

DEVELOPMENT CHARGES BACKGROUND STUDY

Township of Norwich

HEMSON Consulting Ltd.

April 2009

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	1
I INTRODUCTION	7
II A TOWNSHIP-WIDE UNIFORM CHARGE APPROACH TO ALIGN GROWTH-RELATED COSTS AND BENEFITS IS USED	9
A. TOWNSHIP-WIDE DEVELOPMENT CHARGES ARE PROPOSED	9
B. KEY STEPS IN DETERMINING DEVELOPMENT CHARGES FOR FUTURE GROWTH-RELATED PROJECTS	10
III GROWTH FORECAST.	14
A. COUNTY OF OXFORD FORECAST	14
B. TOWNSHIP RESIDENTIAL FORECAST	14
C. TOWNSHIP NON-RESIDENTIAL FORECAST	15
IV SUMMARY OF HISTORIC CAPITAL SERVICE LEVELS	17
V GROWTH-RELATED CAPITAL FORECAST	19
A. A GROWTH-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL	19
B. THE GROWTH-RELATED CAPITAL FORECAST	19
VI PROPOSED DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE <i>DCA</i>	22
A. DEVELOPMENT CHARGE CALCULATION	22
B. PROPOSED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES	24
C. COMPARISON OF 2009 NEWLY CALCULATED DEVELOPMENT	27
VII LONG TERM CAPITAL AND OPERATING COSTS	30
VIII DEVELOPMENT CHARGE ADMINISTRATION AND LOCAL SERVICE DEFINITIONS	33

APPENDICES

LIST OF APPENDICES

- A. Growth Forecast
- B. Township Services Technical Appendix
- C. Reserve Funds
- D. Long Term Capital and Operating Cost Impacts

EXECUTIVE SUMMARY

(i) BACKGROUND

- The *Development Charges Act, 1997 (DCA)*, and its associated regulation (*O. Reg. 82/98*), allow municipalities in Ontario to recover growth-related capital costs from new development.
- The Township of Norwich is growing and is also an attractive location for a wide variety of non-residential development. The anticipated growth in Norwich will increase the demand on municipal services.
- The Township wishes to continue implementing development charges to fund capital projects related to growth throughout Norwich so that development continues to be serviced in a fiscally responsible manner.

(ii) INTRODUCTION

- The *DCA* and *O. Reg. 82/98* require that a development charge background study be prepared in which development charges are determined with reference to:
 - A forecast of the amount, type and location of housing units, population and non-residential development anticipated in the Township;
 - The average capital service levels provided in the Township over the ten year period immediately preceding the preparation of the background study;
 - A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the Township to provide for the expected development, including the determination of the growth and non-growth-related components of the capital projects; and
 - An examination of the long term capital and operating costs for the capital infrastructure required for each service to which the development charges by-laws would relate.

- This report identifies the growth-related net capital costs which are attributable to development that is forecast to occur in the Township. These costs are apportioned to types of development (residential; non-residential) in a manner that reflects the increase in the need for each service attributable to each type of development. This report therefore presents development charges for each type of development.

(iii) GROWTH FORECAST

- The Township of Norwich is growing. Meeting the servicing demands of this growth will require the Township to expand the capacity of municipal infrastructure.
- The following is a summary of the projected growth for the Township:

	Existing	2009-2018		2009-2031	
	As At Mid-Year 2008	Forecast Change	As at 2018	Forecast Change	As at 2031
Population in Existing Units	11,081	(545)	10,536	900	11,981
Housing Units	3,613	576	4,189	1,047	4,660
Forecast Population in New Units		1,901		3,455	
Total Population	11,081	1,356	12,437	4,355	15,436

	Existing	2009-2018		2009-2031	
	As At Mid-Year 2008	Forecast Change	As at 2018	Forecast Change	As at 2031
Non-Residential Building Space (sq.m)		94,100		148,800	
Employment	4,276	989	5,265	1,624	5,900

(iv) ALL ELIGIBLE SERVICES ARE INCLUDED IN THE ANALYSIS

- The following Township services have been included in the development charge analysis:
 - General Government
 - Fire Protection
 - Parks and Recreation
 - Public Works and Fleet
 - Roads

- The Township has existing infrastructure for the provision of these services. The historic service levels for each of the services are shown in Section IV.

(v) THE TOWNSHIP HAS AN EXTENSIVE GROWTH-RELATED CAPITAL PROGRAM FOR THE PROVISION OF ELIGIBLE SERVICES

- The study used a Township-wide approach for calculating development charges for all services which the Township provides.
- The capital infrastructure plans for Township-wide services are based on the ten year planning period of 2009 to 2018 for all services.
- The Township's growth-related capital program for all services amounts to \$9.56 million and provides for a wide range of infrastructure expansions.
- Of the \$9.56 million growth-related capital program, approximately \$4.54 million has been identified as eligible for recovery through development charges.
- The following is a summary of the growth-related capital program for all services:

Service	Gross Cost	DC Recoverable
	(\$000)	(\$000)
1. GENERAL GOVERNMENT	\$115.0	\$98.89
2. FIRE DEPARTMENT	\$1,100.0	\$631.40
3. PARKS & RECREATION	\$1,585.0	\$576.72
4. PUBLIC WORKS	\$210.0	\$189.00
5. ROADS & RELATED	\$6,553.0	\$3,043.64
TOTAL - 10-YEAR TOWNSHIP-WIDE SERVICES	\$9,563.0	\$4,539.7

- Details on the capital programs for each of the Township services are provided in Appendix B.

(vi) DEVELOPMENT CHARGE RATES CALCULATED WITH REFERENCE TO THE DCA

- Development charge rates have been established under the parameters and limitations of the DCA. This study provides the rationale and basis for the calculated rates.
- Based on the Township's growth forecast, historic service levels, and growth-related capital programs, the following Township-wide residential development charge rates have been calculated:

Service	Adjusted Charge Per Capita	Charge by Unit Type			
		Single & Semi-Detached	Rows & Other Multiples	Apartments	
				2 Bedrooms or Larger	Bachelor or 1 Bedroom
General Government	\$39.85	\$132	\$92	\$64	\$48
Fire Department	\$266.55	\$880	\$613	\$426	\$320
Parks & Recreation	\$316.20	\$1,043	\$727	\$506	\$379
Public Works	\$77.45	\$256	\$178	\$124	\$93
Total General Services Charge	\$700.05	\$2,310	\$1,610	\$1,120	\$840
Roads & Related	\$716.15	\$2,363	\$1,647	\$1,146	\$859
Total Township-Wide Residential Charge	\$1,416.20	\$4,673	\$3,257	\$2,266	\$1,699

Based on a population per unit of

3.30

2.30

1.60

1.20

- The proposed Township-wide residential charges are recommended to vary by unit type, reflecting the difference occupancy patterns expected in various unit types and the associated differences in demand that would be placed on municipal services.

- The following Township-wide non-residential development charges have been calculated:

Service	Adjusted Charge Per Sq. M.
General Government	\$0.35
Fire Department	\$2.33
Parks & Recreation	\$0.00
Public Works	\$0.68
Total General Services Charge	\$3.36
Roads & Related	\$6.23
Total Township-Wide Non-Residential Charge	\$9.59

- Overall, the proposed development charges are higher than the Township's current (2009) charges which is a reflection of increased service levels, the recovery of two new services (parks and recreation and public works) and a comprehensive roads capital program.

(vii) A PORTION OF GROWTH-RELATED COSTS REQUIRE FUNDING FROM NON-DEVELOPMENT CHARGES SOURCES

- The *DCA* requires that growth-related net capital costs for general services be reduced by ten per cent when calculating the applicable development charge for these services. The ten per cent share of the growth-related net capital costs not included in the development charge calculation must be funded from non-development charge sources.
- In total, \$96,000 is identified to provide for the required ten per cent reduction.
- Non-development charge funding for replacement portions of the capital forecast and for portions of growth-related projects that benefit existing development will total an additional \$1.40 million. A large portion of these capital costs will have to be funded from the fundraising, property taxes, utility rates, user fees and other non-development charge revenue sources.

