The open channel services external developable areas, and
- The open channel has a 2-year storm design flow cross-sectional area greater than a 1050mm sewer using the City's minimum design standards.

The oversized portion represents the cross-sectional area required in excess of a 1050mm sewer for a 2-year storm design. The oversizing subsidy will be calculated based on the additional cost of oversizing beyond an area equivalent to a 1050mm pipe size using the City's minimum design standards for a 2-year storm design flow. The oversizing subsidy is payable based on an average oversizing cost in the form of a $/m of channel constructed as calculated by the Owner's consulting engineer and as accepted by the City Engineer (or designate). An allowance of 15% will be added to the calculated oversizing amount to cover applicable engineering costs.

(e) Stormwater Management Works (CSRF- Major SWM Works)

Environmental Assessment Complete

Any municipally owned or operated stormwater management works designed to provide capacity to facilitate growth that are identified through the Environmental Assessment

process and are considered to satisfy a regional benefit to growth are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

Environmental Assessment Not Complete

Stormwater Management Works for which an Environmental Assessment has not been completed that are anticipated to satisfy a regional benefit to growth are to be identified as separate area specific contingencies in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

Upon completion of the applicable Environmental Assessment (i.e. no outstanding Part 2 orders), a review of the related area specific contingency and the development charge rate will be undertaken and, if required, a revision to the development charge by-law will be made.

(f) Stormwater Management Facility Land Costs (CSRF- Major SWM Works)
Land will be reimbursed at a specific rate, with different land values assigned to different categories as outlined in the Development Charges By-law.

(g) Major SWM Facility Inlet and Outlet Sewers within the SWM Block(CSRF- Major SWM Works)
Any storm sewers within a Major SWM Facility block that are either upstream or downstream of a facility are considered to satisfy a regional benefit to growth and are eligible for a claim from the CSRF- Major SWM Works.

(h) Major SWM Facility Outlet Sewers outside the SWM Block (CSRF- Major SWM Works or CSRF- Minor Storm Works)
Any major SWM facility outlet sewer that extends outside the SWM block facility is considered to satisfy a regional benefit to growth and is eligible for a claim from the CSRF- Major SWM Works if the outlet sewer is not also used to provide drainage to a development adjacent to the outlet sewer.

In the event that all or a portion of the outlet sewer outside the SWM block is used to provide drainage to a development adjacent to the outlet sewer then the portion of the outlet sewer downstream from the adjacent development is eligible for "Storm Sewer Oversizing" as described in the DC By-law.

(i) Local Service Costs (Developer Cost)
Any pipe or portion of a larger pipe that is less than or equal to 1050 mm in diameter are referred to as local works, and undertaken at the Developer's expense.

(j) Temporary Storm Sewers (Developer Cost)
Costs of all storm sewer systems that are temporary or not defined in the DC Background Charge Study shall be borne by the Developer. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

(k) Temporary Stormwater Management Works (Developer Cost)
Any temporary works or works not included in the approved Development Charges Background Study are at the sole expense of the Developer including operation, maintenance and decommissioning. Approval of temporary works is at the discretion of

the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

Best management practices or private drainage systems are not claimable unless identified through the Environmental Assessment process as being required to meet a regional benefit to growth.

The construction of road side ditches, swales, and overland flow routes are not eligible for claim from the City Services Reserve Fund - Stormwater Management. .

Project Identification

The 2014 Stormwater Development Charge Update Study completed by Delcan identified stormwater servicing needs for the planning period – facilities, sewers, channel remediation and required supporting studies through the planning period including for industrial lands - and determine the portion of cost of needs attributable to growth in accordance with accepted practices and the methodologies permitted under the Development Charges Act 1997. The work consisted primarily of two tasks: review of the stormwater management documentation provided by the City to determine completeness and utility in identifying servicing solutions for all of the lands within the update study area; and updating available information to provide a current cost estimate for those works. Where information detailing a servicing solution was found not to be available, Delcan prepared a “high level” solution suitable to make cost estimates.

a) Future SWM Facilities

The identified SWM facilities listed in the 2014 Stormwater Development Charge Update Study built upon the list of SWM facilities outlined in the AECOM Storm Drainage/Stormwater Management DC update and updated based on needs identified in developing areas i.e. available community plans, environmental assessments, subwatershed studies, draft approved plans of subdivision, subdivision servicing agreements as well as the City’s GMIS.
With the exception of the City’s southwest, most areas within the Urban Growth Boundary have had the benefit of either a stormwater management Environmental Assessment or Master Drainage Plan making it possible to specifically identify or approximate required facilities. The list was then further refined consistent with the City’s GMIS and the proposed phasing strategy for larger ponds to represent the SWM facility work required for the next 20-year growth horizon.

b) Open Watercourse Works

The identified Open Watercourse Works listed in the 2014 Stormwater Development Charge Update Study built upon the list of works outlined in the AECOM Storm Drainage/Stormwater Management DC update and updated based on needs identified in developing areas i.e. available community plans, environmental assessments, subwatershed studies, draft approved plans of subdivision, subdivision servicing agreements as well as the City’s GMIS.
Required Open Watercourse works have also been identified as line item projects together in the SWM facility listing.

c) Trunk Sewer Works

The identified Trunk Sewer Works listed in the 2014 Stormwater Development Charge Update Study was based on existing reporting of routing of storm sewers or on routing developed by the consultant, the location and size of trunk sewers was estimated. The location of trunk sewers was provided to the Technical Committee for comment.

Note the listing of a trunk sewer and its inclusion in the Delcan 2014 Stormwater Development Charge Update Study is for the purpose of providing input into the development charge process and is not indicative of City approval of projects or amounts. Additional information on the trunk sewers identified for the purpose of estimating an appropriate allowance is provided in an appendix to the Delcan report.

d) Stormwater Conveyance Oversizing

The identified Stormwater Conveyance Oversizing Works listed in the 2014 Stormwater Development Charge Update Study was based on existing reporting of routing of storm sewers or on routing developed by Delcan. The location, size and oversizing allowance for storm sewers meeting the policy requirements were also determined. The preliminary analysis of oversizing sewers was provided to the Technical Committee for comment. Additional information on the trunk sewers identified for the purpose of estimating an appropriate allowance is provided in an appendix to the Delcan report.

Establishing Cost Estimates

The DC rate setting process requires the estimated costs assigned to identified growth works be reasonable and defensible. Prior to assigning costs, Delcan undertook a detailed costing analysis including a linear regression analysis to determine an average cost per hectare drainage area and average cost per m3 of facility storage volume. In the event that more detailed cost information was available from the most recent capital budget preparation process, this more recent and detailed information was used. All works have been cost estimated in 2014 dollars. Engineering (15%) and contingency (20%) were added to all sanitary servicing works.

Trunk sewer costing was based on pipe size and depth with the total cost of purchasing and installing sewer pipe broken down into three components: pipe, construction and restoration costs. Redundancies with other transportation, sanitary sewer and water works were removed where applicable. The oversizing sewer subsidy table included in the Development Charges By-law was created based on the trunk sewer unit cost estimates and includes provisions for engineering costs

Project Phasing

Previous DC studies have noted that there is both technical and capital management benefits to phasing of facilities which serve a large area (studies also noted an increased total cost resulting from phasing). The 2014 Stormwater Development Charge Update Study completed by Delcan used the following policy approach regarding phasing:

- For facilities with a drainage area greater than 60 ha and less than 100 ha, a 10% premium has been added to construction cost (facility and inlet outlet);
- For facilities with a drainage area greater than 100 ha, a 30% premium has been added to construction cost (facility and inlet outlet);
- While the 100 ha benchmark has been used to trigger consideration of phasing beyond the planning period, total drainage area was assessed based on component areas of

existing development and drainage area outside the UGB. Where the growth related drainage area fell below 100 ha, the cost of the facility has not been reduced in consideration of phases outside of the planning period;

- Where a large facility may be phased, if that facility is planned early in the growth planning period the facility may be completed in the planning period. Where facilities with a drainage area greater than 100 ha is planned in the first five years of the planning period, a project specific decision was made regarding phasing;
- Where, based on above, a cost reduction in consideration of phases outside the planning period is proposed, that cost reduction is 50% of the estimated cost of the facility and land cost and the remainder will be shown as "Costs beyond period".

Post-Period Benefit Adjustments

"Post period benefit" is triggered when part of the growth related costs of providing stormwater management services (planning, studies, capital spending) planned for within the planning period will provide benefit to growth beyond the planning period – i.e. treatment capacity in a built facility which will be utilized by growth beyond the planning period. The 2014 Stormwater Development Charge Update Study completed by Delcan used the following policy approach regarding post period benefit:

- Drainage area outside the GMIS: Where a portion of the drainage area is outside the GMIS and the facility is not considered a candidate for phasing, a post period benefit has been calculated based on an area based flow proportion ratio. Where drainage area is outside the UGB, the area is considered developed with a 0.2 runoff coefficient;
- Facilities in the last 5 years of the planning period: The full build out of drainage areas for facilities late in the planning period may not be achieved within the planning period. As such, construction of the facility may include capacity for post period development. Using the City's planning estimate of 16 du/ha for single family units and anticipating approx. 50 units / year in single family subdivision phasing by developers, a reduction of approx 3 ha/year as a percentage of the total drainage area has been calculated and applied as a post period benefit. In general, this results in a significant portion of the costs of facilities constructed late in the planning period to be considered post period benefit;
- Inlet Outlet Pipes: For a facility where phasing is assumed, the capacity constructed in full buildout design sized inlet outlet pipes provides a post period benefit. A percentage reduction of cost of inlet outlet as calculated using the methodology above has been applied to inlet outlet costs.

Adjustments were applied to rate calculations for works considered to benefit post-period growth (ie. beyond 20 years) to ensure the calculated growth burden incorporated into the DC Rate calculation matches the planning horizon.

Allocation Splits

(a) Growth/Non-Growth

Where a project will provide service to existing development, the cost of the project may be reduced. SWM facilities and their related components are also considered to be 100% growth driven. In general, if the project specifics have not changed, for projects where a growth non-growth split was identified in the 2009 DC study, that growth split has been brought forward. For

the most part, a simple ratio of growth area to developed area has been used to determine non-growth cost proportions.

(b) Residential/ICI

Storm drainage/stormwater management RES/ICI allocations were based on the population and area information provided by the City of London for the 20-year growth period within the GMIS boundary and benefiting land use (Residential, Institutional, Commercial, Industrial). As industrial areas where new facilities are required are generally spatially separated from Community Growth (Residential, Institutional, Commercial) land use types, allocations have been developed for Community Growth and Industrial Growth areas. These splits are outlined below:

Community Growth

Residential	Institutional	Commercial	Industrial
82.7%	7.4%	10%	0%

Industrial Growth

Residential	Institutional	Commercial	Industrial
0%	0%	0%	100%

In drainage areas where the proportion of industrial land is not 100% a separate calculation has been completed. In that calculation, the total estimated cost of works is allocated on the basis of the area of industrial development serviced with the remaining costs allocated using the Community Growth ratios.

Final Costs for DC Rate Calculation

The required storm servicing works identified in the Delcan 2014 Stormwater Development Charge Update Study form the basis for determining development charges for the SWM Major-CSRF and represent the numerator in the rate calculation. The final total costs calculated for stormwater management works in the 2014-2033 planning horizon are listed in detail in Table M-1.

Uncommitted Reserve Funds

The uncommitted balance of the reserve funds is netted against the determined total growth servicing costs to take into account funds that have been collected in the past. The above costs figures are reduced by the uncommitted storm water reserve fund balance in order to determine the final calculated DC rate.

Financing Costs

Table M-2 was produced to simulate cash flows for CSRF funded SWM works for the purpose of calculating the final DC rate inclusive of financing costs. Forecasting cash flow and financing costs involved:

a) Projecting DC revenues using the “pre-finance” rate;
b) Incorporating DC drawdowns in the cash flow projection based on the growth projects identified in the 20-year study period; and
c) Estimating annual interest revenues to be earned and/or financing costs to be incurred due to fund deficits throughout the 20-year planning horizon.

For the CSRF, any deficit in the cash flow analysis at the end of the planning period equates to the amounts of the expenditures incurred during the planning period to be recovered from growth in the future (i.e. the post period benefit). All figures are presented on an un-inflated, constant (2014) dollar basis and interest rates exclude the inflationary component (estimated at 2%). The rates generated from this cash flow analysis reflect the appropriate cost recovery from growth for the 20-year planning horizon.

Council's Intention to Meet Growth Needs

The growth needs identified within this Appendix have been extracted from the Delcan 2014 Stormwater Development Charge Update Study. The capital items reflected herein will be subject to final approval of Council through the annual capital budget approval process. It is Council's stated intention to "provide for the needs of growth in a way that does not jeopardize the long term financial health of the municipality, or place an undue burden on existing taxpayers" (Official Plan Policy 2.6.3).

NOTE:

All storm drainage and stormwater management works are to be designed and constructed as per the City's design criteria and standards including addressing long-term operation and maintenance aspects. An examination of long term Stormwater Management operating costs for growth needs is included in Appendix O of this Background Study.

Table M-1: Storm Water Management - Facilities

Service component : **Major Storm Water Management Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)	Subtotal	Non-growth share %	Non-growth share benefit	Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - Improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL %	RESIDENTIAL $	NON-RESIDENTIAL Commercial %	Commercial $	NON-RESIDENTIAL Institutional %	Institutional $	NON-RESIDENTIAL Industrial %	Industrial $
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10) [(7) - (9)] * 10	(11) (7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total Community Growth SWM Works																						
DC14-MS00001	Dingman Creek Channel Remm. Works	2017	$9,511.0	$.0	$.0	$9,511.0	0.0%	$.0	$9,511.0	86.0%	$8,179.5	$.0	$1,331.5	$.0	$1,331.5	83%	$1,099.9	10.0%	$133.2	7.4%	$98.5	0.0%	$.0
DC14-MS00002	Dingman Creek Online 1	2016	$6,390.0	$.0	$955.0	$5,435.0	0.0%	$.0	$5,435.0	90.0%	$4,891.5	$.0	$543.5	$.0	$543.5	83%	$448.9	10.0%	$54.4	7.4%	$40.2	0.0%	$.0
DC14-MS00003	Dingman Creek Online 2	2017	$4,740.0	$.0	$.0	$4,740.0	0.0%	$.0	$4,740.0	85.0%	$4,029.0	$.0	$711.0	$.0	$711.0	83%	$587.3	10.0%	$71.1	7.4%	$52.6	0.0%	$.0
DC14-MS00005	Dingman Tributary SWMF B4	2015	$3,638.3	$.0	$.0	$3,638.3	0.0%	$.0	$3,638.3	0.0%	$.0	$.0	$3,638.3	$.0	$3,638.3	83%	$3,005.3	10.0%	$363.8	7.4%	$269.2	0.0%	$.0
DC14-MS00006	Fox Hollow 1 - Phase 2	2019	$3,888.8	$.0	$.0	$3,888.8	27.0%	$1,050.0	$2,838.9	0.0%	$.0	$.0	$2,838.9	$.0	$2,838.9	83%	$2,344.9	10.0%	$283.9	7.4%	$210.1	0.0%	$.0
DC14-MS00007	Hyde Park 4 - Phase 2	2016	$1,400.0	$.0	$.0	$1,400.0	0.0%	$.0	$1,400.0	0.0%	$.0	$.0	$1,400.0	$.0	$1,400.0	83%	$1,156.4	10.0%	$140.0	7.4%	$103.6	0.0%	$.0
DC14-MS00008	Hyde Park SWMF 5 - Phase 1	2015	$5,518.0	$.0	$978.0	$4,540.0	0.0%	$.0	$4,540.0	0.0%	$.0	$.0	$4,540.0	$.0	$4,540.0	83%	$3,750.0	10.0%	$454.0	7.4%	$336.0	0.0%	$.0
DC14-MS00009	Kilally South, East Basin	2024	$3,747.0	$.0	$.0	$3,747.0	0.0%	$.0	$3,747.0	0.0%	$.0	$.0	$3,747.0	$.0	$3,747.0	83%	$3,095.0	10.0%	$374.7	7.4%	$277.3	0.0%	$.0
DC14-MS00011	London Psychiatric Hospital (LPH) SWMF	2019	$3,577.4	$.0	$.0	$3,577.4	0.0%	$.0	$3,577.4	0.0%	$.0	$.0	$3,577.4	$.0	$3,577.4	83%	$2,954.9	10.0%	$357.7	7.4%	$264.7	0.0%	$.0
DC14-MS00012	Mud Creek South Channel Remediation	2015	$640.0	$.0	$.0	$640.0	0.0%	$.0	$640.0	0.0%	$.0	$.0	$640.0	$.0	$640.0	83%	$528.6	10.0%	$64.0	7.4%	$47.4	0.0%	$.0
DC14-MS00013	Mud Creek SWMF 1	2015	$5,114.0	$.0	$.0	$5,114.0	0.0%	$.0	$5,114.0	0.0%	$.0	$.0	$5,114.0	$.0	$5,114.0	83%	$4,224.2	10.0%	$511.4	7.4%	$378.4	0.0%	$.0
DC14-MS00014	Murray Marr SWMF 1	2029	$2,908.7	$.0	$.0	$2,908.7	67.4%	$1,960.2	$948.5	0.0%	$.0	$.0	$948.5	$.0	$948.5	83%	$783.4	10.0%	$94.8	7.4%	$70.2	0.0%	$.0
DC14-MS00015	Murray Marr SWMF 2 - Phase 1	2018	$4,133.7	$.0	$.0	$4,133.7	0.0%	$.0	$4,133.7	0.0%	$.0	$.0	$4,133.7	$.0	$4,133.7	83%	$3,414.4	10.0%	$413.4	7.4%	$305.9	0.0%	$.0
DC14-MS00016	Murray Marr SWMF 4 - Phase 1	2014	$2,100.0	$.0	$.0	$2,100.0	0.0%	$.0	$2,100.0	0.0%	$.0	$.0	$2,100.0	$.0	$2,100.0	83%	$1,734.6	10.0%	$210.0	7.4%	$155.4	0.0%	$.0
DC14-MS00017	North Lambeth P1	2033	$2,871.6	$.0	$.0	$2,871.6	93.5%	$2,684.3	$187.3	0.0%	$.0	$.0	$187.3	$.0	$187.3	83%	$154.7	10.0%	$18.7	7.4%	$13.9	0.0%	$.0
DC14-MS00018	North Lambeth P10 (Dingman Tributary D2) Phase 1	2018	$4,079.6	$.0	$.0	$4,079.6	0.0%	$.0	$4,079.6	91.0%	$3,712.4	$.0	$367.2	$.0	$367.2	83%	$303.3	10.0%	$36.7	7.4%	$27.2	0.0%	$.0
DC14-MS00019	North Lambeth P3 (Dingman Tributary D4)	2032	$3,529.8	$.0	$.0	$3,529.8	90.2%	$3,182.6	$347.2	0.0%	$.0	$.0	$347.2	$.0	$347.2	83%	$286.8	10.0%	$34.7	7.4%	$25.7	0.0%	$.0
DC14-MS00020	North Lambeth P4 (Dingman Tributary D3)	2029	$2,613.3	$.0	$.0	$2,613.3	53.1%	$1,388.3	$1,225.0	0.0%	$.0	$.0	$1,225.0	$.0	$1,225.0	83%	$1,011.8	10.0%	$122.5	7.4%	$90.6	0.0%	$.0
DC14-MS00021	North Lambeth P5	2030	$1,983.7	$.0	$.0	$1,983.7	53.8%	$1,068.1	$915.6	0.0%	$.0	$.0	$915.6	$.0	$915.6	83%	$756.2	10.0%	$91.6	7.4%	$67.8	0.0%	$.0
DC14-MS00022	North Lambeth P6	2020	$2,835.8	$.0	$.0	$2,835.8	0.0%	$.0	$2,835.8	0.0%	$.0	$.0	$2,835.8	$.0	$2,835.8	83%	$2,342.3	10.0%	$283.6	7.4%	$209.8	0.0%	$.0
DC14-MS00023	North Lambeth P7	2017	$3,605.6	$.0	$.0	$3,605.6	0.0%	$.0	$3,605.6	0.0%	$.0	$.0	$3,605.6	$.0	$3,605.6	83%	$2,978.2	10.0%	$360.6	7.4%	$266.8	0.0%	$.0
DC14-MS00024	North Lambeth P8	2020	$3,691.2	$.0	$.0	$3,691.2	0.0%	$.0	$3,691.2	0.0%	$.0	$.0	$3,691.2	$.0	$3,691.2	83%	$3,048.9	10.0%	$369.1	7.4%	$273.1	0.0%	$.0
DC14-MS00025	North Lambeth P9	2016	$3,795.2	$.0	$.0	$3,795.2	0.0%	$.0	$3,795.2	0.0%	$.0	$.0	$3,795.2	$.0	$3,795.2	83%	$3,134.9	10.0%	$379.5	7.4%	$280.8	0.0%	$.0
DC14-MS00026	Old Victoria SWMF 1	2015	$1,814.9	$.0	$.0	$1,814.9	0.0%	$.0	$1,814.9	0.0%	$.0	$.0	$1,814.9	$.0	$1,814.9	83%	$1,499.1	10.0%	$181.5	7.4%	$134.3	0.0%	$.0
DC14-MS00027	Parker SWMF - Phase 1	2016	$4,367.0	$.0	$.0	$4,367.0	0.0%	$.0	$4,367.0	0.0%	$.0	$.0	$4,367.0	$.0	$4,367.0	83%	$3,607.1	10.0%	$436.7	7.4%	$323.2	0.0%	$.0
DC14-MS00028	Pincombe Drain Remediation	2014	$4,200.0	$.0	$500.0	$3,700.0	0.0%	$.0	$3,700.0	25.0%	$925.0	$.0	$2,775.0	$.0	$2,775.0	83%	$2,292.2	10.0%	$277.5	7.4%	$205.4	0.0%	$.0
DC14-MS00029	Pincombe Drain SWMF 3	2016	$2,448.0	$.0	$.0	$2,448.0	0.0%	$.0	$2,448.0	0.0%	$.0	$.0	$2,448.0	$.0	$2,448.0	83%	$2,022.1	10.0%	$244.8	7.4%	$181.2	0.0%	$.0
DC14-MS00030	Pincombe Drain SWMF 4 - Phase 1	2017	$5,128.0	$.0	$.0	$5,128.0	0.0%	$.0	$5,128.0	0.0%	$.0	$.0	$5,128.0	$.0	$5,128.0	83%	$4,235.7	10.0%	$512.8	7.4%	$379.5	0.0%	$.0
DC14-MS00031	Pincombe Drain SWMF 5	2022	$1,731.0	$.0	$.0	$1,731.0	0.0%	$.0	$1,731.0	0.0%	$.0	$.0	$1,731.0	$.0	$1,731.0	83%	$1,429.8	10.0%	$173.1	7.4%	$128.1	0.0%	$.0
DC14-MS00032	River Bend SWMF Trib. C SWMF 'F'	2016	$3,300.0	$.0	$.0	$3,300.0	0.0%	$.0	$3,300.0	0.0%	$.0	$.0	$3,300.0	$.0	$3,300.0	83%	$2,725.8	10.0%	$330.0	7.4%	$244.2	0.0%	$.0
DC14-MS00033	Stoney Creek 7.1	2016	$1,668.2	$.0	$.0	$1,668.2	0.0%	$.0	$1,668.2	0.0%	$.0	$.0	$1,668.2	$.0	$1,668.2	83%	$1,377.9	10.0%	$166.8	7.4%	$123.4	0.0%	$.0
DC14-MS00034	Stoney Creek SWMF 10 (5)	2018	$1,961.0	$.0	$.0	$1,961.0	0.0%	$.0	$1,961.0	0.0%	$.0	$.0	$1,961.0	$.0	$1,961.0	83%	$1,619.8	10.0%	$196.1	7.4%	$145.1	0.0%	$.0
DC14-MS00035	Stoney Creek SWMF 2	2016	$1,994.2	$.0	$.0	$1,994.2	0.0%	$.0	$1,994.2	0.0%	$.0	$.0	$1,994.2	$.0	$1,994.2	83%	$1,647.2	10.0%	$199.4	7.4%	$147.6	0.0%	$.0
DC14-MS00036	Stoney Creek SWMF 8	2024	$1,051.0	$.0	$.0	$1,051.0	0.0%	$.0	$1,051.0	0.0%	$.0	$.0	$1,051.0	$.0	$1,051.0	83%	$868.1	10.0%	$105.1	7.4%	$77.8	0.0%	$.0
DC14-MS00037	Sunningdale SWMF 6A	2016	$1,696.4	$.0	$.0	$1,696.4	0.0%	$.0	$1,696.4	0.0%	$.0	$.0	$1,696.4	$.0	$1,696.4	83%	$1,401.2	10.0%	$169.6	7.4%	$125.5	0.0%	$.0
DC14-MS00059	Old Oak Servicing	2018	$950.0	$.0	$.0	$950.0	0.0%	$.0	$950.0	0.0%	$.0	$.0	$950.0	$.0	$950.0	83%	$784.7	10.0%	$95.0	7.4%	$70.3	0.0%	$.0
DC14-MS00038	Sunningdale SWMF E1	2017	$1,961.9	$.0	$.0	$1,961.9	0.0%	$.0	$1,961.9	0.0%	$.0	$.0	$1,961.9	$.0	$1,961.9	83%	$1,620.6	10.0%	$196.2	7.4%	$145.2	0.0%	$.0
DC14-MS00039	White Oaks SWMF 3	2016	$2,837.0	$.0	$.0	$2,837.0	0.0%	$.0	$2,837.0	0.0%	$.0	$.0	$2,837.0	$.0	$2,837.0	83%	$2,343.4	10.0%	$283.7	7.4%	$209.9	0.0%	$.0
DC14-MS00040	White Oaks SWMF 4 - Phase 1	2016	$4,698.0	$.0	$.0	$4,698.0	0.0%	$.0	$4,698.0	0.0%	$.0	$.0	$4,698.0	$.0	$4,698.0	83%	$3,880.5	10.0%	$469.8	7.4%	$347.7	0.0%	$.0
DC14-MS00041	Wickerson SB SWMF	2014	$3,227.0	$.0	$.0	$3,227.0	43.0%	$1,387.6	$1,839.4	0.0%	$.0	$.0	$1,839.4	$.0	$1,839.4	83%	$1,519.3	10.0%	$183.9	7.4%	$136.1	0.0%	$.0
DC14-MS00061	Contingency Facility A	2014-2019	$2,500.0	$.0	$.0	$2,500.0	0.0%	$.0	$2,500.0	0.0%	$.0	$.0	$2,500.0	$.0	$2,500.0	83%	$2,065.0	10.0%	$250.0	7.4%	$185.0	0.0%	$.0
DC14-MS00063	Interim Works As Identified In EAs	2014-2023	$2,000.0	$.0	$.0	$2,000.0	0.0%	$.0	$2,000.0	0.0%	$.0	$.0	$2,000.0	$.0	$2,000.0	83%	$1,652.0	10.0%	$200.0	7.4%	$148.0	0.0%	$.0
DC14-MS00064	Land (Expropriation Negotiations)	2014-2033	$2,000.0	$.0	$.0	$2,000.0	0.0%	$.0	$2,000.0	0.0%	$.0	$.0	$2,000.0	$.0	$2,000.0	83%	$1,652.0	10.0%	$200.0	7.4%	$148.0	0.0%	$.0
DC14-MS00065	Pre-Assumption Monitoring (4)	2014-2023	$2,000.0	$.0	$.0	$2,000.0	0.0%	$.0	$2,000.0	0.0%	$.0	$.0	$2,000.0	$.0	$2,000.0	83%	$1,652.0	10.0%	$200.0	7.4%	$148.0	0.0%	$.0
	SUBTOTAL		$139,846.3	$.0	$2,433.0	$137,413.3	9.3%	$12,721.1	$124,692.2	17.4%	$21,737.4	$.0	$102,954.8	$.0	$102,954.8	82.6%	$85,040.7	10.0%	$10,295.5	7.4%	$7,618.7	0.0%	$.0
	Total Community Growth Trunk Storm Sewer Works																						
DC14-MS00201	Community Growth Trunk Storm Sewer Works	2014-2023	$7,576.2	$.0	$.0	$7,576.2	10.5%	$794.7	$6,781.5	0.0%	$.0	$.0	$6,781.5	$.0	$6,781.5	83%	$5,601.5	10.0%	$678.1	7.4%	$501.8	0.0%	$.0
	SUBTOTAL		$7,576.2	$.0	$.0	$7,576.2	10.5%	$794.7	$6,781.5	0.0%	$.0	$.0	$6,781.5	$.0	$6,781.5	82.6%	$5,601.5	10.0%	$678.1	7.4%	$501.8	0.0%	$.0

Service component : **Major Storm Water Management Works**

Planning horizon for this component : **2014-2033**

DC ID #	Project Description	Expected Year	Total Estimated Cost	Less: future capital grants, subsidies or other contributions anticipated	Less: Portion of Gross Project Cost Funded In Prior Years	Subtotal	Less: Future growth benefits (portion of growth costs attributable to growth expected to occur beyond planning horizon for this service)		Subtotal	Non-growth share		Less: 10% statutory deduction (if applicable)	Subtotal	Less: Amount ineligible for rate calculation - improvement over existing standard (see Supplement A if applicable)	Net Amount Eligible for DC rate calculation	RESIDENTIAL		NON - RESIDENTIAL					
																		Commercial		Institutional		Industrial	
										%	benefit					%	$	%	$	%	$	%	$
	(all $'s in ,000's)		(1)	(2)	(3)	(4) (1) - sum(2,3)	(5)	(6) (4) * (5)	(7) (4) - (6)	(8)	(9) (7) * (8)	(10)	(11) [(7) - (9)] * 10(7) - sum(9,10)	(12)	(13) (11) - (12)	(14)	(15) (13) * (14)	(16)	(17) (13) * (16)	(18)	(19) (13) * (18)	(20)	(21) (13) * (20)
		Note 1	Note 1				Note 1			Note 1						Note 1		Note 1		Note 1		Note 1	
	Total CSRF Storm Sewer Internal Oversizing Subsidy																						
DC14-MS01001	Storm Sewer Internal Oversizing Subsidy	2014-2033	$22,988.2	$0.0	$0.0	$22,988.2	0.0%	$0.0	$22,988.2	0.0%	$0.0	$0.0	$22,988.2	$0.0	$22,988.2	83%	$18,988.2	10.0%	$2,298.8	7.4%	$1,701.1	0.0%	$0.0
	SUBTOTAL		$22,988.2	$0.0	$0.0	$22,988.2	0.0%	$0.0	$22,988.2	0.0%	$0.0	$0.0	$22,988.2	$0.0	$22,988.2	82.6%	$18,988.2	10.0%	$2,298.8	7.4%	$1,701.1	0.0%	$0.0
	Total Storm Sewers - Infill and Intensification Nodes																						
DC14-MS01002	Infill and Intensification Nodes Storm Sewer Servicing	2014-2033	$13,782.9	$968.2	$0.0	$12,814.7	0.0%	$0.0	$12,814.7	6.7%	$857.0	$0.0	$11,957.7	$0.0	$11,957.7	83%	$9,877.1	10.0%	$1,195.8	7.4%	$884.9	0.0%	$0.0
	SUBTOTAL		$13,782.9	$968.2	$0.0	$12,814.7	0.0%	$0.0	$12,814.7	6.7%	$857.0	$0.0	$11,957.7	$0.0	$11,957.7	82.6%	$9,877.1	10.0%	$1,195.8	7.4%	$884.9	0.0%	$0.0
	Total CSRF Industrial SWM Ponds																						
DC14-MS00053	Industrial Facility 1	2014	$5,001.9	$0.0	$0.0	$5,001.9	0.0%	$0.0	$5,001.9	0.0%	$0.0	$0.0	$5,001.9	$0.0	$5,001.9	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$5,001.9
DC14-MS00054	Industrial Facility 2	2015	$5,001.9	$0.0	$0.0	$5,001.9	0.0%	$0.0	$5,001.9	0.0%	$0.0	$0.0	$5,001.9	$0.0	$5,001.9	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$5,001.9
DC14-MS00055	Industrial Facility 3	2018	$5,001.9	$0.0	$0.0	$5,001.9	0.0%	$0.0	$5,001.9	0.0%	$0.0	$0.0	$5,001.9	$0.0	$5,001.9	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$5,001.9
DC14-MS00056	Industrial Facility 4	2022	$5,001.9	$0.0	$0.0	$5,001.9	25.0%	$1,250.5	$3,751.4	0.0%	$0.0	$0.0	$3,751.4	$0.0	$3,751.4	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$3,751.4
DC14-MS00057	Industrial Facility 5	2026	$5,001.9	$0.0	$0.0	$5,001.9	51.0%	$2,551.0	$2,450.9	0.0%	$0.0	$0.0	$2,450.9	$0.0	$2,450.9	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$2,450.9
DC14-MS00060	Pottersburg Channel	2024	$3,365.1	$0.0	$0.0	$3,365.1	0.0%	$0.0	$3,365.1	0.0%	$0.0	$0.0	$3,365.1	$0.0	$3,365.1	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$3,365.1
	SUBTOTAL		$28,374.7	$0.0	$0.0	$28,374.7	13.4%	$3,801.5	$24,573.2	0.0%	$0.0	$0.0	$24,573.2	$0.0	$24,573.2	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$24,573.2
	Total CSRF Industrial Trunk Storm Sewer Works																						
DC14-MS00101	Industrial Storm Trunk Sewers (600ha)	2014-2033	$3,000.0	$0.0	$0.0	$3,000.0	0.0%	$0.0	$3,000.0	0.0%	$0.0	$0.0	$3,000.0	$0.0	$3,000.0	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$3,000.0
DC14-MS00102	Industrial Storm Servicing Internal Oversizing (250ha)	2014-2023	$1,000.0	$0.0	$0.0	$1,000.0	0.0%	$0.0	$1,000.0	0.0%	$0.0	$0.0	$1,000.0	$0.0	$1,000.0	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$1,000.0
DC14-MS00103	Industrial Storm Servicing Internal Oversizing (300ha)	2024-2033	$1,200.0	$0.0	$0.0	$1,200.0	0.0%	$0.0	$1,200.0	0.0%	$0.0	$0.0	$1,200.0	$0.0	$1,200.0	0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$1,200.0
	SUBTOTAL		$5,200.0	$0.0	$0.0	$5,200.0	0.0%	$0.0	$5,200.0	0.0%	$0.0	$0.0	$5,200.0	$0.0	$5,200.0	0.0%	$0.0	0.0%	$0.0	0.0%	$0.0	100.0%	$5,200.0
	PORTION OF PRIOR YEARS' GROWTH PROJECTS FINANCED WITH DEBT (PRINCIPLE)		$36,596.8						$36,596.8				$36,596.8		$36,596.8	82%	$30,009.3	12%	$4,391.6	6%	$2,195.8	0%	$0.0
	TOTAL		**$254,365.1**	**$968.2**	**$2,433.0**	**$214,367.1**	**8.1%**	**$17,317.3**	**$233,646.5**	**9.7%**	**$22,594.3**	**$0.0**	**$211,052.2**	**$0.0**	**$211,052.2**	**70.8%**	**$149,516.8**	**8.9%**	**$18,859.8**	**6.1%**	**$12,902.3**	**14.1%**	**$29,773.2**

Development Charge Rate Calculation (Pre-Financing Cost)

			Residential		Commercial		Institutional		Industrial	
Less: Portion of above works collected in prior years (approximate uncommitted balance in DC reserve fund at December 31, 2013)	$1,570.7	78.3%	$1,229.9	14.1%	$221.4	7.6%	$119.4	0.0%	$0.0	
Total net cost eligible for DC rate calculation purposes	$209,481.5	70.8%	$148,286.9	8.9%	$18,638.4	6.1%	$12,782.9	14.2%	$29,773.2	
Divided By: Total Gross Growth Projections			104,829		480,293		607,381		1,028,402	
Calculated DC Rate - Pre-Financing			**$ 1,414.56** /person		**$ 38.81** /sq. m.		**$ 21.05** /sq. m.		**$ 28.95** /sq. m.	

Prefinancing - Calculated Residential DC Rate - financing costs to be added

		Facilities	**Existing Res. Rate with financing included** *Jan 1, 2014 rate*
Single Family Dwelling	3.02	$ 4,271.98	$ -
Multiple unit dwelling	2.28	$ 3,225.20	$35,971,018.65
Apartment - bach. & 1 bed	1.41	$ 1,994.53	$ 2,413.45
Apartment - ≥ 2 bedroom	1.90	$ 2,687.67	$ 3,902.60

Notes:

1) Total estimated cost, non-growth share, and RICI splits referenced from the Delcan 2014 Stormwater and DrainageDevelopment Charges Update Study.
2) SWM works outlined above that have not been considered in an Environmental Assessment as of the tabling of this study shall be considered area specific contingency facilities and are anticipated to satisfy a regional benefit . Upon completion of the applicable Environmental Assessment (i.e. no outstanding Part 2 orders), a review of the related area specific contingency and the development charge rate will be undertaken and, if required, a revision to the development charge by-law will be made.

Table M-2: Cash Flow Analysis and Final Rate Calculation Storm Water Management - Facilities

RATE CALCULATIONS - INCLUDING FUND BALANCE AND FINANCING COST (see Explanatory note below)

Service component : **Major Storm Water Management Works**

($'s in thousands)

			FINAL RESULT		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
		Pre-Financing DC Rate	Post-Financing DC Rate	% Collected assumption	Growth projection for each year of forecast period																				
Planning Horizon - yrs	20																								
Growth - Res. (Persons In New Housing)	104,829	$ 1,414.56	$ 1,711.67	100%	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	5,241.4	104,828.8
Growth - Non-Res. (sq. m.)			$ -																						
Commercial	480,293	$ 38.81	$ 46.96	100%	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	24,014.7	480,293.0
Institutional	607,381	$ 21.05	$ 25.47	100%	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	30,369.1	607,381.0
C/I subtotal	1,087,674		$ -		54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	54,383.7	1,087,674.0
Industrial	1,028,402	$ 28.95	$ 35.03	100%	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	51,420.1	1,028,402.0
Total Non-Res.	2,116,076				105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	105,803.8	2,116,076.0
Reserve Fund Projections:																									
Opening Surplus / <Deficit>					$1,570.7	-$3,817.6	-$18,458.8	-$44,046.2	-$54,238.7	-$64,459.4	-$69,494.6	-$73,749.1	-$71,509.0	-$75,440.7	-$72,544.6	-$76,217.5	-$70,432.1	-$67,245.3	-$58,857.5	-$50,176.1	-$46,809.4	-$39,724.7	-$30,373.6	-$24,286.8	$1,570.7
Revenues - Development Charge Collections																									
Residential					$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$8,971.6	$179,432.0
Non-Res.																									
Commercial					$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$1,127.7	$22,553.1
Institutional					$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$773.4	$15,467.7
C/I subtotal					$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$1,901.0	$38,020.8
Industrial					$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$1,801.3	$36,026.6
Total Non-Res.					$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$3,702.4	$74,047.4
Total revenues					$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$12,674.0	$253,479.3
Development Charge draws - calculated on separate page including P&I on Existing Debt					$18,023.6	$26,932.0	$37,186.4	$21,176.1	$20,853.2	$15,405.3	$14,464.9	$7,935.6	$14,078.2	$7,232.7	$13,788.3	$4,366.3	$7,119.2	$2,117.3	$2,117.3	$7,639.2	$4,101.0	$2,117.3	$5,647.0	$4,988.9	$237,289.8
Closing surplus / <deficit> before interest					-$3,778.9	-$18,075.6	-$42,971.2	-$52,548.3	-$62,417.9	-$67,190.7	-$71,285.5	-$69,010.7	-$72,913.3	-$69,999.4	-$73,659.0	-$67,909.9	-$64,877.4	-$56,688.6	-$48,300.8	-$45,141.3	-$38,236.4	-$29,168.0	-$23,346.7	-$16,601.8	$17,760.2
Non-inflationary interest revenue /<expense>																									$.0
on savings	1.75%				-$38.6	-$383.1	-$1,075.0	-$1,690.4	-$2,041.5	-$2,303.9	-$2,463.7	-$2,498.3	-$2,527.4	-$2,545.2	-$2,558.6	-$2,522.2	-$2,367.9	-$2,168.8	-$1,875.3	-$1,668.1	-$1,488.3	-$1,205.6	-$940.1	-$715.6	-$35,077.6
on borrowings	3.50%																								
Closing surplus / <deficit>					-$3,817.6	-$18,458.8	-$44,046.2	-$54,238.7	-$64,459.4	-$69,494.6	-$73,749.1	-$71,509.0	-$75,440.7	-$72,544.6	-$76,217.5	-$70,432.1	-$67,245.3	-$58,857.5	-$50,176.1	-$46,809.4	-$39,724.7	-$30,373.6	-$24,286.8	-$17,317.3	-$17,317.3

Target which reflects growth costs incurred in the forecast period and recoverable from future growth -$17,317.3

Explanatory note

This worksheet projects future activity in this reserve fund. It ultimately determines the rates necessary to recover all costs intended for recovery from growth (including financing costs). The deficit in the fund at the end of the planning horizon reflects costs intended for recovery from future growth.

Method:
1 Set a factor of "1" to vary with the calculation of post-financing DC rates. Under "Post-Financing DC Rate," multiply each "Pre-Financing DC Rate" by the factor.
2 Set ratio of Pre financing revenues = Post financing revenues. This ensures that ratio of revenues stays constant throughout rate re-calculation process.
3 Using "SOLVER" make balance at end of planning horizon = tot "Target " balance by allowing "Post financing rates" to vary from "1".

Other Information:	Pre	Post
Residential share	71%	71%
Non-residential		
Commercial	9%	9%
Institutional	6%	6%
C/I subtotal	15%	15%
Industrial	14%	14%

APPENDIX N – LOCAL SERVICING POLICY

GENERAL

G-1. Claimability

Any item listed as claimable, subsidizable, or eligible for funding from a development charge reserve fund must also be provided for in the approved DC rates. To the extent that specific cost sharable works and projects cannot be identified as to location or timing, there should be a contingency provided for in the estimates that is incorporated into the rates.

It is important that the City continue to monitor between DC Background Studies, the accuracy of the estimates and assumptions used to establish the rates. To the extent that substantial variations are identified, Council should be advised and will need to consider whether to increase or decrease the rates in accordance with the monitoring observations.

G-2. DC Fund reimbursements for Exempted Development

The City currently exempts Industrial development, and certain specified forms of Institutional development from the payment of development charges. These exemptions support economic development and not-for-profit development initiatives.

With respect to any non-statutory exemptions the City approves in its DC policy, the City will pay for these exemptions through non-DC supported contributions to the respective DC reserve funds. This meets the legislative requirement that exemptions or reductions to charges otherwise payable not be recovered from other, non-exempt forms of development (DCA s.5(6)3.)

G-3. Non-Growth Works that Benefit the Existing Population

Where minor works funded in part from the CSRF are subject to this policy and also include a non-growth component in the DC Background Study, funding of that portion of the works must wait until the City has approved sufficient funds in its Council approved capital budgets, or Council makes provision for a Reserve Fund designated for use in funding the non-growth share of DC funded works, to pay for that non-growth portion of the works. The non-growth portion of the funding shall be identified in the City's Capital Works Budget and approved by Council.

G-4. Use of Contingencies

Works listed as eligible in the Development Charges Background Study, or with the approval of the City Engineer, in consultation with the Director, Development Finance, drawn from a contingency and/or an alternative to a work listed in the Background Study may be funded from the CSRF. The claimability of such a work would be subject to inclusion in the development agreement (for works less than $50,000 subject to approved funding in the Capital Budget) or subject to execution of a Municipal Servicing and Financing agreement prior to commencement of the work. The works funded from the CSRF under this paragraph would be subject to rules similar to those described for minor CSRF eligible works contained in this section with respect to eligibility, tender and claim completeness and submission.