- It is also estimated that net annual property tax supported operating costs will increase by approximately \$172,400 by the year 2018 as the facilities and infrastructure listed in the capital forecast are operated and maintained. These costs should be funded from the increase in property assessment generated by new development.

I INTRODUCTION

The Township of Norwich Development Charges Background Study is presented as part of a process to lead to the approval of new development charge by-laws in compliance with the *Development Charges Act, 1997 (DCA)*.

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

- A forecast of the amount, type and location of housing units, population and non-residential development anticipated in the Township;
- The average capital service levels provided in the Township over the 10 year period immediately preceding the preparation of the background study;
- A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred or to be incurred by the Township or its local boards to provide for the expected development, including the determination of the growth and non-growth-related components of the capital projects; and
- An examination of the long term capital and operating costs for the capital infrastructure required for each service to which the development charges by-laws would relate.

This study presents the results of the review which determines the growth-related net capital costs which are attributable to development that is forecast to occur in the Township. These growth-related net capital costs are then apportioned among various types of development (residential; non-residential) in a manner that reflects the increase in the need for each service attributable to each type of development. The study arrives, therefore, at proposed development charges for various types of development.

The *DCA* provides for a period of public review and comment regarding the proposed development charges. Following completion of this process in accordance with the *DCA* and

Council's review of this study and the comments it receives regarding this study or other information brought to its attention about the proposed charges, it is intended that Council will pass new development charges for the Township.

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

Section II designates the services for which the development charges are proposed and the areas within the Township to which the development charges will apply. It also briefly reviews the methodologies that have been used in this background study.

Section III presents a summary of the forecast residential and non-residential development which is expected to occur within the Township over the 2009–2018 period and to ultimate development, estimated at 2031.

Section IV summarizes the historic ten year average capital service levels that have been attained in the Township which form the basis for the development charge calculations.

In Section V, the growth-related capital forecast that has been developed by various Township departments is reviewed.

Section VI summarizes the calculation of applicable development charges and the resulting proposed development charges by class and type of development. This section also provides a comparison of existing development charge rates in the Township with the rates proposed in this study.

Section VII provides an examination of the long term capital and operating costs for each service included in the development charge calculation.

Section VIII provides a review of development charges administrative matters such as collection method and timing of payments, exemptions, credits for services-in-lieu, front-end financing, etc. In addition, this section provides an overview of the Township's definitions of "local service" under s.59 of the DCA.

II A TOWNSHIP-WIDE UNIFORM CHARGE APPROACH TO ALIGN GROWTH-RELATED COSTS AND BENEFITS IS USED

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

A. TOWNSHIP-WIDE DEVELOPMENT CHARGES ARE PROPOSED

The Township provides a wide range of services to the community it serves and has an extensive inventory of facilities, land, infrastructure, vehicles and equipment. The *DCA* provides municipalities with flexibility to define services that will be included in the development charge by-laws, provided that the other provisions of the *Act* and *Regulations* are met. The *DCA* also requires that the by-laws designate the areas within which the by-laws shall be imposed. The development charges may apply to all lands in the Township or to other designated development areas as specified in the by-laws.

1. All Services Based on a Township-Wide Approach

For the majority of services that the Township provides, a range of capital facilities, land, equipment and infrastructure is available throughout the Township: arenas, community centres, fire stations, collector roads, parks and so on. All Township residents have access to all facilities. As new development occurs, new facilities will need to be added so that overall service levels in the Township do not decline. A widely accepted method for sharing the growth-related capital costs for such Township services is to apportion them over all new growth anticipated in the Township.

The following services are included in the Township-Wide development charge calculation:

- General Government
- Fire Protection
- Parks and Recreation
- Public Works
- Roads

These services form a reasonable basis on which to plan and administer the development charges. It is noted that the analysis of each of these services examines the individual capital facilities and equipment that make them up. For example, the Fire service category includes various buildings, fire fighting vehicles and associated land requirements as allowed under the new *DCA*, as well as equipment.

The resulting development charge for these services would be imposed against all development anywhere in the Township.

B. KEY STEPS WHEN DETERMINING DEVELOPMENT CHARGES FOR FUTURE GROWTH-RELATED PROJECTS

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

1. Growth Forecast

The first step in the methodology requires a development forecast to be prepared for the ten year study period, 2009–2018, and to ultimate development in 2031. The forecast of the future residential and non-residential development by location used in this study was prepared in conjunction with the County of Oxford's Planning department and is based on projections prepared by Hemson Consulting for the County entitled *Population, Household & Employment Forecasts 2001-2031*, in April 2006.

For the residential portion of the forecast the new population that will result from the addition of new housing units is estimated. This represents the population which drives

the need for new infrastructure and on which the residential development charges will be based.

The non-residential portion of the forecast estimates building space to be developed over the ten year period, 2009–2018, and to build-out in 2031. The forecast considers the employment forecast for the Township, and recent non-residential building activity.

2. Service Categories and Historic Service Levels

The *Development Charges Act* provides that the increase in the need for service attributable to anticipated development:

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

Historic ten year average service levels thus form the basis for development charges. A review of Township’s capital service levels for buildings, land, vehicles, and so on has therefore been prepared as a reference for the calculation so that the portion of future capital projects that may be included in the development charge can be determined. The historic service levels used in this study have been calculated based on the period 1999–2008.

For “hard” services, such as roads and related and stormwater, historic service levels are less applicable and reference is made to the Township’s engineering standards.

3. Growth-Related Capital Forecast and Analysis of Net Capital Costs to be Included in the Development Charges

A growth-related capital forecast has been prepared by the Township’s departments as part of the present study. The forecast identifies growth-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions as required by the Act (*DCA*, s. 5. (2)). It is noted that no capital grants or subsidies are anticipated for the general services. The capital forecast provides another cornerstone upon which development charges are based. The *DCA* requires that the increase in the need for service attributable to the anticipated development may include an increase:

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

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

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

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

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

Finally, in calculating development charges, the growth-related net capital costs must be reduced by 10 per cent for all services except stormwater, services related to highways, police and fire (*DCA*, s. 5. (1) 8.). The 10 per cent discount is applied to the other services, e.g. general government, and the resulting Township financing responsibility from non-development charge sources is identified.

4. Attribution to Types of Development

The next step in the determination of development charges is the allocation of the growth-related net capital costs between the residential and the non-residential sectors. This is done by using different apportionments for different services in accordance with the demands which the two sectors would be expected to place on the various services and the different benefits derived from those services.

Where reasonable data exist, the apportionment is based on the expected demand for, and use of, the service by each sector (e.g. roads apportioned based on shares of population and employment growth) and consideration of other factors affecting the demand for specific municipal services.

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

5. Final Adjustment

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

III GROWTH FORECAST

This section provides the basis for the growth forecasts used in calculating the development charges and provides a summary of the forecast results. Details of the forecast are provided in Appendix A.

A. COUNTY OF OXFORD FORECAST

Forecasts of population, households, employment and non-residential building are based on the projections prepared by Hemson Consulting Ltd. for the County of Oxford entitled, *Population, Household & Employment Forecasts 2001-2031*, in April 2006. These forecasts are based on a standard cohort-survival projection model. The forecasts have been adjusted to account for 2006 Census results and development that has occurred in the Township between 2006 and 2008.

B. TOWNSHIP RESIDENTIAL FORECAST

The Oxford County housing forecast was allocated to the local municipalities in Oxford, including Norwich, based on projected market shares. The population forecast is a result of applying household sizes to the housing forecast. The average household size forecast for the local municipalities is consistent with the projection for the County. The shares of housing growth for the local municipalities are based on historic shares and anticipated changes as a result of known employment generating investments. Norwich's share of housing growth is projected to remain at about 7% of the County total. The housing forecasts do not take into account potential long-term land supply constraints.