G-5. Exceptions

The Development Charge By-law allows for exceptions to projects listed in the DC Background Study for works listed as eligible in the Development Charges Background Study, or with the approval of the City Engineer, in consultation with the Director, Development Finance, drawn from a contingency and/or substituted for a work listed in the Background Study may be claimable.

WATER DISTRIBUTION

W-1. Major Watermains (CSRF-Water Distribution)
All watermains required to service future development greater than or equal to 400mm in diameter are considered to satisfy a network wide benefit to growth and are to be identified separately as projects in the Development Charges Background Study and are eligible for a claim from the *CSRF-* Water Distribution.

W-2. Watermain Oversizing (CSRF-Water Distribution)
Watermains with the all of the following attributes are eligible for a subsidy from the CSRF-Water Distribution:

- The watermain services external developable areas, and
- The watermain is greater than 250mm in diameter and less than 400mm in diameter.

The oversized portion (>250mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts will be identified in a schedule provided in the approved Development Charges By-law from the City Services Reserve Fund. Payment of claims from the City Services Reserve fund is subject to budget approval.

W-3. Water Facilities *(CSRF-*Water Distribution*)*
Where the upgrading or construction of new public water booster pumping stations and reservoir projects are designed to increase capacity or improve service to acceptable standards and as a result of growth, these works are eligible for a claim from the CSRF-Water Distribution. These projects must also be identified in the Development Charges Background Study.

W-4. Temporary Facilities (Developer Cost)
Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. Approval of temporary works is at the discretion of the City Engineer. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

W-5. Local Service Costs (Developer Cost)
Any watermain or portion of a larger watermain that is less than or equal to 250mm in diameter is referred to as “local works”, and undertaken at the Developer’s expense.

WASTEWATER

SS-1. Regional Trunk Sewers (CSRF- Sanitary Sewerage)
All sewers required to service future development with a diameter greater than 450mm are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage.

All sewers of any diameter required to service future development and that are identified as a strategic need by the City Engineer are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage.

In order to be eligible for a claim as a Regional Trunk Sewer, the sewer must have no Private Drain Connections to individual residential units otherwise the "Sewer Oversizing" policy applies.

SS-2. Sewer Oversizing (CSRF - Minor Sanitary Sewers)
Sanitary Sewers, which are not Regional Trunk Sewers, with all of the following attributes are eligible for a subsidy from the CSRF - Minor Sanitary Sewers:

- The sewer services external developable areas, and
- The sewer is greater than 250mm in diameter.

The oversized portion (>250mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts are to be reflected in an appendix of the DC Bylaw. The oversizing subsidy amounts cover the cost per metre of all associated eligible costs including engineering, manholes, restoration, etc.

SS-3. Pumping Stations (CSRF- Sanitary Sewerage)
The upgrading or construction of new regional pumping stations are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage. These projects must also be identified in the Development Charges Background Study. A figure showing the location of all of these pumping stations is provided in the Sanitary Master Servicing Study.

SS-4. Temporary Pumping Stations (Developer Cost)
The cost of any temporary pumping stations or forcemains is borne by the developer. Approval of temporary works is at the discretion of the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. provide land for permanent facility) as a condition of approval for the temporary facility. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

SS-5. Wastewater Treatment Upgrades (CSRF- Sanitary Sewerage)
All wastewater treatment upgrades considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Sanitary Sewerage.

SS-6. Temporary Sanitary Sewerage Systems (Developer Cost)
Costs of all sanitary sewage systems that are temporary or are not defined in the DC Background Charge Study shall be borne by the Developer. Approval of temporary works is at the discretion of the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for

the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

SS-7. Local Service Costs (Developer Cost)
Any pipe or portion of a larger pipe that is less than or equal to 250mm in diameter are referred to as local works, and undertaken at the Developer's expense.

STORMWATER

SWM-1. Regional Trunk Sewers (CSRF- Major SWM Works)
All sewers to be constructed within existing City owned lands that service multiple new development areas are considered to satisfy a regional benefit to growth and are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

SWM-2. Regional Open Channels (CSRF- Major SWM Works)
Any open channel works identified through the Environmental Assessment process that are considered to satisfy a regional benefit to growth are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

SWM-3. Storm Sewer Oversizing (CSRF- Minor Storm Works)
Storm Sewers with all of the following attributes are eligible for a subsidy from the CSRF - Minor Storm Works:

- The sewer services external developable areas, and
- The sewer is greater than 1050mm in diameter.

The oversized portion (>1050mm) is eligible for a subsidy payable based on an average oversizing cost and is stated in terms of a $/m of pipe constructed. The oversizing subsidy amounts are to be reflected in an appendix of the DC Bylaw. The oversizing subsidy amounts cover the cost per metre of all associated eligible costs including engineering, manholes, restoration, etc.

SWM-4. Open Channel Oversizing (CSRF- Minor Storm Works)
Open Channels with all of the following attributes are eligible for a subsidy from the CSRF - Minor Storm Works:

- An open channel design is required for the reason of inherent site drainage constraints and the design has been accepted by the City Engineer,
- The open channel services external developable areas, and
- The open channel has a 2-year storm design flow cross-sectional area greater than a 1050mm sewer using the City's minimum design standards.

The oversized portion represents the cross-sectional area required in excess of a 1050mm sewer for a 2-year storm design. The oversizing subsidy will be calculated based on the additional cost of oversizing beyond an area equivalent to a 1050mm pipe size using the City's minimum design standards for a 2-year storm design flow. The oversizing subsidy is payable based on an average oversizing cost in the form of a $/m of channel constructed as calculated by the Owners consulting engineer and as accepted by the City Engineer (or designate). An allowance of 15% will be added to the calculated oversizing amount to cover applicable engineering costs.

SWM-5. Stormwater Management Works (CSRF- Major SWM Works)
Environmental Assessment Complete

Any municipally owned or operated stormwater management works designed to provide capacity to facilitate growth that are identified through the Environmental Assessment process and are considered to satisfy a regional benefit to growth are to be identified as separate projects in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

Environmental Assessment Not Complete

Stormwater Management Works for which an Environmental Assessment has not been completed that are anticipated to satisfy a regional benefit to growth are to be identified as separate area specific contingencies in the DC Background Study and are eligible for a claim from the CSRF- Major SWM Works.

Upon completion of the applicable Environmental Assessment (i.e. no outstanding Part 2 orders), a review of the related area specific contingency and the development charge rate will be undertaken and, if required, a revision to the development charge by-law will be made.

SWM-6. Stormwater Management Facility Land Costs (CSRF- Major SWM Works)
Land will be reimbursed at a specific rate, with different land values assigned to different categories as outlined in the Development Charges By-law.

SWM-7. Major SWM Facility Inlet and Outlet Sewers within the SWM Block(CSRF- Major SWM Works)
Any storm sewers within a Major SWM Facility block that are either upstream or downstream of a facility are considered to satisfy a regional benefit to growth and are eligible for a claim from the CSRF- Major SWM Works.

SWM-8. Major SWM Facility Outlet Sewers outside the SWM Block (CSRF- Major SWM Works or CSRF- Minor Storm Works)
Any major SWM facility outlet sewer that extends outside the SWM block facility is considered to satisfy a regional benefit to growth and is eligible for a claim from the CSRF- Major SWM Works if the outlet sewer is not also used to provide drainage to a development adjacent to the outlet sewer.

In the event that all or a portion of the outlet sewer outside the SWM block is used to provide drainage to a development adjacent to the outlet sewer then the portion of the outlet sewer downstream from the adjacent development is eligible for "Storm Sewer Oversizing" as described in the DC By-law.

SWM-9. Local Service Costs (Developer Cost)
Any pipe or portion of a larger pipe that is less than or equal to 1050 mm in diameter are referred to as local works, and undertaken at the Developer's expense.

SWM-10. Temporary Storm Sewers (Developer Cost)
Costs of all storm sewer systems that are temporary or not defined in the DC Background Charge Study shall be borne by the Developer. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

SWM-11. Temporary Stormwater Management Works (Developer Cost)
Any temporary works or works not included in the approved Development Charges Background Study are at the sole expense of the Developer including operation, maintenance and decommissioning. Approval of temporary works is at the discretion of the City Engineer. Where a temporary facility precedes the construction of a permanent facility, the developer that requires the temporary facility will be required to also assist in making provision for the permanent facility (e.g. secure land for permanent facility) as a condition of approval for the temporary facility. In order for a temporary work to proceed there must first be provisions for the permanent work within the current Development Charge Background Study.

Best management practices or private drainage systems are not claimable unless identified through

the Environmental Assessment process as being required to meet a regional benefit to growth.

The construction of road side ditches, swales, and overland flow routes are not eligible for claim from the City Services Reserve Fund - Stormwater Management. .

ROADS

R-1. Major Roadworks (CSRF - Roads Services)

Major Transportation road works typically consist of large-scale arterial road widening projects or two lane road upgrades triggered by increased traffic volumes associated with growth across the City. All Major Transportation Roadworks are constructed by the City and the growth related cost is eligible for a claim from the CSRF - Roads Services.

The costs of the following items are incorporated into road projects and are required as a result of growth:

- Structures to be widened or replaced
- Noise barrier wall where required
- Land acquisition (raw land cost, appraisals, surveying, legal, etc.) but only where lands cannot be acquired through dedications under the Planning Act on a timely basis.

R-2. Minor Roadworks (CSRF - Roads Services)

Minor Road Works that would be constructed as part of the major road project are eligible to be claimed from the CSRF - Roads Services. These works include: new traffic signals, channelization, sidewalks, and streetlights. In some cases, these works are done in advance of the road capacity expansion project as a means of addressing a network wide benefit to growth, without completing the entire road expansion.

R-3. Arterial Road Extensions (CSRF - Roads Services)

When a development precedes the construction of a new arterial road that is either adjacent to or runs through the developable lands, the Developer is responsible for the construction of a primary collector road along the ultimate road right-of-way. A partial claim for this work may be made as per the primary road oversizing provisions for Minor Works - CSRF.

R-4. Minor Road Works - Road Oversizing (CSRF – Minor Roadworks)

Where a new arterial or primary collector road is to be constructed in whole or in part through or adjacent to a development, the Developer is responsible for the cost of constructing a secondary collector road as defined in the City of London's Design Specifications & Requirements Manual. If the required road is wider or at a higher standard, the Developer is responsible for the cost of a standard road, including sidewalks, street lights, etc., and is eligible for a claim to the CSRF – Minor Roadworks for the difference in cost between a standard road and the road actually constructed. The construction responsibilities shall be defined by the conditions of an agreement between the City and the Developer. If the Developer wishes to construct the road at an enhanced standard beyond that acceptable to the City Engineer, then the Developer shall pay for the additional costs of enhancement with no eligibility for a claim from any fund.

R-5. Channelization (CSRF – Minor Roadworks)

Channelization on a primary or arterial road into a new public street is eligible for a claim from the CSRF – Minor Roadworks. The following subsections list the various additional components of the channelization which are considered claimable:

R-5.1. Tree Plantings

When replacement trees are planted as part of external roadworks to compensate for removed trees, other than those removed to facilitate an access, the cost of the removal and replacement is claimable. All other tree plantings are not claimable.

R-5.2. Ditching

When ditching and/or the installation of catchbasins is required to facilitate claimable external road work the drainage works may be incorporated in the minor roadworks claim to the CSRF.

R-5.3. Utility Relocations

Utility relocations necessitated by the claimable roadworks can be claimed upon providing a copy of the invoices from the utility and proof of payment in full. The City shall issue a letter to the utility company stating that this work is required by the City under the Highway Act and will pay for 50% of cost of labor and trucking. This 50% share is claimable from the CSRF; the other 50% is the utility's share and is not claimable. Should the utility refuse to pay these costs, the 50% "utility share" shall be the responsibility of the proponent developer. Engineering fees associated with these relocations are not claimable.

R-6. Local Service Costs (Developer Cost)

The following subsections list the various road components which are considered a local service cost:

R-6.1. Connections

Connections of all public and private new streets, roads, ramps or entrances (including features and design details such as: round-abouts, culverts, signage, gateway treatments, noise wall alterations, sidewalks, bike lanes, bike pathways, paths, directional traffic islands, decorative features) to the existing road infrastructure;

R-6.2. Placing Fill

Re-grading, cutting and placing fill on lands beyond the road allowance along their frontage in accordance with City of London standards. In addition, all grading and restoration of road allowance along the development frontage if no claimable roadworks are required;

R-6.3. Topsoil and Sod

Topsoil and sod to the edge of any existing sidewalk fronting the development;

R-6.4. Tree Planting

Planting of new trees fronting the development, except as provided in the Minor Road Works - Road Oversizing or Channelization policies.

R-6.5. Sidewalk Reinforcement

Any upgrade or reinforcement from a standard 100mm thickness sidewalk across the development's new access;

R-6.6. Retaining Walls

Retaining walls along the development frontage, where acceptable to the City Engineer;

R-6.7. Temporary Works

100% of the cost of temporary asphalt sidewalks, roads, paths, swales along the frontage abutting arterial or primary collectors where installation in ultimate location is deemed premature;

R-6.8. Traffic Signals at Private Streets

Traffic signal installations at all private entrances and at public entrances which do not meet MTO warrants;

R-6.9. Other Works

Any other services, removals, relocations, etc., required including but not limited to, utility relocation, sidewalk alterations, and curb cuts;

R-6.10. Restoration and Damage

Restoration of any utility cuts, and or damage created by construction activities and /or construction traffic in and out of the development. including but not limited to daily removal of mud tracking, daily dust suppression, milling and paving of deteriorated asphalt caused by construction traffic, grading of gravel shoulders to remove rutting caused by construction traffic;

R-6.11. Noise Attenuation Measures

All noise berms, window streets, fences and privately maintained noise walls;

R-6.12. Grading and BMPs

Grading elements such as: swales, ditches, best management practices, (BMPs) and any other feature to address over land flow routes needs created by the development's grading;

R-6.13. Paths and Walkways

Pedestrian paths, walkways, bridges, tunnels, including the related lighting and signage (Note: Parkways are constructed by the City and are specifically provided in the Development Charges Background Study);

R-6.14. Utility Upgrades

The costs related to the upgrading of any utility plant, or the relocation of the same, unless necessitated by the roadwork;

R-6.15. Relocation and Replacement Costs

The relocation and/or replacement costs of any encroachment on the City's road allowance or easement including but not limited to hedges, sprinklers systems and fences;

R-6.16. Street Lighting

Street lighting at intersections with existing roads where required by the development agreement.

APPENDIX O – EXAMINATION OF OPERATING COSTS

A further requirement of the Development Charge Background Study is that it contains an examination, for each service for which the development charge by-law would relate, of the long term capital and operating cost impacts for capital infrastructure for which a development charge is calculated (Development Charges Act, 1997, s.10(c)).

This requirement is partially met by identifying the incremental operating costs associated with each growth related project. Where facilities or amenities are being expanded, only the incremental cost is reported. Where a network is expanded (e.g. sewer pipes or water pipes), the incremental operating costs may be derived from application of the average costs (of operating and maintaining the existing system) to the total linear length of operating the present system.

A second part of the examination involves what the Act refers to as 'the long term capital costs' of the infrastructure required for the service. For the purpose of this examination, this has been interpreted to refer (consistent with previous DC studies) to mean 'the eventual cost of replacement of the asset'. For the purpose of this analysis, we employ a sinking fund method. This method determines the equal annual contribution required to a sinking fund, such that at the end of the asset's useful life, there is sufficient capital available to replace the asset. For the purpose of this analysis, the assumed growth rate of the sinking fund is 2.5% (net of inflation). The table below reflects the assumed average estimated useful lives of the growth related assets. The "factor" is applied to the original capital cost to determine the contribution that would be required for replacement of the asset at the end of its useful life.

2014 DEVELOPMENT CHARGES BACKGROUND STUDY

ASSET	LIFECYCLE COST FACTORS		
	AVERAGE USEFUL LIFE (YEARS)	FACTOR	RATE
Facilities, Buildings	40	0.014836	2.5%
Fire & Police Vehicles	15	0.055766	2.5%
Transit Vehicles	12	0.072487	2.5%
Fire and Police Equipment	8	0.114467	2.5%
Sanitary, Storm	80	0.004026	2.5%
Waterworks			
Pipes and related works	70	0.005397	2.5%
Pumping Stations	25	0.029276	2.5%
Reservoirs	40	0.014836	2.5%
Facilities, Buildings	40	0.014836	2.5%
Roads	20	0.039147	2.5%
Library Collection Materials	7	0.132495	2.5%
Parkland Development, Spray Pads	20	0.039147	2.5%

TABLE O-1 - Life Cycle and Operating Cost Impacts - "Soft Services"

City of London
Capital and Operating Impacts for Future Capital Expenditures

Project #	Project Description	Expected Year	Total Estimated Cost	Annual Impact ($)					
				Average Useful Life(years)	Sinking Fund Factor	Life Cycle Cost	Operating Cost	Notes	Total cost
Fire									
Facility									
DC14-FS00001	Fire Station 15 - New Station	2015	$2,195,000	40	0.014836	$32,566	$44,000	(1)	$76,566
DC14-FS00002	Fire Station 11 - Lambeth Relocation	2015	$2,075,000	40	0.014836	$30,785	$0	(1)	$30,785
Vehicle									
DC14-FS00003	Quint - Station 15	2015	$865,000	15	0.055766	$48,238	$38,000	(1)	$86,238
DC14-FS00004	Aerial Company - Central London	2020	$1,805,000	15	0.055766	$100,658	$79,000	(1)	$179,658
Outfitting									
DC14-FS00005	Fire Fighter Outfitting - Station 15	2015	$66,820	8	0.114467	$7,649	$2,355,000	(1)	$2,362,649
Total	***Fire***		$7,006,820			$219,896	$2,516,000		$2,735,896
Police									
Facility									
	Portion of Prior Years' Growth Projects Financed with Debt		$6,677,000						
Outfitting									
DC14-PS00001	Officer Outfitting (increase due to growth)	2014-2023	$413,700	8	0.114467	$47,355	$7,541,100	(2)	$7,588,455
Total	***Police***		$7,090,700			$47,355	$7,541,100		$7,588,455
Corporate Growth Studies									
Total	***Corporate Growth Studies***		$0						$0
Library									
Facility									
DC14-LS00001	LSA 13 -- Southeast (Facility)	2016	$4,080,000	40	0.014836	$60,532	$500,000	(3)	$560,532
DC14-LS00002	LSA 12 -- Northwest (Facility)	2019	$4,080,000	40	0.014836	$60,532	$550,000	(3)	$610,532
Collections									
DC14-LS00003	LSA 13 -- Southeast (Collections)	2016	$250,000	7	0.132495	$33,124			
DC14-LS00004	LSA 12 -- Northwest (Collections)	2019	$250,000	7	0.132495	$33,124			
Total	***Library***		$8,660,000			$187,311	$1,050,000		$1,171,064
Parks & Recreation									
Recreation Facilities									
	Multi-Purpose Recreation Centres								
DC14-PR00001	Multi-purpose Rec. Centre (SW)	2014							
	Double Icepad Arena	2014	$10,083,596	40	0.014836	$149,603	$504,180	(4)	$653,782
	Indoor Swimming Pool	2014	$3,758,900	40	0.014836	$55,768	$187,945	(4)	$243,713
	Community Centre/Gymnasium	2014	$6,131,000	40	0.014836	$90,961	$306,550	(4)	$397,511
	Change Rooms	2014	$1,749,600	40	0.014836	$25,957	$87,480	(4)	$113,437
	Furniture/Fittings/Equipment	2014	$349,200	40	0.014836	$5,181	$17,460	(4)	$22,641
	Land/Site Works/Prof. Fees	2014	$12,427,274	40	0.014836	$184,374			$184,374
	Subtotal		$34,499,570			$511,844	$1,103,615		$1,615,458
DC14-PR00002	Multi-purpose Rec. Centre (SE - Arena Anchored)	2018							
	Double Icepad Arena	2018	$9,789,900	40	0.014836	$145,245	$489,495	(4)	$634,740
	Community Centre/Gymnasium	2018	$6,094,600	40	0.014836	$90,421	$304,730	(4)	$395,151
	Change Rooms	2018	$1,749,600	40	0.014836	$25,957	$87,480	(4)	$113,437
	Furniture/Fittings/Equipment	2018	$529,000	40	0.014836	$7,848	$26,450	(4)	$34,298
	Land/Site Works/Prof. Fees	2018	$10,400,501	40	0.014836	$154,304			$154,304
	Subtotal		$28,563,601			$423,776	$908,155		$1,331,931
DC14-PR00003	Multi-purpose Rec. Centre (SE - Pool Anchored)	2018							
	Community Centre/Gymnasium	2018	$6,094,600	40	0.014836	$90,421	$304,730	(4)	$395,151
	Indoor Swimming Pool	2018	$3,667,200	40	0.014836	$54,407	$183,360	(4)	$237,767
	Change Rooms	2018	$1,749,600	40	0.014836	$25,957	$87,480	(4)	$113,437
	Furniture/Fittings/Equipment	2018	$345,300	40	0.014836	$5,123	$17,265	(4)	$22,388
	Land/Site Works/Prof. Fees	2018	$5,096,117	40	0.014836	$75,607			$75,607
	Subtotal		$16,952,817			$251,516	$592,835		$844,351
	Field Houses								
DC14-PR00004	Meadowgate Park Field House	2014	$300,000	20	0.0391471	$11,744.14	$3,000	(4)	$14,744
DC14-PR00005	Riverbend Park Field House	2015	$150,000	20	0.0391471	$5,872.07	$3,000	(4)	$8,872
DC14-PR00006	Kilally Sports Fields Field House	2016	$600,000	20	0.0391471	$23,488.28	$3,000	(4)	$26,488
DC14-PR00007	Constitution Park Field House	2017	$300,000	20	0.0391471	$11,744.14	$3,000	(4)	$14,744
DC14-PR00008	Southwest London Field House	2018	$600,000	20	0.0391471	$23,488.28	$3,000	(4)	$26,488
DC14-PR00009	Foxfield Park Field House	2019	$300,000	20	0.0391471	$11,744.14	$3,000	(4)	$14,744
DC14-PR00114	Future Field House (North)	2021	$500,000	20	0.0391471	$19,573.56	$3,000	(4)	$22,574
DC14-PR00115	Future Field House (South)	2022	$500,000	20	0.0391471	$19,573.56	$3,000	(4)	$22,574
DC14-PR00116	Future Field House (West)	2023	$500,000	20	0.0391471	$19,573.56	$3,000	(4)	$22,574
	Splash Pads								
DC14-PR00010	Growth-related Spray Pad (Meadowgate)	2014	$400,000	20	0.039147	$15,659	$40,000	(4)	$55,659
DC14-PR00011	Growth-related Spray Pad (Riverbend)	2015	$200,000	20	0.039147	$7,829	$30,000	(4)	$37,829
DC14-PR00012	Growth-related Spray Pad (Constitution)	2017	$400,000	20	0.039147	$15,659	$40,000	(4)	$55,659
DC14-PR00013	Growth-related Spray Pad (Foxfield)	2019	$400,000	20	0.039147	$15,659	$40,000	(4)	$55,659
	Portion of Prior Years' Growth Projects Financed with Debt		$7,958,526						
	Subtotal - Recreation Facilities		$93,124,514			$1,388,744	$2,781,605		$4,170,348
Parkland Development									
	Neighbourhood Parks								
DC14-PR00014	Vista Woods (39T-03505)	2014	$103,998	20	0.039147	$4,071	$14,000	(5)	$18,071
DC14-PR00015	Forest Hill Subdivision (39T-10501)	2014	$80,227	20	0.039147	$3,141	$10,800	(5)	$13,941
DC14-PR00016	Claybar Subdivision (39T-04503)	2015	$17,085	20	0.039147	$669	$2,300	(5)	$2,969
DC14-PR00017	Drewlo Edge Valley (39T-05505)	2015	$43,085	20	0.039147	$1,687	$5,800	(5)	$7,487