The Township's population is expected to increase by about 1,500 over the next ten years reaching about 12,400 by 2018. The ultimate population is forecast to reach 13,800 by 2031. For development charge purposes, the residential portion of the forecast estimates the population growth that will result from the addition of new housing units. This represents the population which drives the need for new infrastructure and on which the residential development charges is based. The population growth in new units for the ten year period

2009 to 2018 is estimated at 1,900. For the period 2009 to 2031 the population growth in new units is estimated at 3,400.

Approximately 570 housing units are forecast to be developed between 2009 and 2018. Over the long term to 2031 approximately 1,050 new housing units are projected.

C. TOWNSHIP NON-RESIDENTIAL FORECAST

The non-residential space forecast prepared for development charges purposes is also summarized on Table 1. About 94,100 square metres of building space is forecast to come on-stream over the next decade. Over the long term to 2031 approximately 148,800 square metres are projected.

Table 1 also provides a summary of the employment forecast for the 2009–2018 period and to ultimate development. Over the next ten years, employment is projected to grow by over 990 jobs. Over the long term to 2031 a total of 1,600 jobs are forecast to be added.

TABLE 1

**TOWNSHIP OF NORWICH
SUMMARY OF RESIDENTIAL & NON-RESIDENTIAL
DEVELOPMENT FORECAST**

	Existing	2009-2018		2009-2031	
	As At Mid-Year 2008	Forecast Change	As at 2018	Forecast Change	As at 2031
Population in Existing Units	11,081	(545)	10,536	900	11,981
Housing Units	3,613	576	4,189	1,047	4,660
Forecast Population in New Units		1,901		3,455	
Total Population	11,081	1,356	12,437	4,355	15,436

	Existing	2009-2018		2009-2031	
	As At Mid-Year 2008	Forecast Change	As at 2018	Forecast Change	As at 2031
Non-Residential Building Space (sq.m)		94,100		148,800	
Employment	4,276	989	5,265	1,624	5,900

IV SUMMARY OF HISTORIC CAPITAL SERVICE LEVELS

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

For non-engineering services (fire, parks and recreation etc.) the legislative requirement is met by documenting historic service levels for the preceding ten years, in this case, for the period 1999 – 2008. Typically, service levels for non-engineering services are measured as a ratio of inputs per capita. With engineered services such as roads, sanitary sewers and watermains, engineering and legislated environmental and health standards are used in lieu of inputs per capita.

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

Table 2 summarizes service levels for all general services included in the development charge calculation. Appendix B provides detailed historical inventory data upon which the calculation of service levels is based.

TABLE 2

**TOWNSHIP OF NORWICH
HISTORIC AVERAGE SERVICE LEVELS
1999 - 2008**

SERVICE	Historic 10-Year (1999-2008) Average Service Level
FIRE SERVICES	\$550.73 /capita
- Buildings	0.95 sq. ft./capita
- Land	2.94 ha/10,000 pop.
- Furniture and Equipment	\$222.11 /capita
- Vehicles	\$129.48 /capita
JOINT POLICE SERVICES	\$108.57 /capita
- Buildings	0.35 sq. ft./capita
- Land	0.53 ha/10,000 pop.
- Furniture and Equipment	\$22.37 /capita
PARKS & RECREATION	\$2,421.70 /capita
- Major Facilities	5.06 sq. ft./ capita
- Land for Major Facilities	8.48 ha./10,000 pop
- Equipment for Major Facilities	\$7.70 /capita
- Parkland Development	38.67 ha./10,000 pop
- Park Facilities	\$516.75 /capita
PUBLIC WORKS	\$409.96 /capita
- Buildings	1.26 sq. ft./ capita
- Land	5.81 ha./10,000 pop
- Furniture and Equipment	\$4.73 /capita
- Town Fleet	\$197.55 /capita

V THE GROWTH-RELATED CAPITAL FORECAST

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

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

A. A GROWTH-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL

Based on the growth forecasts summarized in Section III and detailed in Appendix A, staff of the Township departments, in collaboration with the consultants, developed a growth-related capital forecast setting out those projects that are required to service anticipated growth. For all services, the capital plan covers the ten year period from 2009 – 2018.

One of the recommendations contained in this background study is for Council to adopt the growth-related capital forecast developed for the purposes of the development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the growth-related projects contained herein that are consistent with the growth occurring in the Township. It is acknowledged that changes to the forecast presented here may occur through the Township's normal capital budget process.

B. THE GROWTH-RELATED CAPITAL FORECAST FOR GENERAL SERVICES

A summary of the growth-related capital forecast for general services is shown on Table 3. Further details on the capital plans for each individual service category are available in Appendix B. The growth-related capital forecast for general services is estimated at a total gross cost of \$9.56 million. Grants to provide for roads infrastructure and parks and recreation have

been identified; they total to \$2.97 million and this portion has been deducted from the development charges calculation.

This capital forecast incorporates those projects identified to be related to growth anticipated in the next ten years. It is not implied that all of these costs are to be recovered from new development by way of development charges (see the following Section VI for the method and determination of net capital costs attributable to growth). Portions of this capital forecast may relate to replacement of existing capital facilities (e.g. replacement of an existing fire station with a newer, larger facility), for shares of projects that provide benefit to the existing community, or for growth anticipated to occur beyond the 2009–2018 planning period. In addition, the amounts shown on Table 3 have not been reduced by 10 per cent for various “soft” services as mandated by s. 5 (1) 8. of the *DCA*.

Of the \$6.59 million in growth-related net capital costs, \$115,000 is for growth-related studies; \$1.1 million is for a replacement and expansion of Otterville Station #1; \$1.58 million is for recreation facilities expansions and park facilities; \$210,000 is for the construction of a storage shed at Middletown Line Yard. The roads capital program totals \$4.13 million after reductions from Federal and Provincial gas tax monies. The program consists of numerous pavings and construction of Township roads.

TABLE 3
TOWNSHIP OF NORWICH
SUMMARY OF GROWTH-RELATED CAPITAL FORECAST
2009-2018

Service	Gross Cost (\$000)	Grants/ Subsidies (\$000)	Net Cost (\$000)	Total Net Capital Forecast (\$000)																
				2009	2010	2011	2012	2013	2014	2015	2016	2017	2018							
1. TOTAL - GENERAL GOVERNMENT																				
1.1 Growth Studies	\$115.0	\$0.0	\$115.0	\$90.0	\$0.0	\$0.0	\$0.0	\$0.0	\$12.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$12.5
2. TOTAL - FIRE DEPARTMENT																				
2.1 Buildings, Land & Furnishings	\$1,100.0	\$0.0	\$1,100.0	\$1,100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3. TOTAL - PARKS & RECREATION																				
3.1 Major Facilities	\$1,585.0	\$544.0	\$1,041.0	\$25.0	\$59.0	\$0.0	\$832.0	\$0.0	\$0.0	\$125.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.2 Park Facilities	\$1,410.0	\$494.0	\$916.0	\$25.0	\$59.0	\$0.0	\$832.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
	\$175.0	\$50.0	\$125.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$125.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4. TOTAL - PUBLIC WORKS																				
4.1 Buildings, Land & Equipment	\$210.0	\$0.0	\$210.0	\$0.0	\$210.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5. TOTAL - ROADS & RELATED																				
5.1 Roads	\$6,553.0	\$2,423.5	\$4,129.5	\$173.9	\$350.7	\$486.9	\$497.3	\$399.6	\$399.6	\$375.0	\$386.7	\$373.4	\$373.4	\$373.4	\$373.4	\$386.7	\$373.4	\$373.4	\$660.4	\$425.4
TOTAL - 10-YEAR TOWNSHIP-WIDE SERVICES	\$9,563.0	\$2,967.5	\$6,595.5	\$1,388.9	\$619.7	\$486.9	\$1,329.3	\$412.1	\$500.0	\$386.7	\$373.4	\$660.4	\$660.4	\$660.4	\$660.4	\$386.7	\$373.4	\$373.4	\$660.4	\$437.9

VI PROPOSED DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE *DCA*

This section summarizes the calculation of development charges for each service category and the resulting total development charge by type of development. For general services, the calculation of the “unadjusted”¹ per capita (residential) and per square metre (non-residential) charges is reviewed. Adjustments to these amounts resulting from a cashflow analysis that takes interest earnings and borrowing costs into account are also discussed.

For residential development, the adjusted total per capita amount is then converted to a variable charge by housing unit type using various unit occupancy factors. For non-residential development, only one development charge rate is proposed. The proposed non-residential charge is based on gross floor area (GFA) of building space.

It is noted that the calculation of the general service development charges does not include any provision for exemptions required under the *DCA*, for example, the exemption for enlargements of up to 50 per cent on existing industrial buildings. Such legislated exemptions, or other exemptions which Council may choose to provide, will result in loss of development charge revenue for the affected types of development. Any such revenue loss may not be made up, however, by offsetting increases in other portions of the calculated charge.

A. DEVELOPMENT CHARGE CALCULATION

Details of the calculation for each individual Township service category are available in Appendix B. A summary of the “unadjusted” residential and non-residential development charges for general services is presented in Table 4.

1. General Services

¹ The term “unadjusted” development charge is used to distinguish the charge that is calculated prior to the cashflow analysis.

TABLE 4
 TOWNSHIP OF NORWICH
 SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
 FOR 10 YEAR TOWNSHIP-WIDE SERVICES

FOR 10 YEAR TOWNSHIP-WIDE SERVICES
 10 Year Growth in Population in New Units 1,901
 10 Year Growth in Square Metres 94,100

	Growth-Related Capital Forecast												
	Total Gross Costs (\$000)	Grants and Subsidies (\$000)	Prior Growth (\$000)	Benefit to Existing Share (\$000)	Pre-Built for Post 2018 Growth (\$000)	Growth-Related Net Capital Costs 2009-2018 (\$000)	Service Discount Required		Total Growth-Related Net Capital Costs After Discount		Non-Residential Share		
							%	\$000	%	\$000	%	\$000	
1 General Government													
Unadjusted Development Charge Per Capita (\$)	\$115.00	\$0.00	\$5.12	\$0.00	\$0.00	\$109.88	10%	\$10.99	\$98.89	70%	\$69.22	30%	\$29.67
Unadjusted Development Charge Per Sq. M. (\$)											\$36.42		\$0.32
2 Fire Department													
Unadjusted Development Charge Per Capita (\$)	\$1,100.00	\$0.00	\$0.00	\$468.60	\$0.00	\$631.40	0%	\$0.00	\$631.40	70%	\$441.98	30%	\$189.42
Unadjusted Development Charge Per Sq. M. (\$)											\$232.54		\$2.01
3 Parks & Recreation													
Unadjusted Development Charge Per Capita (\$)	\$1,041.00	\$0.00	\$0.00	\$400.20	\$0.00	\$640.80	10%	\$64.08	\$576.72	100%	\$576.72	0%	\$0.00
Unadjusted Development Charge Per Sq. M. (\$)											\$303.43		\$0.00
4 Public Works													
Unadjusted Development Charge Per Capita (\$)	\$210.00	\$0.00	\$0.00	\$0.00	\$0.00	\$210.00	10%	\$21.00	\$189.00	70%	\$132.30	30%	\$56.70
Unadjusted Development Charge Per Sq. M. (\$)											\$69.61		\$0.60
5 Roads & Related													
Unadjusted Development Charge Per Capita (\$)	\$6,552.99	\$2,423.48	\$109.33	\$535.84	\$441	\$3,043.64	0%	\$0.00	\$3,043.64	70%	\$2,130.55	30%	\$913.09
Unadjusted Development Charge Per Sq. M. (\$)											\$1,120.93		\$9.70
Total - Township-Wide Services	\$9,018.99	\$2,423.48	\$114.46	\$1,404.64	\$440.70	\$4,635.72		\$96.07	\$4,539.65		\$3,350.77		\$1,188.88
Unadjusted Development Charge Per Capita (\$)											\$1,762.93		\$12.63
Unadjusted Development Charge Per Sq. M. (\$)													



Table 4 shows that the gross capital forecast totals \$9.02 million for Township services. Of this amount, only \$4.64 million is for projects or portions of projects related to growth in the 2009–2018 period and upon which the development charges are calculated.

The difference between the gross capital cost of \$8.4 million for projects and the \$4.64 million shown as being growth-related is for portions of the future capital projects related to replacement of existing facilities and for the benefit of the existing community – \$1.40 million (“replacement share”) and for growth anticipated to occur beyond the 2009–2018 planning period and for service level increases – \$440,700 (“post-2018 benefit”). Grants and subsidies amounting to \$2.42 million also make up the difference between the gross capital cost and the growth-related portion.

An amount of \$114,500 has been identified as providing servicing capacity to prior growth, and will be financed from existing development charge reserve balances.

Of the \$4.64 million in net capital costs that relate to growth in the ten year period 2009–2018, \$96,000 is removed from the development charge calculation for the required 10% reductions for general government, parks and recreation and public works. No discount is required on fire services. The total development charge recoverable share of the capital program is \$4.54 million.

2. Adjusted Rates for Residential and Non-Residential Development Charges

Final adjustments to the “unadjusted” development charge rates summarized above are made through a cashflow analysis. The analysis, details of which are included in Appendix B, considers the borrowing cost and interest earnings associated with the timing of expenditures and development charge receipts for each service category.

B. PROPOSED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES

Residential development charges are proposed to vary by dwelling unit type to reflect their different occupancy factors and resulting demand for services. The proposed residential and non-residential development charges for all services are shown in Table 5. As shown in the table, the proposed residential charge ranges from \$1,699/unit for 1 bedroom apartments, to \$3,257/unit for multiples (i.e. Townhouses), to \$4,673/unit for single and semi-detached units.

The calculated non-residential development charge for all services is \$9.59 per square metre of gross floor area, as shown on Table 6.

TABLE 5

TOWNSHIP OF NORWICH
 SUMMARY OF TOWNSHIP-WIDE DEVELOPMENT CHARGES
 RESIDENTIAL CHARGE BY UNIT TYPE

Service	Adjusted Charge Per Capita	Charge by Unit Type			
		Single & Semi-Detached	Rows & Other Multiples	2 Bedrooms or Larger	Apartments Bachelor or 1 Bedroom
General Government	\$39.85	\$132	\$92	\$64	\$48
Fire Department	\$266.55	\$880	\$613	\$426	\$320
Parks & Recreation	\$316.20	\$1,043	\$727	\$506	\$379
Public Works	\$77.45	\$256	\$178	\$124	\$93
Total General Services Charge	\$700.05	\$2,310	\$1,610	\$1,120	\$840
Roads & Related	\$716.15	\$2,363	\$1,647	\$1,146	\$859
Total Township-Wide Residential Charge	\$1,416.20	\$4,673	\$3,257	\$2,266	\$1,699

Based on a population per unit of

3.30 2.30 1.60 1.20

TABLE 6

TOWNSHIP OF NORWICH
 SUMMARY OF TOWNSHIP-WIDE DEVELOPMENT CHARGES
 NON-RESIDENTIAL CHARGE PER SQUARE METRE

Service	Adjusted Charge Per Sq. M.
General Government	\$0.35
Fire Department	\$2.33
Parks & Recreation	\$0.00
Public Works	\$0.68
Total General Services Charge	\$3.36
Roads & Related	\$6.23
Total Township-Wide Non-Residential Charge	\$9.59

C. COMPARISON OF 2009 NEWLY CALCULATED DEVELOPMENT CHARGES

Table 7 presents a comparison of the newly calculated development charges by residential development unit type and per square metre respectively with the Township's current charges (as at October 1, 2008). The proposed single/semi charge represents an increase of 223% over the existing charge.

Table 8 displays the current and calculated rates for the non-residential development charges. The calculated rate is \$1.17, or 11 per cent, less than the currently levied rate of \$10.76 per square metre.