City of London
Capital and Operating Impacts for Future Capital Expenditures

Project #	Project Description	Expected Year	Total Estimated Cost	Annual Impact ($)					
				Average Useful Life(years)	Sinking Fund Factor	Life Cycle Cost	Operating Cost	Notes	Total cost
DC14-PR00018	Old Victoria (39T-09502)	2015	$109,198	20	0.039147	$4,275	$14,700	(5)	$18,975
DC14-PR00019	Powell Subdivision (39T-05510)	2016	$62,399	20	0.039147	$2,443	$8,400	(5)	$10,843
DC14-PR00020	Ross Lands North (39T-07502)	2017	$103,998	20	0.039147	$4,071	$14,000	(5)	$18,071
DC14-PR00021	Ross Lands South (39T-07502)	2017	$26,000	20	0.039147	$1,018	$3,500	(5)	$4,518
DC14-PR00022	Kent Subdivision (39T-04510)	2017	$193,139	20	0.039147	$7,561	$26,000	(5)	$33,561
DC14-PR00023	Applewood (39T-09501)	2017	$67,599	20	0.039147	$2,646	$9,100	(5)	$11,746
DC14-PR00024	Marsman Stoney Creek (39T-04512)	2018	$66,856	20	0.039147	$2,617	$9,000	(5)	$11,617
DC14-PR00025	Stanton Lands (39T-11503)	2018	$14,857	20	0.039147	$582	$2,000	(5)	$2,582
DC14-PR00026	Meadowlily Secondary Pln (B-NP-05)	2019	$156,740	20	0.039147	$6,136	$21,100	(5)	$27,236
DC14-PR00027	Jackson Road (39T-06507)	2020	$336,508	20	0.039147	$13,173	$45,300	(5)	$58,473
DC14-PR00028	Auburn Col. Talbot (39T-12503)	2020	$153,026	20	0.039147	$5,991	$20,600	(5)	$26,591
DC14-PR00029	LPH Dundas (B-OS-26)	2020	$156,740	20	0.039147	$6,136	$21,100	(5)	$27,236
DC14-PR00030	Future Neighbourhood Parks	2021	$319,423	20	0.039147	$12,504	$43,000	(5)	$55,504
DC14-PR00031	Future Neighbourhood Parks	2022	$319,423	20	0.039147	$12,504	$43,000	(5)	$55,504
DC14-PR00032	Future Neighbourhood Parks	2023	$319,423	20	0.039147	$12,504	$43,000	(5)	$55,504
	Subtotal		$2,649,723			$103,729	$356,700		$460,429
	District Parks								
DC14-PR00033	Clarke Subdivision (39T-05511)	2016	$37,034	20	0.039147	$1,450	$2,700	(5)	$4,150
DC14-PR00034	Old Victoria Hospital Dist. Park	2016	$452,636	20	0.039147	$17,719	$33,000	(5)	$50,719
DC14-PR00035	Southwest District Pk (B-DP-29)	2017	$913,503	20	0.039147	$35,761	$66,600	(5)	$102,361
DC14-PR00036	Beaverbrook	2019	$768,110	20	0.039147	$30,069	$72,000	(5)	$102,069
DC14-PR00037	Meadowgate	2020	$499,270	20	0.039147	$19,545	$36,000	(5)	$55,545
DC14-PR00038	Future District Parks	2021	$987,570	20	0.039147	$38,661	$72,000	(5)	$110,661
	Subtotal		$3,658,123			$143,205	$282,300		$425,505
	Urban Parks								
DC14-PR00039	Old Victoria (39T-09502)	2015	$126,926	20	0.039147	$4,969	$3,000	(5)	$7,969
DC14-PR00040	SoHo Urban Park (Plan-UP-33)	2015	$846,174	20	0.039147	$33,125	$20,000	(5)	$53,125
DC14-PR00041	Applewood Urban Park (39T-09501)	2017	$575,398	20	0.039147	$22,525	$13,600	(5)	$36,125
DC14-PR00042	Hydro Lands Urban Park (Plan-UP-34)	2017	$592,322	20	0.039147	$23,188	$14,000	(5)	$37,188
DC14-PR00043	Future Urban Park	2020	$846,174	20	0.039147	$33,125	$20,000	(5)	$53,125
DC14-PR00044	Future Urban Park	2022	$846,174	20	0.039147	$33,125	$20,000	(5)	$53,125
	Subtotal		$3,833,169			$150,058	$90,600		$240,658
	Civic Spaces								
DC14-PR00045	Future Civic Spaces	2015	$2,186,641	20	0.039147	$85,601	$7,500	(5)	$93,101
DC14-PR00046	Future Civic Spaces	2016	$2,186,641	20	0.039147	$85,601	$7,500	(5)	$93,101
DC14-PR00047	Future Civic Spaces	2018	$2,186,641	20	0.039147	$85,601	$7,500	(5)	$93,101
DC14-PR00048	Future Civic Spaces	2020	$2,186,641	20	0.039147	$85,601	$7,500	(5)	$93,101
DC14-PR00049	Future Civic Spaces	2022	$2,186,641	20	0.039147	$85,601	$7,500	(5)	$93,101
	Subtotal		$10,933,204			$428,004	$37,500		$465,504
	Woodland Parks								
DC14-PR00050	Kenmore Subdivision (39T-08502)	2015	$116,360	20	0.039147	$4,555	$2,760	(5)	$7,315
DC14-PR00051	Applewood (39T-09501)	2017	$105,398	20	0.039147	$4,126	$2,500	(5)	$6,626
DC14-PR00052	Jackson Road (39T-06507)	2018	$95,491	20	0.039147	$3,738	$2,265	(5)	$6,003
DC14-PR00053	Summerside (39T-92020)	2018	$476,400	20	0.039147	$18,650	$11,300	(5)	$29,950
DC14-PR00054	Riverbend South (B-WP-12)	2019	$52,699	20	0.039147	$2,063	$1,250	(5)	$3,313
DC14-PR00055	Future Significant Woodlands	2022	$168,637	20	0.039147	$6,602	$4,000	(5)	$10,602
DC14-PR00056	Future Significant Woodlands	2023	$168,637	20	0.039147	$6,602	$4,000	(5)	$10,602
	Subtotal		$1,014,984			$39,734	$24,075		$63,809
	Major Open Space Network								
DC14-PR00057	Oliver Subdivision (39T-00510)	2014	$24,393	20	0.039147	$955	$1,000	(5)	$1,955
DC14-PR00058	Marsman Stoney Creek (39T-04512)	2014	$23,418	20	0.039147	$917	$960	(5)	$1,877
DC14-PR00059	Felner Subdivision (39T-06510)	2014	$8,782	20	0.039147	$344	$360	(5)	$704
DC14-PR00060	Highland Ridge/Crestview (39T-07503)	2014	$48,787	20	0.039147	$1,910	$2,000	(5)	$3,910
DC14-PR00061	Andover Trails Ph 4 (39T-07510)	2014	$47,323	20	0.039147	$1,853	$1,940	(5)	$3,793
DC14-PR00062	Old Victoria (39T-09502)	2014	$20,978	20	0.039147	$821	$860	(5)	$1,681
DC14-PR00063	Forest Hill Phase 5 (39T-10501)	2014	$6,830	20	0.039147	$267	$280	(5)	$547
DC14-PR00064	Kape/Wickerson (39T-00519)	2015	$16,587	20	0.039147	$649	$680	(5)	$1,329
DC14-PR00065	Richmond North (39T-04513)	2015	$4,391	20	0.039147	$172	$180	(5)	$352
DC14-PR00066	Kenmore Subdivision (39T-08502)	2015	$23,905	20	0.039147	$936	$980	(5)	$1,916
DC14-PR00067	Meddaoui/Wickerson (39T-08507)	2015	$25,857	20	0.039147	$1,012	$1,060	(5)	$2,072
DC14-PR00068	Stanton Lands (39T-11503)	2015	$5,854	20	0.039147	$229	$240	(5)	$469
DC14-PR00069	Monarch (39T-99515)	2015	$53,665	20	0.039147	$2,101	$2,200	(5)	$4,301
DC14-PR00070	Woodhull (39T-03511)	2016	$3,415	20	0.039147	$134	$140	(5)	$274
DC14-PR00071	Claybar Subdivision (39T-04503)	2016	$6,342	20	0.039147	$248	$260	(5)	$508
DC14-PR00072	Clarke Subdivision (39T-05511)	2016	$149,287	20	0.039147	$5,844	$6,120	(5)	$11,964
DC14-PR00073	Ross Lands South (39T-07502)	2016	$28,784	20	0.039147	$1,127	$1,180	(5)	$2,307
DC14-PR00074	CPRI (B-OS-16)	2016	$1,219,665	20	0.039147	$47,746	$50,000	(5)	$97,746
DC14-PR00075	Kent Subdivision (39T-04510)	2017	$17,563	20	0.039147	$688	$720	(5)	$1,408
DC14-PR00076	Applewood (39T-09501)	2017	$1,951	20	0.039147	$76	$80	(5)	$156
DC14-PR00077	Sergautis/Applewood (39T-11502)	2017	$14,636	20	0.039147	$573	$600	(5)	$1,173
DC14-PR00078	Summerside (39T-92020)	2018	$80,986	20	0.039147	$3,170	$3,320	(5)	$6,490
DC14-PR00079	3408 Southwinds Dr (39T-09503)	2019	$310,283	20	0.039147	$12,147	$12,720	(5)	$24,867
DC14-PR00080	Centre Street/Drewlo (39T-12501)	2019	$339,067	20	0.039147	$13,273	$13,900	(5)	$27,173
DC14-PR00081	Meadowlily Secondary Pl (B-OS-03)	2019	$48,787	20	0.039147	$1,910	$2,000	(5)	$3,910
DC14-PR00082	Future Open Space Parks	2020	$634,226	20	0.039147	$24,828	$26,000	(5)	$50,828
DC14-PR00083	Auburn Col. Talbot (39T-12503)	2020	$136,602	20	0.039147	$5,348	$5,600	(5)	$10,948
DC14-PR00084	LPH Dundas (B-OS-25)	2020	$73,180	20	0.039147	$2,865	$3,000	(5)	$5,865
DC14-PR00085	Corlon Sunninglea (B-OS-19)	2021	$926,945	20	0.039147	$36,287	$38,000	(5)	$74,287
DC14-PR00086	Future Open Space Parks	2022	$844,008	20	0.039147	$33,040	$34,600	(5)	$67,640
	Subtotal		$5,146,498			$201,471	$210,980		$412,451
	Sports Parks								
DC14-PR00087	Southwest Sports Pk (B-SP-28)	2016	$1,253,202	20	0.039147	$49,059	$128,000	(5)	$177,059
DC14-PR00088	Kilally Sports Fields (B-SP-27)	2016	$3,230,911	20	0.039147	$126,481	$330,000	(5)	$456,481
DC14-PR00089	Meadowlily Secondary Pl (B-SP-06)	2019	$176,231	20	0.039147	$6,899	$18,000	(5)	$24,899
DC14-PR00090	Future Sports Parks	2020	$1,253,202	20	0.039147	$49,059	$128,000	(5)	$177,059
	Subtotal		$5,913,546			$231,498	$604,000		$835,498
	Pedestrian Crossing								
DC14-PR00091	Richmond Road Pedestrian Crossing (B-OS-30)	2016	$1,405,991					(5)	
	Subtotal		$1,405,991			$0	$0		$0
	Thames Valley Parkway								
DC14-PR00092	Drewlo Edge Valley (39T-05505)	2015	$356,915	20	0.0391471	$13,972.21	$12,800	(5)	$26,772
DC14-PR00093	Old Victoria (39T-05505)	2015	$585,564	20	0.0391471	$22,923.15	$21,000	(5)	$43,923
DC14-PR00094	Old Victoria Hospital TVP (Plan-TVP-32)	2015	$474,028	20	0.0391471	$18,556.84	$17,000	(5)	$35,557
DC14-PR00095	Hydro Lands TVP (Plan-TVP-35)	2017	$312,301	20	0.0391471	$12,225.68	$11,200	(5)	$23,426
DC14-PR00096	CPRI (B-TVP-15)	2018	$724,984	20	0.0391471	$28,381.04	$26,000	(5)	$54,381
DC14-PR00097	Norquay South/Riverbend (B-TVP-14)	2018	$780,752	20	0.0391471	$30,564.20	$28,000	(5)	$58,564
DC14-PR00098	Future TVP	2020	$278,840	20	0.0391471	$10,915.79	$10,000	(5)	$20,916

City of London
Capital and Operating Impacts for Future Capital Expenditures

Project #	Project Description	Expected Year	Total Estimated Cost	Annual Impact ($)					
				Average Useful Life(years)	Sinking Fund Factor	Life Cycle Cost	Operating Cost	Notes	Total cost
DC14-PR00099	Centre Street/Drewlo (39T-12501)	2021	$278,840	20	0.0391471	$10,915.79	$10,000	(5)	$20,916
DC14-PR00100	Future TVP	2021	$278,840	20	0.0391471	$10,915.79	$10,000	(5)	$20,916
DC14-PR00101	Future TVP	2022	$278,840	20	0.0391471	$10,915.79	$10,000	(5)	$20,916
DC14-PR00102	Future TVP	2023	$278,840	20	0.0391471	$10,915.79	$10,000	(5)	$20,916
	Subtotal		$4,628,744			$181,202	$166,000		$347,202
	Environmentally Significant Areas								
DC14-PR00103	Felner Subdivision Medway (39T-06510)	2014	$41,696	20	0.0391471	$1,632.28	$3,863	(5)	$5,496
DC14-PR00104	Old Victoria - ESA (39T-09502)	2015	$8,752	20	0.0391471	$342.62	$811	(5)	$1,154
DC14-PR00105	Sergautis/Applewood (39T-11052)	2016	$52,099	20	0.0391471	$2,039.54	$4,827	(5)	$6,867
DC14-PR00106	CPRI (B-ESA-16)	2016	$57,796	20	0.0391471	$2,262.56	$5,355	(5)	$7,618
DC14-PR00107	Ross Lands North (39T-07502)	2017	$18,165	20	0.0391471	$711.09	$1,683	(5)	$2,394
DC14-PR00108	Riverbend South Warbler Wds (B-ESA-10)	2018	$82,566	20	0.0391471	$3,232.23	$7,650	(5)	$10,882
DC14-PR00109	Meadowlily Secondary Pln (B-OS-03)	2019	$16,513	20	0.0391471	$646.45	$1,530	(5)	$2,176
DC14-PR00110	Riverbend - Kains ESA at west limit (B-ESA-30)	2019	$123,849	20	0.0391471	$4,848.34	$11,475	(5)	$16,323
DC14-PR00111	Future ESAs	2019	$126,326	20	0.0391471	$4,945.31	$11,705	(5)	$16,650
DC14-PR00112	Future ESAs	2021	$126,326	20	0.0391471	$4,945.31	$11,705	(5)	$16,650
DC14-PR00113	Future ESAs	2023	$126,326	20	0.0391471	$4,945.31	$11,705	(5)	$16,650
	Subtotal		$5,409,160			$211,753	$238,308		$450,061
	Subtotal - Parkland Development		$40,133,036			$1,516,053	$1,848,463		$3,364,515
	Total Parks & Recreation		$133,257,549			$2,904,796	$4,630,068		$7,534,864
Transit									
	Transit Facilities								
DC14-TS00001	Downtown BRT Transit Terminal	2018	$5,000,000					(6)	
	Transit Vehicles								
DC14-TS00002	North Leg BRT Buses (10 - 40' buses; 9 - 60' buses)	2019	$11,750,000	12	0.072487	$851,724	$5,979,300	(6)	$6,831,024
DC14-TS00003	South Leg BRT Buses (11 - 40' buses; 10 - 60' buses)	2021	$13,000,000	12	0.072487	$942,333	$6,608,700	(6)	$7,551,033
DC14-TS00004	40' Low Floor Diesel Bus	2015	$479,600	12	0.072487	$34,765	$314,700	(6)	$349,465
DC14-TS00005	40' Low Floor Diesel Bus	2016	$479,600	12	0.072487	$34,765	$314,700	(6)	$349,465
DC14-TS00006	40' Low Floor Diesel Bus	2018	$479,600	12	0.072487	$34,765	$314,700	(6)	$349,465
DC14-TS00007	40' Low Floor Diesel Bus	2021	$479,600	12	0.072487	$34,765	$314,700	(6)	$349,465
DC14-TS00008	40' Low Floor Diesel Bus	2022	$479,600	12	0.072487	$34,765	$314,700	(6)	$349,465
	Total Transit		$32,148,000			$1,967,881	$14,161,500		$16,129,381
	TOTAL SOFT SERVICE - OPERATING IMPACTS		$188,163,069			$5,327,239	$29,898,668		$35,159,659

Note

(1) Fire facility operating costs do not include vehicles as these are listed separately. Firefighter outfitting annual operating costs reflect twenty (20) firefighters at $117,750 per firefighter associated with Station 15.

(2) Sixty-three (63) new officers at approximate annual cost of $119,700 per officer. Police Building - gross costs eligible for DC rate calculations amount to $7.29M being the remaining portion of the growth costs financed by debt. Costs used to estimate life cycle and operating costs include entire building estimated at $32M.

(3) Represents annual operating cost of operating Library branch, net of renewals of Collections.

(4) Yearly operating costs estimated at 5% of capital cost of recreation facility. Spraypad and Field House annual operating costs based on similar existing facilities.

(5) Estimated annual parkland operating costs: Neighbourhoods Park, $10,000/ha; Civic Spaces, $25,000/ha; Urban Parks, $20,000/ha; District Parks, $10,000/ha; Woodland Parks, $500/ha; ESAs, $765/ha; Open Space, $2000/ha; Sports Parks, $20,000/ha; and TVP, $20/m. The Environmental Assessment will determine the format of the Richmond Street Pedestrian Crossing; at this time, annual operating costs are unknown.

(6) Direct "on road" operating cost reflects the labour and material cost associated with operating one hour of on roadservice ($108.51/ revenue service hr). The cost include all related transportation labour and material costs, vehicle maintenance and servicing costs and fuel. Average revenue service hours, per bus, per year amount to 2,900. The costs exclude facilty and general and administrative costs. If such costs were to be included the cost would be $122.06 per revenue service hour. Final determinations for the Downtown BRT Transit Terminal format will be finalized with the BRT Environmental Assessment; as a result, annual operating costs are presently unknown.