TABLE 7

TOWNSHIP OF NORWICH
 2009 DEVELOPMENT CHARGES BACKGROUND STUDY
 COMPARISON OF CURRENT VS. CALCULATED DEVELOPMENT CHARGES
 RESIDENTIAL DEVELOPMENT CHARGE PER SINGLE DETACHED UNIT

Service	Current Residential Charge	Calculated Residential Charge	Difference in Charge	
	(\$/sdu)	(\$/sdu)	\$	%
General Government	\$130	\$132	\$1	1%
Fire Department	\$618	\$880	\$261	42%
Joint Police Services	\$101	\$0	(\$101)	-100%
Parks & Recreation	\$0	\$1,043	\$1,043	n/a
Public Works	\$0	\$256	\$256	n/a
Total General Services Charge	\$850	\$2,310	\$1,461	172%
Roads & Related	\$595	\$2,363	\$1,768	297%
Total Township-Wide Residential Charge	\$1,445	\$4,673	\$3,229	223%

TABLE 8

TOWNSHIP OF NORWICH
 2009 DEVELOPMENT CHARGES BACKGROUND STUDY
 COMPARISON OF CURRENT VS. CALCULATED DEVELOPMENT CHARGES
 NON-RESIDENTIAL DEVELOPMENT CHARGE PER SQUARE METRE

Service	Current Non-Residential Charge (\$/sq.m)	Calculated Non-Residential Charge (\$/sq.m)	Difference in Charge	
			\$	%
General Government	\$0.23	\$0.35	\$0.12	55%
Fire Department	\$1.60	\$2.33	\$0.73	45%
Joint Police Services	\$0.23	\$0.00	(\$0.23)	-100%
Parks & Recreation	\$0.00	\$0.00	n/a	n/a
Public Works	\$0.00	\$0.68	\$0.68	n/a
Total General Services Charge	\$2.06	\$3.36	\$1.30	63%
Roads & Related	\$8.70	\$6.23	(\$2.47)	-28%
Total Township-Wide Non-Residential Charge	\$10.76	\$9.59	(\$1.17)	-11%

VII LONG TERM CAPITAL AND OPERATING COSTS

This section provides a brief examination of the long term capital and operating costs for the capital facilities and infrastructure to be included in the development charges by-law. This examination is required as one of the features of the *Development Charges Act, 1997*.

A. NET OPERATING COSTS FOR TOWNSHIP SERVICES TO INCREASE OVER FORECAST PERIOD

Table 9 summarizes the estimated increase in net operating costs that the Township will experience for additions associated with the planned capital program. The estimated changes in net operating costs are based on the current budget and other Township financial documents. Additional details are included in Appendix d.

As shown in Table 9, by 2018 the Township's net operating costs are estimated to increase by about \$172,400. The most significant portion of this increase relates to increasing road operating, winter control and maintenance costs. The construction of the new fire station and the storage shed will also have operating cost impacts.

B. LONG TERM CAPITAL FINANCING FROM NON-DEVELOPMENT CHARGE SOURCES TOTALS \$2.71 MILLION

Table 9 also summarizes the components of the growth-related capital forecast that will require funding from non-development charge sources as discussed above in Section VI. Of the \$9.02 million net capital forecast (property tax supported services), about \$1.50 million will need to be financed from non-development charge sources over the next 10 years. This includes about \$96,100 in respect of the mandatory 10 per cent discount required by the *DCA* for 'soft' services and about \$1.40 million for shares of projects related to capital replacement and for non-growth shares of projects that provide benefit to the existing community. A significant portion of this cost is related to the roads and related program which has a large non-growth or benefit to existing share.

In addition, approximately \$440,700 in interim financing may be required for projects related to general service level increases and to growth in the post-2018 period. It may be that most of these monies could be recovered from future development charges as the by-laws are

TABLE 9

TOWNSHIP OF NORWICH
SUMMARY OF LONG TERM CAPITAL AND
OPERATING COST IMPACTS
(in thousands of constant dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
NET OPERATING IMPACTS											
General Government	-	-	-	-	-	-	-	-	-	-	-
Fire	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5
Parks and Recreation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8.8	\$8.8	\$8.8	\$8.8	\$8.8	\$8.8
Public Works	\$0.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0
Roads	\$14.8	\$30.0	\$45.4	\$55.9	\$66.6	\$77.4	\$88.3	\$99.4	\$107.3	\$115.2	\$115.2
NET OPERATING IMPACTS	\$42.3	\$78.5	\$93.9	\$104.4	\$115.1	\$134.6	\$145.6	\$156.7	\$164.5	\$172.4	
LONG-TERM CAPITAL IMPACTS (1)											
Total Net Cost	\$2,054.9	\$852.2	\$593.3	\$1,435.7	\$626.5	\$750.4	\$636.7	\$648.4	\$660.4	\$760.3	\$9,019.0
Net Cost from Development Charges	\$868.2	\$428.2	\$206.9	\$612.6	\$57.7	\$335.7	\$193.5	\$179.7	\$191.4	\$395.0	\$3,468.9
Prior Growth Share from DC Reserve Balance (2)	\$114.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$114.5
Portion for Post-2018 Growth	\$0.0	\$34.1	\$19.3	\$31.7	\$35.2	\$46.4	\$61.2	\$67.7	\$145.1	\$0.0	\$440.7
Funding From Non-DC Sources											
Discount Portion (4)	\$11.0	\$26.9	\$0.0	\$43.2	\$1.3	\$12.5	\$0.0	\$0.0	\$0.0	\$1.3	\$96.1
Replacement Portion	\$468.6	\$40.6	\$44.7	\$425.8	\$210.0	\$33.4	\$59.6	\$78.6	\$1.6	\$41.7	\$1,404.6
FUNDING FROM NON-DC SOURCES	\$479.6	\$67.5	\$44.7	\$469.0	\$211.3	\$45.9	\$59.6	\$78.6	\$1.6	\$43.0	\$1,500.7
TOTAL NET OPERATING & CAPITAL IMPACTS	\$521.9	\$146.0	\$138.6	\$573.4	\$326.3	\$180.5	\$205.2	\$235.3	\$166.1	\$215.4	\$2,708.8

Notes:

- (1) See Appendix F
- (2) Existing development charge reserve fund balances collected from growth prior to 2008 are applied to fund initial projects in growth-related capital forecast
- (3) Post-2018 growth-related capital costs may be recovered from future development charges
- (4) Mandatory 10% reduction for applicable services

HEMSON

revisited at least every five years. However, given the time-frames involved, the interim financing for this amount could be required over an extended period.

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

VIII DEVELOPMENT CHARGE ADMINISTRATION

A. DEVELOPMENT CHARGE ADMINISTRATION

Many of the administrative requirements of the DCA will be similar to those presently followed by the Township in terms of collection practices. However, changes will likely be required in the use of and reporting on the new development charges. In this regard:

- It is recommended that the collection and administration policies be as consistent as practicable with those of the County of Oxford in order to simplify by-law administration and aid understanding for those required to pay the charges;
- As required under the DCA, the Township should codify any rules regarding application of the by-laws and any exemptions within the development charges by-laws proposed for adoption;
- It is recommended that the Township develop reporting policies consistent with the requirements of the DCA;
- It is recommended that the by-laws permit the payment of a development charge in cash or through services-in-lieu agreements. The municipality is not obligated to enter into services-in-lieu agreements;
- It is recommended that limited exemptions, other than those required in the DCA, be formally adopted in the by-laws;
- It is recommended that Council adopt the growth-related capital forecast included in this background study, subject to annual review through the Township's normal capital budget process.

B. LOCAL SERVICE DEFINITIONS

The following provides the definition of "local service" under the Development Charges Act (DCA) for a number of services provided by the County of Oxford and its Area municipalities. The purpose of establishing these definitions is to determine the eligible capital costs for inclusion in the development charges (DC) calculation for the County and its Area municipalities. The functions or services deemed to be local in nature are not to be included

in the determination of the development charge rates. The provision of local services is considered to be a direct developer responsibility under s.59 of the DCA and will (or may) be recovered under other agreement(s) with the landowner or developer. The issue of "local services" is being specifically considered for the services of:

- Roads and Related Services
- Water Services
- Wastewater Services
- Stormwater Services
- Parkland Development

1. Roads and Related Services

- Collector Roads:
 - The local component of a collector road internal to a development is a direct developer responsibility under s.59 of the DCA as a local service. The oversized share of a collector road internal to a development is development charge recoverable.
 - Collector roads external to a development are a local service if the works are within the area to which the plan relates and therefore a direct developer responsibility under s.59 of the DCA. Otherwise, the works are included in the DC calculation to the extent permitted under s.5(1) of the DCA.
- Arterial Roads:
 - New arterial roads and arterial road improvements - included as part of road costing funded through DCs. Only the oversizing component would be recovered through DCs and local road equivalent costs are considered to be a local service.
- Local Roads:
 - Local roads, as defined by the municipalities' engineering standards, are local services and a direct developer responsibility under s.59 of the DCA.
- Subdivision/Site Entrances and Related:
 - Entrances and all related costs (including, but not limited to: signalization, turn lanes, utilities and extensions, etc.), no matter the class of road, are a local service and a direct developer responsibility under s.59 of the DCA.
- Streetlights:
 - Streetlights internal to a development or site are a direct developer responsibility through local service provisions (s.59 of the DCA).

- Streetlights external to a development but related to the subject lands are a direct developer responsibility through local service provisions (s.59 of the DCA).
- Sidewalks:
 - Sidewalks internal to a development or site are a direct developer responsibility through local service provisions (s.59 of the DCA).
 - Sidewalks external to a development but required and related to the subject lands are a direct developer responsibility through local service provisions (s.59 of the DCA).
 - New sidewalks in other areas related to growth are included in the DC calculation to the extent permitted under s.5(1) of the DCA.
- Bike or Transit Lanes:
 - Bike or transit lanes, where requested, internal to a development or site are a direct developer responsibility through local service provisions (s.59 of the DCA).
 - Bike or transit lanes external to a development but required and related to the subject lands are a direct developer responsibility through local service provisions (s.59 of the DCA).
 - New bike or transit lanes in other areas related to growth are included in the DC calculation to the extent permitted under s.5(1) of the DCA.
- Noise Abatement Measures:
 - Noise abatement measures internal to a development are a direct developer responsibility through local service provisions (s.59 of the DCA).
 - Noise abatement measures external to a development but required and related to, or mitigate impacts from, the development of the subject lands, are a direct developer responsibility through local service provisions (s.59 of the DCA).
- Street Tree Planting
 - Street tree planting, as required in the Engineering Standards, is considered a local area service and a direct responsibility of the developer.
- Land Acquisition for Road Allowances
 - Land acquisition for planned road allowances within development lands is a dedication under the Planning Act provisions.

- Land acquisition for planned road allowances outside of development lands, and that is not a dedication under the Planning Act , is included in the DC calculation to the extent permitted under s.5(1) of the DCA.
- Additional land acquisition for bridges or grade separations (beyond normal dedication requirements) is to the extent eligible as identified and included, if applicable, in the Development Charges Background Study.
- County Roads
 - The definition of a "local service: with respect to County roads is as follows:
 - All improvements to a County road to facilitate development are considered local services to be paid by the developer unless they fall into one of the following categories:
 - The improvement is designated as required for traffic flow improvement for an area greater than the development, is defined as a road improvement required by the County, and is identified through the Class Environmental Assessment process or the County Transportation study. Such an improvement would be listed in the Development Charges Background Study.
 - The improvement is designated as required by County of Oxford staff to serve a greater area than the development and is identified in the 5 year Capital Works forecast and is listed in the Development Charges Background Study.
 - The improvement is designated as required by County of Oxford staff to serve a greater area than the development and is identified in the capital works forecast or similar County financial documents, and is listed in the development charges study.

2. Water Services

The definition of a "local service: with respect to water services is as follows:

- All growth-related water supply, storage, treatment facilities and booster pumping stations will be included in the development charge calculation, unless specifically noted otherwise in the Development Charges Study.
- Watermains within the development that are larger than 250 mm are to be included in the development charge calculation. The amount of cost contribution for watermains within a development shall be calculated using tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 250mm pipe diameter including a 10% engineering fee. Only watermain and valves will be included in the calculation. Any costs related to the depth of pipe are the responsibility of the developer.

- Water mains 250mm and under are deemed to be a local service and are a direct funding responsibility of the developer.
- Connections to trunk mains and pumping stations to service specific areas are to be a direct developer responsibility. Watermains will generally be required to be carried to a property line or external to the subdivision to connect to an existing watermain as a local service as a direct funding responsibility of the developer.
- Trunk watermains, generally outside the development area, identified by a Class Environmental Assessment, Servicing Study or by County staff will be included in the development charge calculation.

3. Wastewater Services

The definition of a "local service: with respect to wastewater services is as follows:

- All sanitary sewage treatment facilities are to be included in the development charge calculation, unless specified otherwise in the Development Charges study.
- Major sanitary trunk sewers, external to the development, and major pumping stations serving more than one development are to be included in the development charge calculation. These services will be identified through a Class Environmental assessment, Servicing Study or by County staff.
- Sewer collectors 250mm and under are deemed to be a local service and are a direct funding responsibility of the developer. Sanitary sewers larger than 250mm that also service upstream properties will have cost sharing calculated on the tendered unit prices and shall be the difference between the cost of the actual pipe diameter and the cost of a 250mm pipe including a 10% engineering fee. All other appurtenances with respect to oversizing and any costs related to the depth of pipe are the responsibility of the developer.
- Connections to collectors and pumping stations to service specific areas are to be a direct developer responsibility. The cost of continuing the last run of a sewer upstream past the last manhole to property line is the responsibility of the developer as a local services.
- Local pumping stations serving a small localized area (which may include more than one development property) are local services to be paid by the developer or developers on a flow area or proportional basis. Local pumping stations will not be included in the list of projects in the DC background study and therefore not eligible for development charge funding or credits.

- Any oversizing costs for other developers on a local pumping station will be negotiated as part of the development agreement for the particular developer.

4. Stormwater Management Services

- The costs of stormwater management facilities internal to subdivision and related to a plan of subdivision are considered to be a local service under the DCA and the associated costs are not included in the development charges calculation. Local SWM facilities would typically include:
 - Stormwater management facilities servicing local drainage areas;
 - Storm sewer oversizing associated with local drainage areas;
 - Storm sewer works on existing roads.

5. Parkland Development

- For the purpose of parkland development, local services include the requirement for the owner to undertake preparation of the park plan, retaining necessary consultants to prepare design and grading plans for the park, prior to development. In addition, the owner is required to provide stripping and stockpiling, leveling, topsoiling, seeding and stormwater servicing including all appurtenances (consistent with the plan), fencing the property perimeter, and provide municipal water and waste water services to the lot line. These requirements are part of the conditions of s.51 and 53 Planning Act agreements. The municipality also requires the owner to dedicate parkland or provide cash-in-lieu, consistent with the Planning Act provisions. All of these costs are deemed a direct responsibility of the developer and have not been included in the development charge calculation.
- With respect to other parkland development costs, the municipal policy is to include all other components of parkland development in the DC calculation, including parking, park furniture, signage, landscaping and walkways and multi-purpose trails, in addition to the necessary fields, diamonds, playground equipment, lighting, irrigation and field houses.

APPENDIX A

GROWTH FORECAST

APPENDIX A

GROWTH FORECAST

This appendix provides the details of the growth forecast that was used to prepare the Development Charges Background Study for the Township of Norwich. The forecast method and key assumptions are discussed. The results of the forecasts are provided in a series of tables.

Forecasts of population, households, employment and non-residential building are based on the projections prepared by Hemson Consulting Ltd. for the County of Oxford entitled, *Population, Household & Employment Forecasts 2001-2031*, in April 2006. These forecasts were undertaken in conjunction with the *Oxford County Economic Strategy* prepared for the County by Hemson and Mathew Fischer and Associates.