(7) All operating cost figures based on a rough approximation

TABLE O-2
2014 DEVELOPMENT CHARGE STUDY
Life Cycle and Operating Cost Impacts - Hard Services

PROJECT INFORMATION	DC COST AND TIMING		ANNUAL IMPACT ($)					TOTAL
	YEAR OF CONSTRUCTION	TOTAL GROSS CONSTRUCTION COST	AVERAGE USEFUL LIFE (YRS)	SINKING FUND FACTOR	LIFE CYCLE COST	OPERATING COST %AGE	OPERATING COST	OPERATING COST
					(K)		(M)	(K+M)
TRANSPORTATION ROAD PROJECTS								
Arterial Road Works	2014-2033	$648,395,190	20	0.039147	$25,382,810	4.00%	$25,935,808	$51,318,618
Arterial Road Works: BRT Related	2014-2033	$301,664,320	20	0.039147	$11,809,292	4.00%	$12,066,573	$23,875,865
Two-Lane Arterial Upgrades	2014-2033	$97,594,750	20	0.039147	$3,820,554	4.00%	$3,903,790	$7,724,344
Total Minor Road Works	2014-2033	$16,908,408	20	0.039147	$661,916	4.00%	$676,336	$1,338,252
Total Additional Programs	2014-2033	$33,185,723	20	0.039147	$1,299,126	4.00%	$1,327,429	$2,626,555
UWRF Minor Road Works (Schedule 7)	2014-2021	$11,263,289	20	0.039147	$440,925	4.00%	$450,532	$891,457
TRANSPORTATION ROAD PROJECTS	**2014-2033**	**$1,109,011,680**			**$43,414,623**		**$44,360,467**	**$87,775,090**
WASTEWATER SEVICING PROJECTS								
Sanitary Trunk Sewers	2014-2033	$48,852,481	80	0.004026	$196,682	0.70%	$341,967	$538,650
Greenway PCP\Wonderland Pump Station Sewer Capacity Works	2014-2033	$15,000,000	80	0.004026	$60,391	0.70%	$105,000	$165,391
Sanitary Sewer Internal Oversizing Subsidy	2014-2033	$1,786,500	80	0.004026	$7,193	0.70%	$12,506	$19,698
Sanitary Sewers - Infill and Intensification Nodes	2014-2033	$8,141,738	80	0.004026	$32,779	0.70%	$56,992	$89,771
Sanitary Treatment Plant Upgrades	2014-2033	$63,066,750	80	0.004026	$253,910	0.70%	$441,467	$695,377
Sanitary Pumping Station Works	2014-2033	$10,951,450	25	0.029276	$320,615	3.00%	$328,544	$649,158
Industrial Sanitary Servicing Works	2014-2033	$23,750,000	80	0.004026	$95,619	0.70%	$166,250	$261,869
UWRF Minor Sanitary Sewerage Works-Sanitary Pumping Station Works	2014-2021	$187,000	25	0.029276	$5,475	3.00%	$5,610	$11,085
UWRF Minor Sanitary Sewerage Works-Sewer (Schedule 7)	2014-2021	$28,590	80	0.004026	$115	0.70%	$200	$315
UWRF Minor Sanitary Sewerage Works-Sewer (Schedule 6)	2014-2021	$5,483,039	80	0.004026	$22,075	0.70%	$38,381	$60,456
WASTEWATER SEVICING PROJECTS	**2014-2033**	**$177,247,548**			**$994,852**		**$1,496,917**	**$2,491,769**
STORMWATER MANAGEMENT PROJECTS								
Community Growth SWM Works	2014-2033	$139,846,326	80	0.004026	$563,028	2.00%	$2,796,927	$3,359,954
Community Growth Trunk Storm Sewer Works	2014-2033	$7,576,225	80	0.004026	$30,502	1.60%	$121,220	$151,722
CSRF Storm Sewer Internal Oversizing Subsidy	2014-2033	$22,988,157	80	0.004026	$92,551	1.60%	$367,811	$460,362
Storm Sewers - Infill and Intensification Nodes	2014-2033	$13,782,913	80	0.004026	$55,491	1.60%	$220,527	$276,017
CSRF Industrial SWM Ponds	2014-2033	$28,374,685	80	0.004026	$114,238	2.00%	$567,494	$681,731
CSRF Industrial Trunk Storm Sewer Works	2014-2033	$5,200,000	80	0.004026	$20,935	1.60%	$83,200	$104,135
UWRF Minor Storm Sewerage Works (Historical Cost Calculation)	2014-2021	$1,701,862	80	0.004026	$6,852	1.60%	$27,230	$34,082
UWRF Minor Storm Sewerage Works-Sewer (Schedule 7)	2014-2021	$999,723	80	0.004026	$4,025	1.60%	$15,996	$20,021
UWRF Minor Storm Sewerage Works - Sewer (Schedule 6)	2014-2021	$2,181,721	80	0.004026	$8,784	1.60%	$34,908	$43,691
UWRF Storm Water Management Works (Schedule 7)	2014-2021	$15,606,899	80	0.004026	$62,834	2.00%	$312,138	$374,972
STORMWATER MANAGEMENT PROJECTS	**2014-2033**	**$238,258,512**			**$959,240**		**$4,547,448**	**$5,506,687**
WATER DISTRIBUTION AND SUPPLY								
Watermains - Low Level system	2014-2033	$39,233,666	70	0.005397	$211,749	1.00%	$392,337	$604,085
Watermains - Southeast Pressure Zone	2014-2033	$12,913,877	70	0.005397	$69,698	1.00%	$129,139	$198,836
Watermains - High Level System	2014-2033	$10,279,440	70	0.005397	$55,479	1.00%	$102,794	$158,274
Watermains - Internal Oversizing Subsidy	2014-2033	$1,000,000	70	0.005397	$5,397	1.00%	$10,000	$15,397
Watermains- Infill and Intensification Nodes	2014-2033	$10,990,381	70	0.005397	$59,316	1.00%	$109,904	$169,220
Watermains - Industrial	2014-2033	$30,000,000	70	0.005397	$161,914	1.00%	$300,000	$461,914
Water Distribution Facilities	2014-2033	$7,080,000	25	0.029276	$207,274	3.00%	$212,400	$419,674
Lake Huron Primary Water Supply System	2014-2033	$18,800,000	40	0.014836	$278,917	3.00%	$564,000	$842,917
Elgin Area Primary Water Supply System	2014-2033	$66,600,000	40	0.014836	$988,078	3.00%	$1,998,000	$2,986,078
WATER DISTRIBUTION AND SUPPLY	**2014-2033**	**$196,897,365**			**$2,037,821**		**$3,818,574**	**$5,856,395**
"HARD SERVICE" TOTALS		**$1,721,415,104**			**$47,406,536**		**$54,223,406**	**$101,629,942**

Notes:
1. Total Gross Construction costs as updated April 2014
2. Above costs are a gross approximation based on rough estimate of expected operating costs.
3. Annual operating cost are in most cases, based on the gross cost of construction. In some cases (eg. Growth Studies or Land purchase) there is no life cycle or operating costs associated with the capital expenditure.
4. There are no incremental operating costs associated with growth related studies. Staff time spent on these studies is funded by tax and user rated.
5. The operating cost associated with water supply projects are not directly borne by the municipalities, but are integrated with the "wholesale" cost of water charged by each water board.
6. The total cost includes all related transportation labour and material cost, vehicle and service.

APPENDIX P –DEVELOPMENT CHARGE STAKEHOLDER COMMITTEE

per DC Study Initiation Report – April 30, 2012

Terms of Reference Development Charge (DC) Stakeholder Committee

Purpose
To assist City staff in completing the 2014 Development Charge (DC) Background Study and By-law by :

a) Reviewing, analysing and providing justification to shape DC policy decisions from stakeholder perspective;
b) Discussing viability of alternative policy directions,
c) Providing suggestions on communicating policy issues,

Anticipated Outcomes
Anticipated outcomes over the coming two years with respect to DC policy are :

1. Produce reports on various policy matters related to development funding for consideration of Council and as a basis for compilation of the forecasts needed to prepare a background study;
2. produce a revised background study - namely the 2014 Development Charge study - and produce new DC rates by early 2014;
3. address various issues related to works to be cost shared through development charges, and appropriate approach to funding those works as developed and researched by staff and consultants with expertise in area (developer financed through Urban Works Reserve fund or through City Capital Budget (CSRF);
4. address the timing of investments in infrastructure and implications on DC rates and debt levels
5. DC study to result in a revised schedule of capital works (including timing of works) to serve growth;
6. incorporate stakeholder input into the process to ensure transparency, accountability and understanding;
7. Ensure the existence of an implementation plan where policy changes dictate same.

Timing of the Project
The Development Charge By-law must be developed and enacted by Council prior to August 3,2014. Completion of background study and DC rate by-law in early 2014 should facilitate this process.

Membership of Stakeholder committee
Membership on the stakeholder committee will ideally consist of :

1. One member representing The Urban League;
2. One member representing the development community from London Development Institute(LDI);
3. One member representing the development community outside of the LDI membership;
4. One member of the London Home Builders Association executive;
5. Martin Hayward, City Treasurer; Peter Christiaans, Director of Development Finance; and the Scott Mathers, Manager of Development Finance; Jennie Ramsay, Division Manager, Engineering Review;
6. Various City managers as determined appropriate, from time to time;
7. Jim Barber, City Solicitor (or his designate).

The Committee will be chaired by Martin Hayward, City Treasurer.

Roles and Responsibilities

The committee will:

a) Address issues associated with DC Policy matters and proposed changes to same;
b) work expeditiously to provide input on questions and alternative DC policies, within timelines of the study;
c) Provide assessment, comment and suggestions on various components of the DC study process and its interim products, including :
    i. Preference amongst various funding alternatives, with reasons;
    ii. Completion of growth forecasts,
    iii. Completion of capital needs studies,
    iv. Completion of the DC rate calculations

Individual members are encouraged to consult with colleagues and the process undertaken to develop the DC By-law. The changes contemplated in the City's DC Policy.

Meetings

The Development Charge (DC) Stakeholder Committee will meet monthly, or otherwise as required, at the call of the Chair. Materials for pre-reading should be provided as early as possible but at least two days before the meeting. Committee members are asked to come to the meetings prepared to discuss and provide input on issues on the agenda.

Term of Appointment

The committee will exist until the substantial completion of the 2014 DC Background Study. The committee may be requested by the Chair, to extend their involvement beyond the study period to deal with issues related to implementation arising from the DC policy initiatives.

APPENDIX Q – EXCERPTS OF CITY OF LONDON OFFICIAL PLAN WITH RESPECT TO GROWTH FINANCING POLICIES

On March 3, 2008, Municipal Council adopted Official Plan Amendment 438 to implement the policy revisions arising from the City's Five-year Official Plan Review. This five year update, required under the *Planning Act*, resulted in the adoption of new policies, including new Growth Management policies that relating to the staging of development through the staging of extensions of services and approvals, the requirement for an evaluation of the financial implications and a cost-benefit analysis as part of the development approvals process, and the potential for differential development charges. Official Plan Amendment 438 came into full force and effect on December 17, 2009 following Ministry of Municipal Affairs and Housing approval. The following policies are excerpts from the Official Plan Policy for the City of London.

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
2.6.1. Introduction	Responsible growth management is a key element of the City of London's strategic approach to the accomplishment of its Vision and Goals. Growth management embodies the City's commitment to optimize the use of existing and new services and facilities, to protect and rehabilitate its natural heritage, to conserve its prime agricultural lands, to take full advantage of its opportunities for sustainable economic development and to promote healthy communities, while maintaining a strong financial position for the municipality.
2.6.2. Growth Management Principles	The Growth Management Policies are based on the following principles: i) that growth will maintain a compact urban form; ii) that the measures necessary to accommodate growth through land use intensification, having regard to the timely and efficient use of existing infrastructure, will be supported; iii) that growth-related infrastructure costs and the financial implications of required works for the City's capital budget and development funds will be evaluated at an early stage of the area planning and development approval processes; iv) that growth will be directed to areas that are suitable for the provision of full municipal services in keeping with the City's long term servicing and financing plans; v) that outward expansion of the urban area will be managed to provide for a logical progression in the extension of service areas having regard to cost-effectiveness and optimization of existing infrastructure capacity; vi) that the City may stage the extension of services and approvals of development both within new areas of community growth and between new areas of community to maximize the cost effectiveness of its infrastructure investments;

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	vii) that new areas of community growth will be planned to provide a mix of housing types and to achieve a target density consistent with a more efficient utilization of land and services; viii) that the City will maintain an adequate supply of vacant designated land to accommodate the expansion of its urban areas in an orderly, efficient, timely and affordable manner; ix) that the implications of new development for the financial health of the municipality will be assessed and that growth related costs will be financed from revenues generated from growth; x) that the City will consider and encourage viable innovative proposals such as partnerships, cost-sharing and alternative technologies and design standards, that may reduce the overall costs of growth or allow for the more timely delivery or use of the infrastructure required for growth, provided such proposals satisfy City requirements and will contribute to a compact urban form; xi) that planning for growth will support the identification and protection of London's Natural Heritage System; and xii) that the City will encourage rehabilitation measures that protect the ecological function and integrity of the Natural Heritage System; and xiii) that the City may adopt and annually update a development staging strategy to co-ordinate the orderly progress of urban area expansion with municipal investment in growth related capital works.
2.6.3. Growth Financing Policies	The financing requirements to service new development should not jeopardize the long term financial health of the municipality or place an undue burden on existing taxpayers. The following growth financing policies are intended to achieve these objectives: i) Growth related capital costs will be recovered from revenues generated from new development. ii) The review of secondary plans or proposals for major development approvals outside of a secondary plan will require a complete financial impact analysis demonstrating the potential financial implications of the proposed development on the City, and area studies or major development proposals may not be approved without an approved plan for financing municipal services. Approval of a secondary plan, major development proposal or plan of subdivisions may be refused or deferred if a satisfactory financial analysis is not submitted for the City's

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	review or if the City determines that the required investment in municipal works would be premature. The financial impact analysis shall consider the scope, total cost, cost sharing and timing of major road, sewer, water and storm water management works. The financial impact analysis shall also incorporate an assessment of the total cost, cost sharing and timing of community facilities and services including parks and recreation facilities, libraries, public transit, and fire and police services needs associated with growth. The analysis will also project the development charge revenue to be generated from the build-out of the development area. The City may stage infrastructure works and/or development approvals to manage its capital budget commitments. iii) The City will consider, as part of the secondary plan process, the involvement of the private sector in the development, operation, construction and financing of long term servicing infrastructure. iv) Temporary servicing arrangements must be consistent with long term planning, servicing and financing strategies and policies and must contribute to the cost of providing long term servicing through the payment of development charges. v) The City may explore alternatives for the financing of oversizing costs (that portion of servicing projects that have been sized to accommodate growth beyond the planning period) until these costs and related interest carrying costs can be recovered from future development. vi) The City will plan and budget for major infrastructure works in keeping with its financial management strategy and with regard for the balance of revenues and expenditures from its development charges funds. Infrastructure works and development approvals may be staged accordingly. vii) The City will consider, as part of a development charges study, the use of a differential development charge to encourage intensification and infilling.
2.6.4. Growth Servicing Policies	The City of London will plan the provision of services to accommodate growth so that servicing is timely, cost efficient, environmentally sound, consistent with long term servicing plans and within the financial means of the municipality. Servicing subject to this strategy includes physical infrastructure such as sanitary sewerage works, storm drainage works, water supply and distribution, and road works. It also includes the provision of community facilities and services including parks and recreation facilities, libraries, public transit, and fire and police services. The City, in consultation with appropriate agencies, will also have regard for the provision of other services such as electrical and communications, utilities, schools, health services and other social services.

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
2.6.4.1. General	The City will apply the following policies to the planning, review and approval of servicing proposals: i) The services required to support growth will be identified through the periodic update of the Official Plan and major servicing plans, and through the preparation of Area Plans. ii) The City will monitor the servicing requirements of proposed and approved development and will control, plan and co-ordinate the expansion of its municipal services to provide adequate capacity and performance in a timely, cost efficient manner. In controlling, planning and co-ordinating for required servicing, the City will have regard for the optimization of existing infrastructure and the merits of managing and/or limiting growth according to the availability of uncommitted servicing capacity. iii) Development approvals may be refused if there is insufficient existing or planned servicing capacity to accommodate the proposed use within a reasonable time frame. iv) Where projected and potential growth within any portion of the Urban Growth Area is nearing or exceeding the threshold of available sewer or water servicing capacity, the City will adopt measures to manage the allocation of available capacity until such time as the capacity constraint is resolved. Where the constraint is likely to be short term in nature (generally less than three years) such measures may include, but are not limited to the deferral of development approvals; the use of conditions to ensure that development, once approved, occurs in a timely manner; the use of holding zone provisions; and development limitations. Where the solution to a capacity constraint is longer-term in nature, as is the case in the Greenway Pollution Control Plant service area, the City will establish priorities for the allocation of available capacity and limit development approvals in accordance with these priorities so that planned growth does not exceed the availability of servicing capacity. The following order of priorities for the allocation of servicing capacity in the Greenway service area until such time as the Southside Pollution Control Plant is built, are based on the Official Plan objectives related to effective use of infrastructure, intensification and infill, compact urban form and economic development: (a) Growth in the form of redevelopment, expansion or intensification on serviced lands with the built up area of the City will take precedence over growth on previously undeveloped lands. Capacity will be allocated on the basis of projected demand plus a reasonable contingency. (b) Industrial growth will take precedence over non-industrial growth on previously undeveloped lands. Capacity will be allocated on the basis of projected demands.

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	(c) Remaining capacity will be allocated for non-industrial growth on previously undeveloped lands. Within these areas, priority will be given to development that, in the opinion of the City, best advance the public interest. (d) Take-up of allocated capacity will be monitored. If significant portions the allocated capacity are not used, the City may re-assign that unused capacity in keeping with priorities a), b) and c) assuming no major works will be prematurely triggered. Applications that do not meet the City's priorities for the allocation of servicing capacity may be refused on the basis of prematurity. v) Non-growth needs will be addressed in conjunction with the planning and delivery of growth related services. vi) The City will pursue the orderly development of growth areas so that services are efficiently used. vii) Sewer and water services will be sized according to ultimate land areas and populations intended to be served. viii) The City will not extend municipal and sewer services beyond the limits of the land designated for urban growth except as set out in policies 17.2.3 and 17.7.5. ix) The use of existing infrastructure and public service facilities will be optimized, wherever feasible, before giving consideration to the development of new infrastructure and public service facilities. x) Infrastructure and public service facilities will be strategically located to support the effective and efficient delivery of emergency management services.
2.6.4.2. Sanitary Sewerage	i) The City will promote the maintenance and expansion of a municipal sanitary sewerage collection and treatment system that will: (a) have the potential to service all areas of the municipality intended for urban development; (b) maximize the service area of gravity drainage systems and minimize the number of pumping stations required; (c) optimize the capacity of the existing Greenway, Pottersburg, Oxford, Adelaide and Vauxhall Treatment Plants and collection systems to accommodate growth; (d) provide for the construction of a Southside Sewage Treatment Plant to service the Dingman Creek drainage area in keeping with the

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	Growth Management Policies. An environmental impact assessment and any other studies required prior to commencement of this project will be undertaken at the earliest opportunity; (e) place a high priority on measures to address existing problems of sewage overflows and basement flooding; and (f) provide for continued improvement in the quality of the effluent being directed to the Thames River. (g) direct and accommodate growth in a manner that promotes the efficient use of existing municipal sewage services; (h) be financially viable and in compliance with all regulatory requirements; and (i) protect human health and the natural environment. ii) While the City strongly supports development on full municipal services, the need for flexibility to allow the consideration of interim sanitary servicing options that may provide for more timely development, without detracting from the viability of the long term servicing plan, is recognized. The City will assess proposals for temporary sanitary servicing according to the servicing policies set out in Policy 17.2.4. of this Plan. Emphasis will be placed on the implications that proposed temporary systems would have on the physical and financial viability of future municipal services in keeping with the Sanitary Sewerage Servicing Study. The City may permit a temporary sanitary servicing system where the proponent can demonstrate that certain criteria as set out in Section 17.2 are met. The proponent will bear the cost of the temporary system and contribute to the financing of the long term servicing solution through the payment of development charges or other form of payment approved by Council. iii) Individual wastewater treatment systems may be permitted for proposed "dry" commercial or industrial development on lands that were designated for commercial or industrial use before they were annexed to the City of London on January 1, 1993 provided certain criteria as set out in Section 17.2. are met. Lands not serviced by municipal sanitary sewerage facilities will be subject to a holding zone limiting uses to "dry" uses until the services are available. iv) Notwithstanding the above policies for the consideration of sanitary servicing options, residential subdivision development on individual wastewater treatment systems will be discouraged.

2.6.	**<u>GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)</u>**
2.6.4.3. Water Supply	The City will promote the maintenance and expansion of a water supply and distribution system that will: i) have the potential to service all areas of the municipality intended for urban development; ii) provide adequate pressure for all servicing conditions; iii) optimize the capacity of existing pumping stations and reservoirs; iv) place a high priority on the efficient use of water as a method to minimize the future demand for water supply and associated sewage treatment. v) direct and accommodate expected growth in a manner that promotes the efficient use of existing municipal water services; vi) be financially viable and in compliance with all regulatory requirements; vii) promote water conservation and water use efficiently; and viii) protect human health and the natural environment. All development within the Urban Growth Area shall be dependent upon the City of London Water Supply and Distribution System for both potable water and fire protection.
2.6.4.4. Stormwater Management	Stormwater management plans shall be prepared for identified growth areas in conjunction with the area study process and in accordance with Section 17.6.
2.6.5 Staging of Development	The City may adopt a development staging strategy to ensure the orderly progression of development within its Urban Growth Area and the timely provision of the infrastructure required to support fully serviced and functional communities and employment areas. The staging strategy will be directed towards the following objectives: i) support the timely build-out of existing planned communities in a logical, phased manner that optimizes the utilization of any new infrastructure that is required to support development; ii) focus growth in areas that have existing servicing capacity or comparatively lower costs for required infrastructure; iii) provide a basis for long-term, reliable municipal capital budgeting for growth-related servicing works;

2.6.	**<u>GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)</u>**
	iv) ensure that services are in place or planned to maintain an adequate supply of serviced lands to support the City's economic growth; v) support growth in areas that are or can be served by existing community facilities of where development will facilitate the provision of new community facilities; vi) avoid scattered or 'leap-frog' development patterns; vii) ensure that sufficient serviced lands are available to support the City's housing mix and affordability objectives; and viii) support the extension and use of transit services.
2.6.=6. Growth Forecasting and Monitoring	The City will maintain a program of growth forecasting and monitoring. Population and housing demand projections will be updated and approved at five year intervals in association with the review of the Official Plan. The process for updating and approving these projections will include opportunities for public and agency review and input. i) The City will monitor population trends and changes in housing composition and distribution through the review of census and assessment data and building permit activity, and through information sharing with other agencies and organizations. ii) The City will monitor local, regional and provincial economic trends and growth forecasts and consider the implications of these trends and forecasts for its growth management policies.
2.6.7. Land Requirements Forecasting	i) The City will maintain an adequate supply of land designated for urban growth to accommodate its projected community and industrial growth requirements. The target range for the inventory of vacant land designated for urban growth will be a fifteen to twenty year supply. While much of the forecasted growth will be accommodated through the development of vacant lands, the City will promote opportunities for intensification and redevelopment to optimize the share of growth that can be accommodated within the existing urban area. ii) The City will normally update its land requirements projection at five year intervals in conjunction with the review of the Official Plan by using the Land Requirements Accommodation Method in Policy 2.5.5 without including the contingency factor, unless the particular 5 year update is being used to establish the land requirements for a new 20 year planning period. The processes of updating, projecting and/or approving the land requirements for community and industrial growth will include opportunities for public and agency review and input. iii) The City will monitor development activity and update, on a semi-annual

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	basis, its inventory of vacant designated lands categorized according to their servicing status and stage in the planning approvals process.
2.6.8. Identification of Growth Areas	In conjunction with the five year review of the Official Plan, Council will consider expansion or adjustments to the Urban Growth Area where there is a demonstrated need for additional lands and where such expansions are in keeping with all applicable Official Plan objectives and policies, provincial policies and the following criteria: i) The amount of land to be added as urban growth area will have regard to the approved projected land requirements and to ensuring both timely cost-efficient areas of development over both the short and long terms. ii) Proposed expansion areas represent a logical extension of the urban area having regard for the principle of maintaining a compact urban form. iii) Municipal water and sewer services can be provided in a timely and cost effective manner, in accordance with the servicing and financing components of the Growth Management Policies. iv) Growth will be directed to areas that can be appropriately integrated with existing or planned communities or to areas of sufficient size to support a new community and allocated in a manner which provides for the complete development of the communities with a full range of Municipal Services where possible. v) Growth will be allocated to areas that can be adequately integrated with and accessed from the network of existing and planned arterial roads and are suitable for the provision of transit services. vi) Council will consider alternatives for the direction and sequencing of growth having regard for the comparative costs of providing infrastructure and services, the financial implications for the municipality, the potential impacts on existing communities, and the effects on natural features and ecological functions and agriculture. Where practical and within its financial means, Council will distribute growth areas to provide greater choice in the location and character of new communities. vii) Council will consider the inclusion of additional Industrial Growth Area lands in the Highway 401 and Highway 402 corridors and additional Community Growth lands south of the Highway 401 corridor, at such time as the south side sewage Treatment Plant is built and sanitary sewer services can be provided in a cost effective manner. viii) Expansions to the Urban Growth Area onto prime agricultural lands will only be considered where there are not reasonable alternatives which avoid prime agricultural areas or which would be accommodated on

2.6.	**<u>GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)</u>**
	lower priority agricultural lands. ix) Council will protect employment areas to support the longer-term economic development of the municipality. Council will only permit the conversion of employment areas to other uses where it has been demonstrated through a comprehensive review that the land is not required for employment purposes over the long term and that there is a need for conversion. x) Impacts from new or expanding Urban Growth Areas on agricultural operations which are adjacent or close to the Urban Growth Area shall be mitigated to the extent feasible.
2.6.8.1. Applications To Expand The Urban Growth Area	The primary means for reviewing the adequacy of the City's land supply and expanding the urban growth area, if warranted, will be the five year review process. It is recognized that emergent opportunities may present themselves in the interim and that these should be evaluated according to the criteria for the identification of growth areas. Privately initiated applications for amendments to the Official Plan to expand the Urban Growth Area will be evaluated for public benefit on the basis of Policy 2.6.8. and the following criteria: i) the need for urban growth at the proposed location and the reasons why a comprehensive review of the Urban Growth Area is necessary in advance of the five year Official Plan review process; ii) the costs and benefits of permitting growth at the proposed location; and iii) the implications for the City's supply of vacant land designated for growth, having regard for the City's intent that the inventory of vacant designated land be maintained in a range of a 15 to 20 year supply.
2.6.9. Area Planning	i) Vacant lands within the Urban Growth Area may be placed in the Urban Reserve designation pending the completion of a Secondary Plan as provided for in Chapter 19 of this Plan. A Secondary Plan will provide the basis for an Official Plan amendment that will: (a) identify or refine environmental features, areas and natural resources in conformity with the applicable Official Plan policies; and (b) identify collector roads. ii) Secondary Plans will also provide for the co-ordination of development among multiple land owners and provide direction for: (a) the delineation, protection and management of

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**

natural heritage areas;

(b) the location and size of parks, schools and other community facilities;

(c) housing mix and densities;

(d) municipal services;

(e) the phasing of development;

(f) pedestrian and bicycle routes;

(g) transit routing and supportive facilities;

(h) site and subdivision design criteria; and

(i) local road access points to arterial and collector roads;

iii) The approximate boundaries of areas intended subject to completed Secondary Plans are shown on Schedule "D". Portions of the Urban Growth Area where Secondary Plans are intended but not yet completed are also shown. These boundaries may be refined through the approval of a proposal to undertake Secondary Plan without amendment to the Official Plan. In some instances the boundaries include lands beyond the boundaries of the Urban Growth Area that represent a logical longer-term extension of a community to the City boundary or other appropriate limit for long term community development. Lands outside the Urban Growth Area will be regarded as potential areas of community expansion and the evaluation and planning of these areas may be limited to the extent necessary to demonstrate how they can be appropriately integrated with the balance of the community. The eventual development of these lands would require an amendment to this Plan.

iv) A Secondary Plan may be undertaken by the City or by consultants retained by landowners. Proposals for privately-initiated Secondary Plans will be required to conform to area study guidelines established by the City and must be submitted for approval by the City. This process will include opportunities for public and agency review and input.

Prior to initiating a Secondary Plan, Council shall approve the terms-of-reference for the Secondary Plan, including the scope of the background studies to be undertaken. For a privately-initiated Secondary Plan, the City shall coordinate and undertake the public consultation process, and recommend the preferred land use concept for approval.

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	v) The City will encourage affected landowners to participate in the area study process and to contribute their proportionate share towards the study costs and towards the provision of the services, facilities, open space, stormwater management and other measures required to support the growth of the community. vi) Secondary Plans shall provide for the staging of development to make efficient use of built services, facilitate planning for the delivery of new services, and minimize the gap between major servicing expenditures and the recovery of costs through development charges. vii) Documentation to be submitted in support of a proposed privately-initiated Secondary Plan will include: (a) a record of the public and agency consultation undertaken in the course of the area study; (b) an environmental evaluation and impact study completed in accordance with Section 15.5. of the Plan; (c) any information required by the municipality to undertake a financial impact analysis including information necessary to determine the total cost and cost-sharing of required infrastructure works, the timing of such works and the implications that such works will have for the City's capital budget and development charge funds; and (d) a servicing plan to demonstrate the availability and adequacy of municipal sewer and water services to accommodate the proposed development, and to describe the location, timing and design of required sewer, water, storm water management and road improvements. viii) Until such time as a Secondary Plan has been approved and the subject lands have been appropriately designated for development, vacant lands within the Urban Growth Area will be placed in the Urban Reserve designation. ix) The "Community Growth" and "Industrial Growth" categories of the Urban Reserve designation are intended to provide a general indication of the mix of urban land uses intended for the area. Community Growth areas will be predominantly residential but will include a range of commercial, institutional and open space uses that support communities, as well as uses that contribute to employment growth and that are compatible in a community setting. "Industrial Growth" areas

2.6.	**GROWTH MANAGEMENT POLICIES (as reflected in the City of London Official Plan)**
	are generally intended for uses that fall within the "Light Industrial", "General Industrial" and "Office Business Park" land use designations. Notwithstanding this general intent, lands within the "Urban Reserve" designation may be re-designated for any use through the Area study process and resulting amendment to the Official Plan. x) Portions of the Urban Growth Area are designated as Environmental Review and are subject to the policies of Chapter 8B. These areas require further study to determine their environmental significance and to determine the boundaries of areas that warrant protection. It is anticipated that the necessary studies will occur as part of the community planning process and that Environmental Review areas will be re-designated on the basis of an approved Area study.

	OTHER GROWTH FINANCING OFFICIAL PLAN POLICIES
17.1.2.	**SANITARY SEWERAGE OBJECTIVES** i) Provide and maintain sanitary sewers, pumping stations, and sewage treatment plants with sufficient capacity to accommodate the existing and future development of the City, within the financial capability of the Municipality.
17.1.4	**STORMWATER MANAGEMENT OBJECTIVES** vi) Promote, through efficient stormwater management techniques, orderly development in a cost-effective manner.
17.1.5	**WATER SERVICES OBJECTIVES** i) Provide and maintain water storage facilities, pumping stations and watermain distribution systems with sufficient capacity to provide for existing and planned development at a reasonable cost.
17.2.1 Sanitary Sewerage Service Study	vi) The Sanitary Sewerage Servicing Study identifies systems with deficiencies which require flow capacity improvements to service new development. Where it is not practical to implement such improvements under an agreement, the City may establish an area rating charge to recover the growth-related capital costs of these works.
17.2.8 Cost of Services	The development industry shall contribute to the cost of trunk sewer and treatment facilities. The cost of local services within a subdivision shall be borne entirely by the developer as part of the subdivision process.
17.6.2 Stormwater Management	v) For areas where the City has determined that it is not practical to initially implement stormwater management measures due to constraints such as small lot sizes, small-scale developments, site conditions or

Plans	fragmented land ownership, the City may undertake the development of stormwater management plans and/or facilitate establishment of an area rating charge to recover the costs of such works.

At the time of approval of the 2014 Development Charges Background Study, the City is nearing completion of ReThink London – a comprehensive review of the Official Plan with the goal of preparing a new 20 year Plan to guide future growth and development for the City of London. It is anticipated that the above Official Plan policies will be re-drafted for the new Official Plan and upon approval, the policies of the new Official Plan will prevail over the above identified policies.

APPENDIX R – MUNICIPAL SERVICE AND FINANCING AGREEMENTS

Municipal Servicing and Financing Agreements (MSFA) are a means to accelerate infrastructure projects from Growth Management Implementation Strategy (GMIS) timing on a limited basis. The use of MSFA is provided for in the *Development Charges Act* and the employed by several municipalities throughout Ontario.

The framework for MSFA's was approved by Council in December 2011. As part of the discussions with stakeholders regarding the retirement of the Urban Works Reserve Fund (UWRF), an MSFA policy was developed as a tool for use by development proponents seeking to advance the timing of infrastructure projects. Table 1 "Comparison of UWRF to MSFA" provides a high-level comparison between the current UWRF framework versus the MSFA framework, noting the differences between the two financing policies. Discussions with stakeholders focused on key aspects of a workable policy, in the event of the dissolution of the UWRF.

Key elements of discussions included:

- Consensus that GMIS is the City's development staging strategy and that MSFAs would be used in limited circumstances;
- The project must be included in the current Development Charge Background Study to be eligible;
- Generally, the City will budget, design and construct all City Services Reserve Fund funded projects with the timing of the project in accordance with GMIS schedule;
- Acceleration of the project by the City will be accomplished via a loan from the developer;
- Only projects within the 0-5 year time frame in the GMIS Schedule/Capital Budget at the time of an application are eligible for acceleration using a MSFA;
- Ten Million dollar ($10,000,000) cap on total funding through Front Ending Agreement's at any one time;
- Ensure that MSFAs do not result in the City exceeding its overall debt ceiling;
- No single MSFA project shall exceed three million dollars ($3,000,000); and
- Cap to be reviewed in 2019.

The "Municipal Service and Financing Agreements Policy" reproduced in this appendix provides the principles, parameters and criteria for MSFA applications and will be applied to any application for an MSFA.

MSFAs are intended to be used sparingly as they could adversely affect timing of infrastructure for other developers. As a result, the MSFA Policy includes evaluation criteria to assess the appropriateness of an MSFAs and the "cap" on total obligations is considered a key component of those criteria, especially in the early years of transitioning away from the 'UWRF based approach'.

The MSFA Policy was endorsed by Council on July 30, 2013 for accepting, assessing and administering applications for the acceleration of DC-funded works through Front-Ending Agreements under the Development Charges Act. Draft Front-Ending Agreements have been prepared by external consultants to be used as templates for future agreements.

Table 1:
Comparison of UWRF to MSFA

	UWRF Framework	MSFA Framework
Financial Obligations and Controls	• No "ceiling" on the amount of total UWRF claims permissible. • Queued re-payment with per claim caps of $250,000 (SWM) and $1 million (General). Re-queue until full re-payment received.	• Cap of $10 million for all MSFAs at any time; $3 million cap per service component. • Re-payment on scheduled GMIS date as of the signing of the agreement.
Who Constructs?	• Developer designs and constructs works.	• City designs and constructs works.
Control of Timing	• Construction timing of UWRF project at the discretion of the developer	• Construction of works at the discretion of Council.
Approvals	• No previous approval required to initiate engineering of works. • Approval of claimability outlined in agreement under the *Planning Act*.	• Council approves projects supported by Staff reports evaluating the merits of accelerating the project. • Council provided implications of accelerating the project outside of regular GMIS timing.
Frequency	• Almost every subdivision includes Urban Works Reserve Fund recoverable works.	• MSFAs to be used on an infrequent basis.
Financial Impact	• Council has limited information about the anticipated costs of the UWRF project at the time of approving the works in a subdivision agreement	• Council approval of MSFAs specifying the financial costs associated with the accelerated project
Claim Documentation	• Submission of cost documentation for a claim after the work has been constructed.	• Work completed under MSFAs will align with the City's Procurement Policy
Claim Repayment	• Repayment was subject to uncertainties related to market and fund balance.	• MSFA specifies terms of financing agreement.
Administrative Costs	• City administrative costs associated with reviewing claimable works not recoverable from developer	• Administrative costs associated with the preparation, review and administration of MSFAs recovered by the City.
Industry Best Practices	• UWRF is the only fund of its kind that exists in Ontario.	• Many municipalities use the various forms of MSFAs
Financial Management	• Less-than-ideal financial systems management/controls in place to administer UWRF claims as noted by external auditors (spreadsheet based).	• All growth projects administered through City's enterprise financial management system.

MUNICIPAL SERVICE AND FINANCING AGREEMENTS POLICY

1. GENERAL

1.1 Purpose and Scope

In order to achieve a logical, affordable and fiscally sustainable installation of infrastructure to service growth and development, the City of London utilizes the Growth Management Implementation Strategy ("GMIS"), which is updated on a yearly basis. There may be circumstances, however, where the annual GMIS process cannot address a pressing need for infrastructure construction and where Municipal Council desires to advance a project ahead of its scheduled GMIS construction date. The Municipal Service and Financing Agreements Policy applies to applications for agreements between the City and a proponent to accelerate the construction an infrastructure project outside of the regular GMIS process.

1.2 Introduction

In this Policy,

"20 Year Servicing Boundary"	means the extent of lands within the Urban Growth Area that are deemed to be required to meet projected 20 year unit and non-residential space demand as identified through the Development Charges Study growth allocations (also known as the "GMIS Boundary").
"Agreement(s)"	means a form of Municipal Service and Financing Agreements as described in Section 1.3 of this Policy.
"the Act"	means the *Development Charges Act*, S.O. 1997, c.27, as amended.
"the City"	means the Corporation of the City of London.
"Capital Budget"	means the financial plan adopted by Council. In the context of this policy, the capital budget provides the funding for the capital projects reflected in the adopted GMIS, and is subject to separate Council approval.
"Carrying costs"	means the financial costs associated with funding an accelerated infrastructure project (e.g., interest costs, opportunity costs, application and administration costs), from the time of design to the time of repayment (i.e., "non-reimbursable costs").
"CSRF"	means the City Services Reserve Fund.
"DC"	means Development Charge or Development Charges.

"DC Study"	means the Development Charges Background Study as prepared to meet the requirements of the Act.
"FEA"	means Front-Ending Agreement.
"GMIS"	means the Growth Management Implementation Strategy, as described in the City's Official Plan and adopted by Municipal Council on June 23, 2008, as amended from time-to-time.
"IPR"	means Initial Proposal Review, submitted by a proponent developer prior to submitting a formal subdivision application.
"MSFA"	means Municipal Service and Financing Agreements.
"Staff"	means an employee of the Corporation of the City of London.
"Urban Growth Area"	means the extent of permitted urban development for the City of London, as described in the City's Official Plan.

1.3 Types of Agreements

Although the Act provides for several types of MSFAs, there are two types of Part III ("Front-Ending") Agreements addressed by this Policy:

i) Single Front-Ending Owner Front-Ending Agreement: where the agreement to accelerate infrastructure under this policy is between the City and a single front-ending owner/consortium; and,

ii) Future Benefiting Landowners Front-Ending Agreement: where the agreement to accelerate infrastructure under this policy is initially between the City and a single front-ending owner/consortium, with the addition of future front-ending owners that become party to the agreement as their land within the benefiting area develops.

1.4 GUIDING PRINCIPLES

The City's use of MSFA agreements is guided by key principles that inform requests for MSFAs, evaluation of MSFA proposals and agreements prepared to implement this Policy. The MSFA principles are as follows:

i) The Growth Management Implementation Strategy serves as the City's development staging strategy for growth infrastructure. The adopted GMIS serves as the basis for the corporate Capital Budget. The GMIS and timing of infrastructure in the DC rate study are intended to provide an adequate supply of serviceable, developable land to meet the growth forecasts.

ii) Municipal Service and Financing Agreements are tools to be used to advance project timing from planned GMIS and Capital Budget construction schedules. Given the opportunity for developers to request adjustments to the timing of

infrastructure through the annual GMIS process, MSFAs are not anticipated to be required on a frequent basis.

iii) It is critical that the integrity of the Development Charge reserve funds be maintained at all times when using MSFA tools. In order to maintain the integrity of the reserve funds and to avoid undue debt risk, the City will cap the total value of MSFAs that will be undertaken. Development advanced through an MSFA benefits the proponent developer in their attempts to capture a perceived market demand; therefore, the risk and costs associated with an MSFA are to be borne by the proponent developer and not the City.

iv) Market choice for new housing is beneficial to Londoners, but the timely build-out of existing serviced lands is also essential to capture revenues to pay for past investments in infrastructure.

v) Opportunities to positively affect the cash flow of development charges reserve funds are valued by the City.

vi) All growth opportunities must be assessed based on the debt risk associated with the proposal and the existing DC debt profile.

2. MSFA PARAMETERS

2.1 General

i) The total value of all obligations under executed MSFA agreements at any point in time from the inception date of this policy to July 31, 2019 shall not exceed ten million dollars ($10,000,000) (i.e., “the cap”).

ii) MSFAs shall generally only be used to advance one infrastructure project per development. The City may consider the use of an MSFA to accelerate multiple projects where the secondary projects represent minor extensions of projects that are eligible for DC funding. In addition to the maximum value of MSFA agreements outlined in Section 2.1.i), no infrastructure project accelerated through an MSFA shall exceed three million dollars ($3,000,000) for any one service component as defined in the DC By-law.

iii) Municipal Service and Financing Agreements will not be used to accelerate development located outside of the 20 Year Servicing Boundary as indicated in the Development Charges Background Study.

iv) Only works included in the most recent Development Charges Background Study will be eligible for acceleration through the use of an MSFA. Additionally, only works within the current 5 year GMIS and Capital Budget time periods will be considered for acceleration.

v) As part of an application for an MSFA, the development proponent shall be provided the opportunity to describe the benefits of accelerating a project from the existing GMIS and Capital Budget timeline, consistent with Section 2.1 iv).

vi) Lands accelerated for development through an MSFA shall be contiguous to existing developing lands.

vii) Infrastructure projects proposed for acceleration through an MSFA shall meet the criteria outlined in this policy (Section 4) to the satisfaction of the City. The development proponent will have the opportunity to address the criteria in applying for MSFA approval.

viii) Costs associated with the preparation and administration of an MSFA (e.g., staff time and consulting fees) shall be recovered from the proponent developer.

ix) The proponent developer shall pay for the full costs associated with the non-growth share of the accelerated work. The cost of the non-growth share shall be repaid to the proponent developer, unless the developer and the City agree to

have the developer pay a portion or all of the non-growth cost without reimbursement as part of the acceleration of the project. Repayment of the non-growth share shall be exclusive of interest and shall be based on the actual non-growth amount for the project, rather than the estimate contained in the Development Charges Background Study. Reimbursement of the non-growth share will occur at the same time as reimbursement of the growth share.

x) Agreements shall contain provisions for the City to recover cost overruns should the actual cost of an accelerated project exceed the estimated cost identified in an Agreement. Conversely, should the accelerated project produce cost efficiencies resulting in the project being below the anticipated cost identified in an agreement with the City, the agreement shall provide that any excess of the front-end funding that exceeds the revised actual cost of the works be returned to the proponent, without interest.

2.2 Front-Ending (Part III) Agreements – s.44

Section 44 of the Act provides for the costs of constructing DC eligible works where the initial financing is to be provided by one or more of the parties to the Agreement. The Agreement may also provide for persons who, in the future, develop land within the area defined in the Agreement to pay an amount to reimburse the initial front-ending developer(s) for some part of the upfront costs of the work.

The Agreement is viewed as a loan arrangement between a developer(s) and the City. The loan to the City facilitates the financing and advancement of construction of infrastructure until it would otherwise have been constructed according to the timing specified in the GMIS.

This form of Agreement will generally be used to accelerate major works such as stormwater management facilities, trunk sanitary and storm sewers and arterial road improvements.

Under such an arrangement, the following minimum provisions will be included in the Agreement:

i) A description of the work to be done, a definition of the area of the municipality that will benefit from the work and the estimated cost of the work.
ii) If necessary, the proportion of the cost of the work that will be borne by each party to the Agreement, and the method and timing for depositing the amount with the City.
iii) If necessary, the method for determining the part of the costs of the work that will be reimbursed by the persons who, in the future, develop land within the area defined in the Agreement; and a description of the way in which amounts collected from persons to reimburse the costs of the work will be allocated.
iv) If necessary, the method for determining the amount, and the amount of the non-reimbursable share of the costs of the work for the parties and for persons who reimburse parts of the costs of the work.
v) The applicant(s) will finance all carrying costs associated with the Agreement. Carrying costs will not be eligible for reimbursement.
vi) The developer will provide the City with cash or an irrevocable indexed Letter of Credit, to the satisfaction of the City Treasurer (or designate), to finance the costs of the works. A Letter of Credit provided in relation to an Agreement will be drawn upon as design and construction of the work proceeds.

vii) The Agreement will contain provisions related to the repayment for the works. Repayment will be in the form of cash. The City will make repayment, using the appropriate service component, from the City Services Reserve Fund. The repayment may be financed from cash in the City Services Reserve Fund, or through a debenture, at the discretion of the City Treasurer (or designate).
viii) Redistribution of proportionate share of funding may be accomplished by financial contributions by parties named in the agreement who benefit from the works completed under the Agreement (See subsection 2.2 iii) above).
ix) Repayment by way of cash reimbursement of funding for front-ended works will commence on the date originally identified in the GMIS for the construction of the work at the time in which an Agreement is entered into. Adverse revenue conditions experienced by the City after entering into an Agreement may result in the deferral of other projects through the annual GMIS process. This may adversely affect the timing of projects not being accelerated.
x) The entering of an MSFA Agreement will not alter the times at which DC's are collected from the developments which ensue from the construction of infrastructure facilitated by an Agreement.
xi) The Agreement will provide that the City will recover a sum estimated to be the reasonable cost of preparing and administering the Agreement, including staff time and expected consulting costs.
xii) The FEA will be subject to notification and appeal processes described in sections 46 through 49 of the Act.