A. COUNTY OF OXFORD FORECAST

The population and household forecast for the County is based on a standard cohort-survival forecast model that incorporates fertility, mortality, headship and participation rates, and migration by age group. Levels of natural increase in the County are declining due to decreasing fertility rates, the aging of the population overall and, particularly, the aging of the “baby boom” population beyond its child bearing years. The major factor affecting population growth in the County is the level of net in-migration, mainly from other parts of Ontario. A significant influence on migration levels will be the impacts of the major new manufacturing and related investments occurring in and around the 401 corridor and elsewhere.

The forecast assumes that initially, the net increase in the labour force that will be required to fill the new jobs in Oxford will be accommodated largely by commuters beyond Oxford. Experience elsewhere suggests that over time, commuters will eventually begin to re-locate to Oxford, thereby increasing the County’s labour force. The following is a summary of the assumptions and method used in the forecasts. For a more detailed description, please consult the April 2006 Hemson Oxford County forecast report referenced above.

1. Residential Forecast

A standard cohort-survival model was used to estimate population growth through natural increase (births less deaths). The level of net migration to Oxford was set by considering the effect of known manufacturing investments and the resulting spin-off employment impacts. The amount of net migration to Oxford in the 2001-2006 period was estimated at 1,200 persons annually. Net migration is projected to peak at 1,600 annually in the period after 2016 when it is anticipated that about 50% of the new employment opportunities will be filled by new Oxford County residents.

Household projections by type are based on 2006 Census age-specific household formation data and on unit type preferences by age of household head data within each age group for Oxford.

2. Non-Residential Forecast

The employment forecast is based on the following assumptions:

- Age and sex participation rates are held constant at 2006 levels with the exception of minor adjustments for increases related to increased participation rates of older females.
- The unemployment rate at the time of the 2006 Census of 5% is maintained throughout the forecast.
- Employment adjustments were made to take account of the major new investments since 2006 and over the coming years.

B. TOWNSHIP OF NORWICH FORECAST

The Oxford County forecast is disaggregated into area municipal forecasts for the purposes of calculating development charge rates for each area municipality.

1. Residential Forecast

The Oxford County housing forecast was allocated to the area municipalities in Oxford, including Norwich, based on projected market shares. The population forecast is a result of applying household sizes to the housing forecast. The average household size forecast

for the area municipalities is consistent with the projection for the County. The shares of housing growth for the area municipalities are based on historic shares and anticipated changes as a result of new employment-generating investments. Norwich's share of housing growth is projected to remain at about 7% of the County total. The housing forecasts do not take into account potential long-term land supply constraints in the Township.

Norwich's historic population, households, and employment from 1991 to 2006 are provided in Table A.1. and A.2. Average household sizes and activity rates are also provided.

In addition to the overall population forecast, population growth that occurs only in new housing is provided. This forecast is based upon a long historic time series of population growth in housing by period of construction. This historic data for Norwich is based on a special Census data tabulation by Statistics Canada and is provided in Table A.3.

For the residential portion of the forecast, the total additional population that will result from the addition of new housing units is estimated. This "population in new units" determines the need for additional facilities and provides the foundation for the growth-related capital forecast.

2. Non-Residential Forecast

The employment forecast for Norwich is based on allocating the County's employment forecast by three types – employment land, rural and rural based and population-related employment – based on historic patterns and anticipated locational employment growth trends based on the recent and anticipated major investments. In addition to the employment forecast, Hemson also prepared a forecast of non-residential (commercial, industrial and institutional) floor space as part of the development charges forecast. The floor space per employee ratios used are based on recent observed non-residential development in Norwich as well as on typical industry averages.

C. FORECAST RESULTS

Based upon the methodology, inputs and assumptions discussed in Section A, forecasts of population, housing, employment and non-residential floor space were prepared for the Township of Norwich. The forecast results are presented in the following tables:

- | | |
|-----------|---|
| Table A.1 | Historic population, households and employment from 1991 to 2006. |
| Table A.2 | Historic annual housing completions in Norwich from 1994 to 2007. |
| Table A.3 | Historic average household size by unit type for the Township. |
| Table A.4 | Forecast results for the development charges planning period 2009 to 2031. This table also presents the forecast growth in new housing units which forms the basis of the growth-related capital program. |
| Table A.5 | Net change in population between growth in new households versus existing households. |
| Table A.6 | Net change and total employment growth for the ten year period of 2009 to 2018 and to 2031. |
| Table A.7 | Non-residential space forecast for employment land and population-related employment based on typical space per employee ratios. |

TOWNSHIP OF NORWICH DEVELOPMENT CHARGE STUDY - 2009

TABLE A.1
Historic Population, Households & Employment

Mid-Year	Population	Growth	Households	Growth	HH Size	Employment	Growth	Activity Rate
1991	10,146		3,231		3.14	2,760		27.2%
1992	10,227	81	3,260	29	3.14	2,863	103	28.0%
1993	10,310	82	3,290	30	3.13	2,970	107	28.8%
1994	10,392	83	3,320	30	3.13	3,080	111	29.6%
1995	10,476	83	3,350	30	3.13	3,195	115	30.5%
1996	10,560	84	3,380	30	3.12	3,314	119	31.4%
1997	10,544	-16	3,389	9	3.11	3,443	129	32.7%
1998	10,527	-16	3,398	9	3.10	3,577	134	34.0%
1999	10,511	-16	3,407	9	3.09	3,717	139	35.4%
2000	10,494	-16	3,416	9	3.07	3,862	145	36.8%
2001	10,478	-16	3,425	9	3.06	4,012	150	38.3%
2002	10,479	1	3,434	9	3.05	4,027	15	38.4%
2003	10,479	1	3,443	9	3.04	4,043	16	38.6%
2004	10,480	1	3,451	9	3.04	4,059	16	38.7%
2005	10,480	1	3,460	9	3.03	4,074	16	38.9%
2006	10,481	1	3,469	9	3.02	4,090	16	39.0%
2007	10,677	196	3,540	71	3.02	4,182	92	39.2%
2008	10,877	200	3,613	73	3.01	4,276	94	39.3%

Source: Statistics Canada, Census of Canada

Note: 1996 data adjusted to reflect municipal boundary changes between 1996 and 2001.

TABLE A.2

Historic Housing Activity - Units

Mid-Year	Housing Completions - Units			Total
	Singles/Semis	Rows	Apts.	
1994	28	0	0	28
1995	24	0	0	24
1996	20	0	0	20
1997	29	0	0	29
1998	21	0	0	21
1999	27	0	0	27
2000	31	0	6	37
2001	31	8	0	39
2002	37	0	0	37
2003	17	0	0	17
2004	33	0	0	33
2005	27	0	0	27
2006	33	0	0	33
2007	43	2	0	45
Total	401	10	6	417
Average '98-'07	30	1	1	32
Average '03-'07	31	0	0	31

Source: Statistics Canada, Building Permits Data

Historic Housing Activity - Shares By Unit Type

Mid-Year	Housing Completions - Units			Total
	Singles/Semis	Rows	Apts.	
1994	100%	0%	0%	100%
1995	100%	0%	0%	100%
1996	100%	0%	0%	100%
1997	100%	0%	0%	100%
1998	100%	0%	0%	100%
1999	100%	0%	0%	100%
2000	84%	0%	16%	100%
2001	79%	21%	0%	100%
2002	100%	0%	0%	100%
2003	100%	0%	0%	100%
2004	100%	0%	0%	100%
2005	100%	0%	0%	100%
2006	100%	0%	0%	100%
2007	96%	4%	0%	100%
Total	96%	2%	1%	100%