3. APPLICATION FOR A MUNICIPAL SERVICE AND FINANCING AGREEMENT

3.1 Application Required

A request for an Agreement with the City shall require the completion of an application form by the proponent developer(s). The application form will provide the applicant opportunities to demonstrate how the proposed acceleration meets the criteria outlined in Section 4. Consideration of a request for an MSFA will not commence until a completed application has been received by the City and acknowledged in writing by the City Treasurer (or designate) as complete.

3.2 Commissioner Certification

All applicants submitting MSFA applications shall be required to swear an oath before a Commissioner for the Taking of Affidavits that the contents of the application are true and complete, to the best of their knowledge. A Commissioner's stamped and signed verification of this oath shall be required prior to the commencement of an administrative review of an MSFA application.

4. CRITERIA FOR EVALUATION OF MUNICIPAL SERVICE AND FINANCING AGREEMENT APPLICATIONS

The following is a list of the criteria that will be applied to an application for consideration of an MSFA:

i) Is the project proposed for acceleration included in the most recent Development Charges Background Study?
ii) Is the project proposed for acceleration within the current 5 year period of GMIS and the Capital Budget?

iii) Is the estimated cost of the project within the available MSFA cap room and the available service component MSFA cap room?
iv) Does the project for proposed acceleration have a minor non-growth share?
v) Is there a single DC-eligible infrastructure project required to permit the development of the subject lands?
vi) Are there DC-eligible minor extensions of other non-local services required to permit the development of the subject lands?
vii) If acceleration of the project produces pressure on timelines for lifecycle renewal projects on previously constructed infrastructure that would be impacted by the proposed development, is there a means of mitigating the pressure through the proponent contributing to the cost of prematurely upgrading previously built infrastructure?
viii) Are the benefiting lands contiguous to existing developing lands?
ix) Have all environmental assessments required for the proposed accelerated work been completed and approved?
x) Will the project require the expropriation of land, and if so, what are the implications of the proposed expropriation?
xi) Are there any concerns related to the MSFA's impact on the City's debt ceiling?
xii) Does the financial analysis completed by Staff demonstrate that the acceleration of the project will not have negative impacts on DC cash flow projections and have minimal impact on tax and water/sewer rates funding for non-growth share portions?
xiii) Are the proposed project and the information contained in the application consistent with the MSFA principles, and parameters as stated herein?

5. MSFA REQUEST REVIEW PROCESS

5.1 Initial Assessment

Proponent submits development proposal through an Initial Proposal Report. If the IPR meeting identifies a DC-funded infrastructure project required for the development that has a construction date within the five year capital budget period, but with a construction timeline currently limiting the subject lands from being developed, the developer may submit an application for acceleration of the capital work.

5.2 Application

Although the application is pre-mature, based on the timing of infrastructure in the GMIS, the proponent desires to proceed by providing the financing necessary to facilitate the construction of the needed infrastructure. This will entail entering into a form of MSFA with the City. The proponent completes an MSFA application and submits the application to Development Finance Staff for review. The application will require the proponent to demonstrate the need for the development and why it would be advantageous for the City to advance the construction timing of the needed infrastructure.

Staff review the completed application based on Council-endorsed MSFA policies and criteria and prepare a report for Council consideration (including an engineering and financial analysis of the implications of the proposal and its effects on the DC reserve funds). The report will be submitted to Corporate Services Committee and will provide a recommendation by the City Treasurer and City Engineer, regarding the City's review of the proponent's application for an MSFA.

5.3 Recommendation to Committee re: Application

If the Staff review deems the application to be in the City's interest based on the criteria and financial analysis, the recommendation to Corporate Services Committee will be to approve the application in principle, with direction to Civic Administration to work out the Agreement details in accordance with the staff report, MSFA policy elements affecting agreements and any further direction arising from Council's consideration of the report.

If the Staff review deems the application to be not in the City's interest based on the criteria and financial analysis, the recommendation will be to refuse the application, with reasons for the recommended refusal. In either case, the results of the staff review will be placed before the Corporate Services Committee of Council for their deliberation.

5.4 Negotiation/Preparation of Agreement

Pending a Council resolution that favours the pursuit of the MSFA agreement, Staff will initiate the preparation of the Agreement and a report for the Corporate Services Committee providing the Agreement for Council approval.

Upon Council approval of the Agreement, both parties affix signatures and the Agreement comes into force. Based on the terms of the executed Agreement construction of the developer front-end financed work can proceed.

5.5 Repayment under a Front-Ending Agreement

The initiating proponent(s) provides funds to the City to pay for the full costs associated with the construction of an infrastructure project, in accordance with the executed Agreement. The money received is deposited in a dedicated account and is used to pay for the costs of constructing the project. Under the Act provisions, as lands within the benefiting area are developed, the owners of the developing land may become party to the FEA and may be required to contribute funds to provide a proportional share with the proponent and previous developers, all as set out in the Agreement. Repayment of the funds provided to accelerate the work will be in accordance with MSFA policy and the terms of the FEA. Each year, the City Treasurer will report the amount of outstanding liabilities and credits associated with front-ending agreements in accordance with the Act provisions and regulations governing the annual report of the Treasurer. As outlined in the Act, Part III agreements are subject to notice requirements and are appealable.

Reports and Council Resolutions Pertinent to MSFA Policy :

Report To Finance And Administration Committee - November 16, 2011 re: Municipal Service Financing Agreements - Council resolution arising from Report:

November 22, 2011

M. Hayward
City Treasurer, Chief Financial Officer

I hereby certify that the Municipal Council, at its session held on November 21, 2011 resolved:

That, on the recommendation of the City Treasurer, Chief Financial Officer:

(a) the report and presentation from Watson and Associates Economists Ltd. **BE RECEIVED** for information;

(b) recommendations (b)(ii) through (b)(v) **BE APPROVED**, but implementation **BE SUBJECT TO** recommendation (b)(i), noting that a significant debt load is currently being carried and projected to be carried by the City Services Reserve Funds (CSRF);

(i) the following conditions to implement a Municipal Services Financing Agreement (MSFA) **BE APPROVED**:

(A) the Development Charges By-law **BE AMENDED,** as necessary, to accommodate an MSFA, noting the next scheduled update is 2014;

(B) the staff complement **BE INCREASED** by at least one additional staff resource to support the Director, Development Finance, to effectively assess and administer these agreements, as well as provide for other analyses related to Development Charges (DC), including those necessary for the next DC background study.

(ii) the annual review of the Growth Management Implementation Strategy (GMIS) **BE CONFIRMED** as the development staging strategy to ensure the orderly progression of development and for construction of CSRF (growth) projects and, further, that a stronger link **BE PROVIDED** through the GMIS process between the projection of revenues (projected building activity), existing debt approvals and the determination of the works proposed in the ten year capital plan;

(iii) consideration **BE GIVEN** to the benefit of accelerating CSRF projects on an exception basis where the individual project provides economic opportunities for new business and jobs or where it may facilitate a community use facility; in considering the merits of an application to accelerate a CSRF project, the

evaluation process provided in section 4.2 of the Municipal Service and Financing Policy document dated November 7, 2011, from Watson & Associates Economists Ltd. **BE ADOPTED IN PRINCIPLE** and the Civic Administration **BE INSTRUCTED** to further develop and implement the principles and processes identified, with any adjustments that are deemed necessary for practical reasons. In addition, an assessment of risk and financial implications of accelerating the timing of the project should be included in any analysis;

(iv) the following forms of MSFA **BE PROVIDED** to facilitate recommendation (b)(iii), above (as outlined in Pages 3-1 and 3-2 of the Municipal Service and Financing Policy document dated November 7, 2011, from Watson & Associates Economists Ltd.):

(A) Accelerated Payment Agreement would facilitate construction of the CSRF project by the City with reimbursements provided by credits;

(B) Service Emplacement Agreements would facilitate construction of the CSRF project by the landowner with reimbursement provided by credits, subject to the process set out in section 4.1 of the Municipal Service and Financing Policy document dated November 7, 2011, from Watson & Associates Economists Ltd.; or

(C) Front-ending Agreements would facilitate construction of the CSRF project by the City with reimbursement provided by either a credit or repayment. If a repayment is considered, then the repayment should occur no earlier than the cumulative growth amount anticipated in the GMIS forecast in force at the start of the agreement;

(D) the non-growth share of projects undertaken with the MSFA be cash-flowed by the developers and repaid by the City no earlier than the cumulative growth amount anticipated on the original timeline in the Development Charge Study growth forecast in force at the start of the agreement;

(v) the total amount of all agreements entered into **NOT EXCEED** $5 million. The adequacy of this cap **BE REVIEWED** within five years. Further, the Civic Administration **BE AUTHORIZED** to delay other competing projects to balance lot inventories and/or restrict debt levels;

(c) the City Solicitor **BE INSTRUCTED** to develop appropriate forms of agreement to accommodate the recommendations in (b) above and **BE DIRECTED** to retain an independent legal review of the proposed forms of agreement;

(d) the Civic Administration **BE AUTHORIZED** to engage consulting services necessary to develop the processes, tools and resources required implement the recommendations;

(e) the Civic Administration **BE DIRECTED** to develop the debt cap for the CSRF based on the low point for DC revenue over the previous ten years and this cap **BE APPLIED** to the allowable debt authorized in the CSRF. If this debt amount is exceeded, projects must be postponed until the debt levels come to acceptable and affordable levels;

(f) the Civic Administration **BE DIRECTED** to develop an administrative charge to be charged to any developer requesting an MSFA to recoup in full or in part administrative costs associated with administering the agreements; and

(g) the Civic Administration **BE INSTRUCTED** to explore the following other considerations as part of the next Development Charges Background Study:

(A) Development Charges **BE REVIEWED** with a view to establishing a fee structure that encourages intensification and discourages "leap frog" development;
(B) capital works **BE REVIEWED** as part of the next Development Charges Background Study to establish more works related to the development as local services (Section 59(2), *Development Charges Act, 1997*) rather than regional services;
(C) further to recommendations to the Audit Committee from the internal auditor, the viability and future of the Urban Works Reserve Fund **BE REVIEWED**; and
(D) the Development Charges By-law **BE REVIEWED** with a view to applying section 26(1) of the *Development Charges Act, 1997* which allows for payment of development charges related to water, wastewater, storm water and roads upon entering a subdivision or consent agreement; noting that while this improves cash flow to the CSRF, considerable administrative burden and cost will be incurred to effectively monitor this change;

it being noted that the Finance and Administration Committee heard the attached presentation from G. Scandlan, Watson & Associates Economists Ltd. and received the attached communications from L. J. Townsend, Townsend and Associates; S. Levin and G. McGinn-McTeer, Urban League of London; and J. Kennedy, President, London Development Institute, with respect to this matter. (2011-L03-00) (1/28/FAC)

C. Saunders
City Clerk
/hw

cc: L. J. Townsend, Townsend and Associates, Suite 10, 1525 Cornwall Road, Oakville, ON L6J 0B2
S. Levin and G. McGinn-McTeer, Urban League of London, 1017 Western Road, London,
ON N6G 1G5
J. Kennedy, LDI, 630 Colborne, Suite 203, London, ON N6B 2V2
J. A. Fielding, City Manager
P. McNally, Executive Director, Planning, Environmental and Engineering Services
J. P. Barber, City Solicitor
D. Ailles, Managing Director, Development Approvals Business Unit
J. Fleming, Director, Land Use Planning and City Planner
J. Braam, Director, Water and City Engineer
P. Christiaans, Director of Development Finance

Reports and Council Resolutions Pertinent to MSFA Policy :

Strategic Priorities And Policy Committee - Meeting July 29, 2013 Re : Development Charges Policy Review: Major Policies Covering Report - Council resolution arising from Report:

July 31, 2013

M. Hayward
Managing Director, Corporate Services and City Treasurer, Chief Financial Officer

I hereby certify that the Municipal Council, at its session held on July 30, 2013 resolved:

That, on the recommendation of the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, with the concurrence of the Managing Director, Environmental and Engineering Services and City Engineer and the Managing Director, Development and Compliance Services and Chief Building Official, the following actions be taken:

a) the following policies with respect to the retirement of the Urban Works Reserve Fund BE APPROVED; it being noted that a number of the recommendations in the May 13, 2013 report have been refined or redesigned in comparison to the May 13, 2013 report, based on discussions with the London Development Institute, the London Home Builders' Association and the Urban League:

   i) funding of all Urban Works Reserve Fund works be consolidated under the City Services Reserve Fund (CSRF); it being noted that suitable transitional provisions with respect to works currently included in draft plan conditions or under agreements will be addressed in the draft 2014 Development Charges(DC) By-law and Background Study;

   ii) the enhancements to the Growth Management Implementation Strategy Update Process as generally summarized in Appendix 'A' to the staff report dated July 29, 2013 be endorsed;

   iii) the new processes for Design and Construction of Storm Water Management Facilities (SWMF's), as amended, and as generally summarized in Appendix 'B' to the staff report dated July 29, 2013 be endorsed;

   iv) the Municipal Service and Financing Agreements Policy as outlined in Appendix "D" to the staff report dated July 29, 2013 to be enacted as part of the 2014 Development Charges By-law be endorsed for accepting, assessing and administering applications for the acceleration of DC-funded works through Front-Ending Agreements under the Development Charges Act following the adoption of the 2014 Development Charges By-law;

   v) the draft front-ending agreement prepared by external legal counsel as outlined in Appendix "E" to the staff report dated July 29, 2013 be received for information, it being noted that final agreements will be prepared at the time of

Council approval of an application for a Municipal Service and Financing Agreement based on issues specific to the subject infrastructure project;

vi) the Civic Administration be directed to further develop the procedures governing construction of infrastructure undertaken by developers through development agreements; and

vii) the Civic Administration be directed to prepare by-law amendments and further refine administrative processes necessary to effect the above-noted changes coincident with the effective date of the 2014 DC By-law;

b) comments from the London Development Institute and the Urban League of London, included in Appendix 'F': "Stakeholder Comments" of the staff report dated July 29, 2013, as well as the ~~attached~~ submission from L. Langdon, Executive Officer, London Home Builders' Association, with respect to the above-noted policy, BE RECEIVED for information; and

c) the following changes to the City's "local service" definitions BE APPROVED:

i) Watermain oversizing be a claimable work;
ii) Stormwater Open Channel Oversizing be a claimable work;
iii) the definition of Sanitary Sewer Oversizing be redefined subject to information to be provided by the Master Servicing Study consultants; and
iv) the definition of storm water management works be more broadly defined as all works required to provide stormwater management servicing that satisfy the requirements of a Class Environmental Assessment process;

it being noted that the Strategic Priorities and Policy Committee heard the ~~attached~~ presentation from L. Townsend with respect to this matter. (2/11/SPPC)

C. Saunders
City Clerk
/hw

cc: J. P. Barber, Managing Director, Corporate Services and City Solicitor
J. Braam, Managing Director, Environmental and Engineering Services & City Engineer
J. Fleming, Managing Director, Planning and City Planner
G. Kotsifas, Managing Director, Development & Compliance Services and Chief Building Official
P. Christiaans, Director of Development Finance
S. Mathers, Manager, Development Finance

SINGLE FRONT-ENDING OWNER
FRONT-ENDING AGREEMENT

This AGREEMENT made this ____day of _____, 20__.

B E T W E E N:

_____
(hereinafter referred to as the "Front-Ending Owner")

- and -

THE CORPORATION OF THE CITY OF LONDON
(hereinafter referred to as the "City")

RECITALS:

A. The Front-Ending Owner is the owner of land located in the City of London legally described in Schedule "A" (the "Front-Ending Owner's Lands").

B. The Municipal Council of the City ("Council") at its meeting on June 23, 2008 adopted a Growth Management Implementation Strategy ("GMIS") for the purpose of aligning the schedule of the construction of infrastructure pursuant to the *Development Charges Act*, 1997, S.O. 1997, c. 27, as amended (the "DCA") with the pace of the development of land permitted for urban development as described in the City of London Official Plan (the "Urban Growth Area").

C. Council at its meeting on November 21, 2011 resolved to:

i update the GMIS on a yearly basis in order to ensure the orderly progression of development and construction of infrastructure projects required to accommodate development in the Urban Growth Area, to be funded through the "City Services Reserve Fund" ("CSRF");

ii consider the benefit of accelerating infrastructure projects in the current 5 year capital budget to be funded through the CSRF on an exception basis, subject to an evaluation process; and

iii implement a Municipal Service and Financing Agreement ("MSFA") with the development industry in order to facilitate the acceleration of such infrastructure, including front-ending agreement(s) pursuant to Part III of the DCA.

D. Council at its meeting on _____ approved the MSFA Policy for inclusion as a schedule to the next development charges by-law.

E. The City completed a study pursuant to the DCA on _____that relates to the provision of services for which there will be an increased need as a result of development within the Urban Growth Area (the "DC Background Study").

F. Council at its meeting on _____ enacted By-law No_____, being a by-law to establish development charges for the Urban Growth Area pursuant to the DCA (the "DC By-law").

G. The DC Background Study includes the estimated costs of the capital projects necessary in order for development to proceed within the Urban Growth Area. The DC Background Study took into account the costs that are attributable to the portions of the Urban Growth Area that benefit from each of the following services, in conjunction with the costs of all necessary studies and engineering design related to these services including:

i storm ponds;

ii trunk sewers; and

iii arterial roads.

which are collectively referred to as the "Front-Ended Works" and are individually referred to as the "Front-Ended Work"..

[NTD: Details of specific project being front-ended to be inserted here]

H. The portions of the Urban Growth Area that benefit from each of the Front—Ended Works are depicted on Schedule "B" and referred to individually as a "Benefitting Area".

I. The Front-Ended Works are capital works to provide for services to which the DC By-law relates, and are required in order to develop the lands of the Front-Ending Owner as well as the balance of the land in each Benefitting Area. The distribution of the costs for each Front-Ended Work within the applicable Benefitting Area is set out in Schedule "C".

J. The DC Background Study, as reflected in the development charges that are payable pursuant to the DC By-law, accounted for the costs associated with all of the Front-Ended Works within each of the Benefitting Areas.

K. The Front-Ended Works are capital projects that have been approved for acceleration as contemplated in Recital C(ii) and pursuant to the City's MSFA Policy.

L. The parties have agreed to enter into a front-ending agreement pursuant to Part III of the DCA (the "Agreement") for the purpose of providing for the front-ended financing, construction and installation of the Front-Ended Works, including the immediate payment to the City of all front-ended costs required to complete the Front-Ended Works as temporary financing before any construction of the Front-Ended Works commences, on the basis that the City may, at its discretion, issue debentures for the Front-Ended Works as set out in this Agreement.

M. The parties have agreed that the City will temporarily borrow the aforesaid front-ended costs from the Front-Ending Owner to meet expenditures made in connection with the Front-Ended Works and that such temporary borrowing may be ultimately financed in whole or in part by the issue of debentures as set out in this Agreement and in Part XIII of the MA.

N. Council at its meeting on _____ enacted By-law No_____, being a by-law to authorize the execution of this Agreement.

NOW THEREFORE in consideration of the covenants expressed in this Agreement and other good and valuable consideration, the sufficiency of which is acknowledged, the parties covenant and agree, one with the other, as follows:

ARTICLE 1
INTERPRETATION

1.1 In this Agreement, unless specifically stated or there is something in the subject matter or context inconsistent therewith, capitalized terms shall have the following meanings ascribed to them:

(a) "Administrative Costs" shall have the meaning set out in Section 6.8

(b) "Agreement" means this front-ending agreement entered into pursuant to Part III of the DCA.

(c) "Approved Reimbursable Cost" shall have the meaning set out in Section 2.3.

(d) "Benefitting Area" means the lands that will benefit from the Front- Ended Works as depicted in Schedule "B".

(e) "CSRF" means the City Services Reserve Fund.

(f) "Certificate of Completion" means a certificate issued by the City Engineer and/or the Engineer, as applicable, certifying the completion of each Front-Ended Works (or a portion thereof) and which, for greater clarity, will not be approved by the City Engineer until the milestones set out in Schedule "D" have been achieved to the satisfaction of the City Engineer for each Front-Ended Work.

(g) "City" means The Corporation of the City of London.

(h) "City Clerk", "City Engineer", "City Planner" and "City Treasurer" means the person(s) holding such positions with the City, and his/her designate(s).

(i) "Council" means the Municipal Council for the City.

(j) "DCA" means the *Development Charges Act*, 1997, S.O. 1997, c. 27. as amended.

(k) "DC Background Study" means the study under the DCA described in Recital E.

(l) "DC By-law" means By-law No. _____, being a by-law to establish development charges for the Urban Growth Area pursuant to the DCA, enacted by Council on _____.

(m) "Debt Servicing Costs" has the meaning described in Section 2.5(f).

(n) "Estimated Reimbursable Costs" shall have the meaning set out in Section 2.3.

(o) "Front-Ended Works" means those capital projects that have been approved for acceleration pursuant to the City's MSFA Policy, as more particularly described in Schedule "C".

(p) "Front-Ending Owner" means the owner who supplies the funds necessary to temporarily finance the construction of the Front-Ended Works that are required to enable development of the Front-Ending Owner's Lands and the balance of the Benefitting Areas, as applicable.

(q) "Front-Ending Owners' Lands" shall have the meaning set out in Recital A.

(r) "GMIS" means the City's Growth Management Implementation Strategy, as originally adopted by Council on June 23, 2008 and which is updated on an annual basis.

(s) "Letter of Credit" means a letter of credit from a Canadian chartered bank or other lending institution that is acceptable, and in a form that is acceptable, to the City Solicitor and City Treasurer, provided that the City may, in its sole discretion, require that such letter of credit be from a Schedule "1" Canadian chartered bank.

(t) "MA" means the *Municipal Act*, 2001, S.O. 2001, c. 25, as amended. (s)

(u) "Non-Reimbursable Costs" has the meaning described in Section 2.5.

"Owner Constructed Front-Ended Works" has the meaning described in Section 5.1.

ARTICLE 2
DEVELOPMENT CHARGES ACT

2.1 This Agreement applies to the Front-Ending Owner's Lands and all lands in the Benefitting Area.

2.2 With respect to Section 45(1)(1) of the DCA, a description of the work to be undertaken is set out in Schedule "C" to this Agreement, and each Benefitting Area is defined in Recital H and is depicted in Schedule "B" to this Agreement.

2.3 With respect to Section 45(1)(3) of the DCA, the method for determining the front-ended payment by the Front-Ending Owner for costs that are applicable to all landowners in each Benefitting Area shall be the actual costs of such construction and installation of the portions of the Front-Ended Works that are provided for in the DC By-law, as the City deems reasonable and appropriate. Such costs (collectively referred to before final approval by the City Treasurer as the "Estimated Reimbursable Costs" and following final approval by the City Treasurer as the "Approved Reimbursable Costs") include the following:

(a) all payments on contracts entered into for such construction or installation as accepted by the City Engineer;

(b) the value of all land transferred to the City for nominal consideration by a Front-Ending Owner, where the subject land is required to be acquired by the City for the completion of the Front-Ended Works;

(c) all engineering and legal fees, including fees paid to consultants;

(d) the cost of studies and design engineering attributable to the Front-End Work as determined by the City Engineer; and

(d) the cost of establishing the readiness of the Front-End Works.

2.4 With respect to Section 45(1)(2) of the DCA, the Front-Ending Owner will bear 100% of the front-ended costs pursuant to this Agreement.

2.5 With respect to Section 45(1)4 of the DCA, the non-reimbursable share of the costs of the Front-Ended Works (collectively referred to as the "Non- Reimbursable Costs") includes the following:

(a) any indirect overhead expense of the Front-Ending Owner;

(b) any financing cost of the Front-Ending Owner;

(c) the cost of any Letter of Credit required by this Agreement;

(d) any portion of the cost deemed to be a "local service" as defined in Section 2(5) of the DCA;

(e) Administrative Costs; and

(f) any debt servicing costs incurred by the City for its temporary borrowing pursuant to Sections 6.1(a) and 6.1(b) in respect of the Estimated Reimbursable Costs or Approved Reimbursable Costs for the Front-Ended Works, which

temporary borrowing is pursuant to Section 405 of the MA (the "Debt Servicing Costs").

2.6 With respect to Section 45(1)(5) of the DCA, the way in which amounts collected from other landowners in the Benefitting Area to reimburse the Front-Ending Owner will be allocated is described in Section 6.4.

2.7 The parties agree that none of the Front-Ended Works for reimbursement are local services as defined in Section 2(5) of the DCA.

2.8 The parties acknowledge that the Front-Ended Works are capital works that have been approved for acceleration as described in Recital C(ii) pursuant to the Council approved MSFA Policy and constitute capital works for purposes of the MA. The Front-Ending Owner acknowledges that this Agreement is part of the development charge scheme for the Urban Growth Area and it has full knowledge of the development charge by-law(s) applicable to the Benefitting Area enacted by Council. The Front-Ending Owner agrees not to appeal the DC By-law or otherwise contest such by-law before the Ontario Municipal Board or otherwise.

2.9 Where the Front-Ended Works benefit the existing community and where, in the DC Background Study, a share of the Front-Ended Works is attributed to non-growth, the Front-Ending Owner shall include the costs associated with the non-growth share in its front-ended payment to the City pursuant to this Agreement. The non-growth share accelerated in this Agreement will be repaid to the Front-Ending Owner on such terms and conditions as agreed to by the parties hereto.

The amount of the non-growth share shall be calculated using the actual cost of the Front-Ended Works approved by the City Treasurer and the non-growth percentage used in the DC Background Study. Where any Front-Ended Work is phased and only a component of the Front-Ended Works is front-ended the non-growth share shall be determined by reference to the shares used in the capital budget approved by Council in relation to each Front-End Work.

ARTICLE 3
CONSTRUCTION OF FRONT-ENDED WORKS

3.1 Despite the front-ended payments by the Front-Ending Owner pursuant to this Agreement, the City shall:

(a) own the Front-Ended Works upon completion of each Front-Ended Work,

(b) be responsible for the design, engineering, tender, construction, installation, operation and maintenance of the Front- Ended Works; and

(c) be entitled to impose, from time to time and at any time, such fees and charges for the collection, production, treatment, storage, supply, transmission and distribution of water and/or wastewater through the City's water and/or wastewater system as the City considers necessary or desirable

pursuant to Part XII (Fees and Charges) of the MA or any other user fee or charge permitted by law.

3.2 The City shall construct and install the Front-Ended Works provided that the Front-Ending Owner has strictly complied with the requirements of this Agreement. The City covenants and agrees to call tenders and commence construction and installation of the applicable portion or the whole of the Front-Ended Works within _____ days after the receipt of all of the front-ended payments and security described in Section 6.1.

3.3 The City shall draw upon the payment and security provided by the Front- Ending Owner as described in Section 5.1 in its discretion to pay all costs, as construction of the Front-Ended Works progresses. If the amount of the security is at any time determined to be insufficient to pay for the total cost of the Front-Ended Works, the Front-Ending Owner shall immediately pay to the City such deficiency or deliver an additional Letter of Credit upon demand therefor and the City may cease construction of, or prevent connection to the Front-Ended Works until such deficiency is paid, failing which the Front-Ending Owner shall be in default of this Agreement as described in Article 10.

The City will return any unused security when in excess of the amount required to complete the Front-Ended Works and to maintain same for a minimum of _____ at the discretion of the City Engineer.

3.4 Whenever and to the extent that the City shall be unable to fulfil, or shall be delayed or restricted in fulfilling its obligation to construct the Front-Ended Works, for any cause beyond its control, the City shall be relieved from its obligation during the period it is unable to fulfil or is delayed or restricted in fulfilling its obligations. For greater clarity, the Front-Ending Owner shall at all times be liable for the funding of all of its obligations pursuant to this Agreement, including, without limitation, the funding of debt servicing costs as described in Section 2.5(f) incurred by the City, if any, in respect of the temporary borrowing described in Sections 3.3 and 5.1 during such period.

ARTICLE 4
FRONT-ENDING OWNER-CONSTRUCTED SERVICES

EDITORS NOTE: In some instances as deemed appropriate by the City Engineer works may be constructed by the front-ending owner. Specific conditions for these works will be crafted based on the nature of the works and shall align with the procedures governing construction of infrastructure undertaken by developers as outlined in the *Development Charges By-law*.

ARTICLE 5
FRONT-ENDED PAYMENTS

5.1 Prior to the construction of any Front-Ended Works pursuant to Article 4, the Front-Ending Owner shall deliver to the City as temporary financing the following amounts as confirmed by the City Treasurer:

(a) a certified cheque equal to _____, being _____% of the up-to-date Estimated Reimbursable Costs;

(b) a Letter of Credit in the amount of _____plus costs included in the works to be constructed, as described in Section 2.5(d), and Administrative Costs, being the balance of the Estimated Reimbursable Costs; and

(c) a Letter of Credit in the amount of _____, being the estimated Debt Servicing Costs for the temporary borrowing described in subsections (a) and (b).

The Letter of Credit will be held by the City as security for the obligations of the Front-Ending Owner in accordance with this Agreement.

5.2 The City will provide financial reporting to the Front-Ending Owner annually and will incorporate a record of all cash payments and Letter of Credit draw- downs, cash payments received and expenditures for each Front-Ended Work. The City will prepare a report on an annual basis summarizing all activity in respect of each of the Front-Ended Works, and, starting when recoveries commence pursuant to Article 6, the status of all reimbursements to the Front-Ending Owner.

ARTICLE 6
FINANCIAL IMPLEMENTATION AND RECOVERIES

6.1 Subject to Section 6.6, the Front-Ending Owner shall be entitled to recover the Reimbursable Costs or any portion thereof following the later of the following two dates:

(a) [NTD: insert date that the Front-Ended Works are forecast to be constructed in the GMIS] and;

(b) the date that a Certificate of Completion for the Front-Ended Works (or applicable portion thereof) is approved by the City Engineer.

6.2 The Front-Ending Owner shall ultimately be reimbursed for the Approved Reimbursable Costs. Repayments to the Front-Ending Owner shall be administered by the City in accordance with Section 35 of the DCA and otherwise in accordance with the DCA and regulations published pursuant to the DCA.

6.3 Notwithstanding the reimbursement of the Approved Reimbursable Costs hereunder, the Front-Ending Owner shall pay or cause to be paid all of the development charges of the City in the amount and at the time specified in the DC By-law or any successor development charge by-law applicable to the development of the Front-Ending Owner's Lands.

6.4 It is acknowledged that all other owners of land in the Benefitting Area who are not the Front-Ending Owner shall not be required to become a party to this Agreement nor participate in the front-ending of the Front-Ended Works as contemplated in this

Agreement. Therefore, reimbursements by such other landowners in the Benefitting Area to the Front-Ending Owner as contemplated in Section 44(1)(c) of the DCA shall be facilitated through payment of development charges by such other landowners in the Benefitting Area as a condition to any development approval referred to in Section 2(2) of the DCA.

6.5 The City's financial accounting will include a separate record for funds held in the CSRF or other account for each of the Front-Ended Works.

6.6 In order to ensure the adequacy of funds in the CSRF or other account at any given time, the City may, in its sole discretion, replace the temporary borrowing funded by the Front-Ending Owner as described in Section 2.3, 2.9, 5.1(a) and 5.1(b), with debenture financing in a principal amount that does not exceed over a maximum term of _____ in accordance with Part XIII of the MA, and/or with other available funds of the City.

6.7 The Front-Ending Owner shall be entitled to apply for a recovery of the funds advanced under this Agreement to the extent and limit of the Approved Reimbursable Costs or a portion thereof one (1) business day following the date the funds are available to the City pursuant to Section 6.6 by making an application to the City Treasurer for the recovery alleged to be owing, being the amount of the Approved Reimbursable Costs without interest. Upon receipt of such application, the City Treasurer shall review the request and facilitate the recovery payable to the Front-Ending Owner (pursuant to the MSFA Policy in the DC By-law or any other policy established by Council to administer the CSRF that is in place on the date of this Agreement), as follows:

(a) Immediately upon such time as a payment to the Front-Ending Owner is available, the City shall:

(i) issue notice to the Front-Ending Owner that the reimbursement is available to be paid out; and

(ii) request that the Front-Ending Owner provide direction to the

(iii) City as to whom the money is to be paid,

(b) Upon receipt of a direction in a form satisfactory to the City Solicitor from the Front-Ending Owner, the City shall pay to the person or persons named in the direction the money as set out in the direction; and

(c) If, within _____ days of issuing the notice under subsection (a)(i), the City has not received a direction from a Front-Ending Owner, the municipality may pay the money owing to that Front-Ending Owner into the Ontario Superior Court of Justice and give notice to such Front-Ending Owner that the money has been paid into court and the Front-Ending Owner must apply to the court for the

release of the money. It is understood and agreed that if the Front-Ending Owner has not applied to the court for the release of the money within months from the date of the mailing of the notice, the City may apply for release of the money to the City and place it in its general account for its own use absolutely.

6.8 The parties confirm that the reasonable cost to the City in processing the collection of the front-ended payment by the Front-Ending Owner and all related accounting and administrative activities while this Agreement remains in force is _____ % of the Approved Reimbursable Costs (the "Administrative Costs").

6.9 The City shall reimburse the Front-Ending Owner and/or reduce the Front- Ending Owner's Letter of Credit, as appropriate, if the actual costs that are incurred by the City in respect of the construction of the Front-Ended Works (or any portion thereof) are lower than the estimated cost paid by the Front- Ending Owner to the City for such construction. The reimbursement or reduction of Letter of Credit shall be facilitated by the City Treasurer following the date that a Certificate of Completion for the Front-Ended Works (or applicable portion thereof) is approved by the City Engineer.

ARTICLE 7
RIGHTS OF WAY

7.1 All services constructed under this Agreement shall be located in City owned lands or easements approved by the City Engineer and granted to the City, free and clear of all encumbrances, unless otherwise provided.

7.2 No construction under this Agreement shall commence until the City Solicitor is satisfied that all necessary rights in land required by the City Engineer have been conveyed to the City or agreements to convey have been executed.

7.3 Upon request from the Front-Ending Owner who desires to construct Front- Ended Works through lands approved by the _____, but owned by others, the City will assist, at the sole cost of the Front-Ending Owner, in obtaining rights to construct and maintain services on such lands. It is understood and agreed that the City will not commence expropriation proceedings for any such lands until the Front-Ending Owner has complied with Section 3 .2, and that the Front-Ending Owner shall be responsible for all costs of such expropriation process inclusive of appraisal consulting work, legal costs, and land compensation paid pursuant to the *Expropriations Act*, R.S.O. 1990, c. E. 26, as amended. Council may, by by- law in its sole discretion, refuse to expropriate.

ARTICLE 8
COMMENCEMENT AND TERMINATION

8.1 Within 20 days from the date of the execution of this Agreement, the City shall give notice of this Agreement in accordance with the requirements of Section 46 of the DCA by publishing a notice in a newspaper having a general circulation in the City explaining the nature and purpose of this Agreement and indicating that this Agreement can be viewed in the office of the City Clerk during normal office hours, and with an

indication that written objections to this Agreement may be filed with the City clerk within 40 days from the date of the giving of the notice of this Agreement. This Agreement shall be effective as of the date that the appeal period ends pursuant to the DCA with no appeals having been filed or the date that the Ontario Municipal Board approves this Agreement.

8.2 This Agreement shall remain in force until the Front-Ending Owner is reimbursed for the entire amount of the Approved OwnerCosts, inclusive of any indexing entitlement, and thereafter this Agreement shall terminate (except that the release described in Section 10.4 and the indemnity contained in Section 10.5, which shall remain in full force and effect) and no further construction shall be carried out in accordance with its terms.

ARTICLE 9
DEFAULT

9.1 Where the Front-Ending Owner has failed to comply with an obligation under this Agreement, the City shall give notice to the Front-Ending Owner in writing specifying the nature of the default, the actions required to cure such default, and the time for curing such default provided the time for curing the default shall not be less than thirty (30) days. If the Front-Ending Owner does not advance the amount owing, the outstanding payment shall bear a rate of interest per annum that is five percent (5%) over the prime commercial lending rate that the Canadian Imperial Bank of Commerce charges to its best commercial customers in Toronto from time to time, compounded semi- annually.

9.2 If the Front-Ending Owner has not cured the default in the manner and within the time specified in the notice, then:

(a) if the default occurs before any development approval referred to in Section 2(2) of the DCA in respect of the defaulting Front-Ending Owner's Lands, then the City shall be entitled to withhold such approval until such time as the default has been cured;

(b) if the default occurs after any development approval referred to in Section 2(2) of the DCA in respect of the defaulting Front-Ending Owner's Lands, then the City shall be entitled to withhold the lifting of any holding provision in a zoning by-law applicable to the plan, until the default has been cured; and

(c) the City shall be entitled to seek any further remedy which may be available to it at law in order to recover the monetary amount claimed from the defaulting Front-Ending Owner, in addition to its legal costs on a solicitor and his own client basis.

ARTICLE 10
GENERAL

10.1 The parties agree that the above-noted Recitals are true and accurate.

10.2 It is acknowledged and agreed that this Agreement is entered into by the City to facilitate the financing of the Front-Ended Works by the Front-Ending Owner in the Benefitting Area and that said owner will be responsible for all of the costs thereof. It is further agreed that the City will not be required to expend money or commit to expend money as a result of entering into this Agreement except in accordance with the DCA.

10.3 Regardless of whether the actual costs of the Front-Ended Works exceeds the cost included in the Development Charge By-law, no credit or claim for refund for such excess against the payment of development charges shall be made by any Front-Ending Owner or any person claiming through them. In addition, the excess cost shall not be included in the Approved Reimbursable Costs.

10.4 The Front-Ending Owner hereby releases and forever discharges the City from all claims for damages arising out of the City entering into this Agreement and any actions taken by the City pursuant to this Agreement. In addition, the Front-Ending Owner agrees that the City shall not be responsible for any errors or mistakes made in the collection or disbursement of any funds under this Agreement.

10.5 The Front-Ending Owner covenants and agrees to indemnify and save harmless and defend the City from all actions, causes of action, suits, claims and demands whatsoever which may arise directly or indirectly, by reason of advancing the timing and/or the construction of the Front-Ended Works, or by reason of the maintenance or lack of maintenance of such services by the Front-ending Owner pursuant to the terms of this Agreement or by reason of any defect in workmanship or material, until the assumption of the Front- Ended Works.

10.6 If any notice is required to be given pursuant to this Agreement, such notice shall be mailed, delivered or transmitted by email or facsimile to the address or number set forth in Schedule "E", or, in the case of notice to the Front- Ending Owner, such other address of which the Front-Ending Owner has notified the City Clerk, in writing, and any such notice mailed, delivered transmitted by email or facsimile shall be deemed good and sufficient notice under the terms of this Agreement.

10.7 The Front-Ending Owner agrees that this Agreement and the schedules, or any part or parts thereof, shall be registered upon the title of the Front-Ending Owner's Lands. Such registration shall be at the request of the City. Subject to the provisions of the *Registry Act*, R.S.O. 1990, c. R.20, and the *Land Titles Act*, R.S.O. 1990, c. L.5, the City may enforce the provisions of this Agreement against any and all owners of land in the Benefitting Area as permitted in the DCA. The Front-Ending Owner shall pay to the City all costs relating to the registration of this Agreement on title, as well as any further costs incurred by the City, relating to the registration of any other documents pertaining to this Agreement.

10.8 The Front-Ending Owner shall not call into question directly or indirectly in any proceeding whatsoever, in law or in equity before any court or before any administrative or other tribunal, the right of the City to enter into this Agreement and to enforce each and every term, covenant and condition thereof. The law of contract applies to this Agreement and the City shall be entitled to all remedies arising therefrom. This

provision may be pleaded by the City in any action or proceeding as a complete and conclusive estoppel of any denial of such right.

10.9 The failure of any party to this Agreement to enforce at any time any of the provisions of this Agreement or any of its rights in respect to this Agreement or to insist upon strict adherence to any term of this Agreement shall not be considered to be a waiver of such provision, right or term or in any way to affect the validity of this Agreement or deprive the applicable party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. The exercise of any right under this Agreement shall not preclude or prejudice such party from exercising any other right it may have under this Agreement, irrespective of any previous action or proceeding taken by it pursuant to this Agreement. Any waiver by any party of the performance of any of the provisions of this Agreement shall be effective only if it is in writing and signed by both the Front-Ending Owner and the City Treasurer.

10.10 No remedy herein conferred upon or reserved in favour of any party shall exclude any other remedy herein or existing at law or in equity or by statute, but each shall be cumulative and in addition to every other remedy given hereunder or now or hereafter existing.

10.11 The parties agree to execute such other instruments as may from time to time be necessary or desirable to give effect to the provisions of this Agreement.

10.12 Time shall be of the essence of this Agreement and each of its provisions.

10.13 This Agreement sets forth the entire agreement between the parties and supersedes all prior understandings and communication among the parties or any of them, oral or written, with respect to the subject-matter of this Agreement. Each party acknowledges and represents that this Agreement is entered into after full investigation and that no party is relying upon any statement or representation made by any other party which is not embodied in this Agreement. Each party acknowledges that it shall have no right to rely upon any amendment, promise, modification, statement or representation made or occurring subsequent to the execution of this Agreement unless the same is in writing and executed by each of the parties.

10.14 This Agreement may be executed in any number of counterparts and each such counterpart shall for all purposes constitute one agreement, binding on all parties, notwithstanding that all parties are not signatories to the same counterpart.

10.15 The parties agree that:

(a) the part numbers and headings, subheadings and section, subsection, clause and paragraph numbers are inserted for convenience of reference only and shall not affect the construction or interpretation of this Agreement;

(b) gender as may be required by the context;

(c) all references to any statute, regulation or by-law or any provision thereof includes such statute, regulation or by-law or provision thereof as amended,

revised, re-enacted and/or consolidated from to time to time and any successor statute, regulation or by-law thereto;

(d) all obligations herein contained, although not expressed to be covenants, shall be deemed to be covenants;

(e) whenever a statement or provision in this Agreement is followed by words denoting inclusion or example and then a list of or reference to specific items, such list or reference shall not be read so as to limit the generality of that statement or provision, even if words such as "without limiting the generality of the foregoing" do not precede such list or reference; and

(f) that all covenants and conditions contained in this Agreement shall be severable, and that should any covenant or condition in this Agreement be declared invalid or unenforceable by a court of competent jurisdiction, the remaining covenants and conditions and the remainder of this Agreement shall remain valid and not terminate thereby.

10.16 This Agreement shall apply to and be binding on the parties hereto and its successors, administrators, executors and assigns and each of them.

ARTICLE 11
SCHEDULES

11.1 The following schedules are attached and form an integral part of this Agreement:

Schedule “A”	Front-Ending Owner’s Lands
Schedule “B”	Benefitting Area of Each Front-Ended Work
Schedule “C”	Front-Ended Works – Description and Cost Distribution
Schedule “D”	Front-Ended Works Completion Milestones
Schedule “E”	Notice Particulars

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

IN WITNESS WHEREOF the parties have executed this agreement as of the date shown on the title to this Agreement.

[FRONT-ENDING OWNER]

Per: _____
Name:
Title:

Per: _____
Name:
Title:
We have the authority to bind the Corporation.

THE CORPORATION OF THE CITY OF LONDON

Per: _____
Name:
Title: **Mayor**

Per: _____
Name:
Title: **City Clerk**
We have the authority to bind the Corporation.