TABLE A.3
Historic Households by Period of Construction Showing Household Size

	Period of Construction										Total
	Pre 1946	1946-1960	1961-1970	1971-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2006	1996-2006	
Singles											
Household Population	23,580	11,230	8,875	10,660	2,450	6,140	5,150	5,630	5,595	11,225	79,310
Households	8,415	4,665	3,410	3,910	920	2,085	1,695	1,795	1,825	3,620	28,720
Household Size	2.80	2.41	2.60	2.73	2.66	2.94	3.04	3.14	3.07	3.10	2.76
Semis											
Household Population	1,055	555	920	1,450	205	725	510	340	285	625	6,045
Households	425	220	315	490	110	250	215	150	135	285	2,310
Household Size	2.48	2.52	2.92	2.96	1.86	2.90	2.37	2.27	2.11	2.19	2.62
Singles/Semis											
Household Population	4,365	1,320	1,025	1,205	205	430	425	385	570	955	9,930
Households	1,360	515	375	460	80	140	130	95	135	230	3,290
Household Size	3.21	2.56	2.73	2.62	2.56	3.07	3.27	4.05	4.22	4.15	3.02
Rows											
Household Population	0	0	0	0	0	0	0	0	0	0	0
Households	10	0	0	0	10	15	10	0	10	10	55
Household Size	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments											
Household Population	170	0	0	0	0	0	0	0	0	0	170
Households	95	10	0	0	10	0	10	0	0	0	125
Household Size	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36
All Units											
Household Population	4,535	1,320	1,025	1,205	205	430	425	385	570	955	10,100
Households	1,465	525	375	460	100	155	150	95	145	240	3,470
Household Size	3.10	2.51	2.73	2.62	2.05	2.77	2.83	4.05	3.93	3.98	2.91

Source: Statistics Canada, 2006 Census Special Run

TABLE A.4
Population, Household & Employment Forecast Summary

Mid-Year	Population	Households	Employment	PPH	Activity Rate	Mid-Year	Pop'n Growth	Total Pop'n	HH Growth	Total HHs	Pop'n in New HHs*
2006	10,481	3,469	4,090	3.02	39.0%	2007	196	10,677	71	3,540	235
2007	10,677	3,540	4,182	3.02	39.2%	2008	200	10,877	73	3,613	240
2008	10,877	3,613	4,276	3.01	39.3%	2009	204	11,081	74	3,687	245
2009	11,081	3,687	4,373	3.01	39.5%	2010	208	11,289	76	3,763	250
2010	11,289	3,763	4,471	3.00	39.6%	2011	211	11,500	77	3,840	255
2011	11,500	3,840	4,572	2.99	39.8%	2012	137	11,637	53	3,893	173
2012	11,637	3,893	4,683	2.99	40.2%	2013	138	11,775	53	3,946	176
2013	11,775	3,946	4,796	2.98	40.7%	2014	140	11,915	54	4,000	178
2014	11,915	4,000	4,913	2.98	41.2%	2015	142	12,057	55	4,055	181
2015	12,057	4,055	5,032	2.97	41.7%	2016	143	12,200	55	4,110	183
2016	12,200	4,110	5,154	2.97	42.2%	2017	118	12,318	39	4,149	130
2017	12,318	4,149	5,209	2.97	42.3%	2018	119	12,437	40	4,189	131
2018	12,437	4,189	5,265	2.97	42.3%	2019	120	12,557	40	4,229	132
2019	12,557	4,229	5,321	2.97	42.4%	2020	121	12,678	40	4,269	133
2020	12,678	4,269	5,378	2.97	42.4%	2021	122	12,800	41	4,310	135
2021	12,800	4,310	5,436	2.97	42.5%	2022	118	12,918	41	4,351	136
2022	12,918	4,351	5,472	2.97	42.4%	2023	119	13,037	42	4,393	137
2023	13,037	4,393	5,508	2.97	42.3%	2024	120	13,157	42	4,435	139
2024	13,157	4,435	5,544	2.97	42.1%	2025	121	13,278	42	4,477	140
2025	13,278	4,477	5,581	2.97	42.0%	2026	122	13,400	43	4,520	141
2026	13,400	4,520	5,618	2.96	41.9%	2027	79	13,479	28	4,548	91
2027	13,479	4,548	5,673	2.96	42.1%	2028	80	13,559	28	4,575	92
2028	13,559	4,575	5,729	2.96	42.3%	2029	80	13,639	28	4,603	92
2029	13,639	4,603	5,786	2.96	42.4%	2030	80	13,719	28	4,632	93
2030	13,719	4,632	5,842	2.96	42.6%	2031	81	13,800	28	4,660	94
2031	13,800	4,660	5,900	2.96	42.8%	2009-2018	1,559	12,437	576	4,189	1,901
						2019-2031	1,363	13,800	471	4,660	1,555
						2009-2031	2,923	13,800	1,047	4,660	3,455

*Source: See Table A.5

TABLE A.5

Forecast Population & Household Growth Summary

Population per Household in New Units* 3.30

Mid-Year	New HH Growth	Pop'n in New HHs	Existing Pop	Existing HHs	Existing Base
2008			10,877	3,613	3.01
2009	74	245			
2010	76	250			
2011	77	255			
2012	53	173			
2013	53	176			
2014	54	178			
2015	55	181			
2016	55	183			
2017	39	130			
2018	40	131			
2009-2018	576	1,901	12,437	4,189	2.97
2019-2031	471	3,455	13,800	4,660	2.96
2009-2031	1,047	3,455	13,800	4,660	2.96

*Based on information provided on Table A.3.

TABLE A.6

Forecast Employment Growth

	Employment Growth	Total Employment
2008	94	4,276
2009	96	4,373
2010	99	4,471
2011	101	4,572
2012	111	4,683
2013	114	4,796
2014	116	4,913
2015	119	5,032
2016	122	5,154
2017	55	5,209
2018	56	5,265
2009-2018	989	5,265
2019-2031	635	5,900
2009-2031	1,624	5,900

TABLE A.7
Non-Residential Space Forecast

Employment Density
 Employment Land Employment 110 m² per employee
 Population-Related Employment 50 m² per employee
 Rural-Based Employment 100 m² per employee

Mid-Year	Employment Land		Population-Related		Rural-Based		Total	
	Empl Growth	Space (m ²)	Empl Growth	Space (m ²)	Empl Growth	Space (m ²)	Empl Growth	Space (m ²)
2007	41	4,500	15	800	36	3,600	92	8,900
2008	43	4,700	15	800	36	3,600	94	9,100
2009	44	4,900	15	800	37	3,700	96	9,400
2010	46	5,100	15	800	37	3,700	99	9,600
2011	48	5,300	15	800	37	3,700	101	9,800
2012	37	4,100	18	900	56	5,600	111	10,600
2013	38	4,200	18	900	57	5,700	114	10,800
2014	39	4,300	18	900	59	5,900	116	11,100
2015	41	4,500	19	900	60	6,000	119	11,400
2016	42	4,600	19	900	61	6,100	122	11,600
2017	3	300	14	700	39	3,900	55	4,900
2018	3	300	14	700	39	3,900	56	4,900
2019	3	300	14	700	40	4,000	56	5,000
2020	2	300	14	700	40	4,000	57	5,000
2021	2	300	14	700	41	4,100	58	5,100
2022	8	900	17	900	11	1,100	36	2,900
2023	8	900	18	900	11	1,100	36	2,900
2024	8	900	18	900	11	1,100	36	2,900
2025	8	900	18	900	11	1,100	37	2,900
2026	8	900	18	900	11	1,100	37	2,900
2027	5	500	13	600	38	3,800	55	4,900
2028	5	500	13	600	38	3,800	56	4,900
2029	5	500	13	700	39	3,900	56	5,100
2030	5	500	13	700	39	3,900	57	5,100
2031	5	500	13	700	39	3,900	58	5,100
2009 - 2018	341	37,600	166	8,300	481	48,200	989	94,100
2019 - 2031	71	7,900	197	9,900	368	36,900	635	54,700
2009 - 2031	411	45,500	363	18,200	849	85,100	1,624	148,800

Source: Employment land employment growth based on April 2006 Hemson forecast adjusted for recent industrial development activity



APPENDIX B

***TOWNSHIP SERVICES
TECHNICAL APPENDIX***

APPENDIX B

TOWNSHIP SERVICES TECHNICAL APPENDIX INTRODUCTION AND OVERVIEW

This appendix provides the detailed analysis undertaken to establish the development charge rates for each of the Township services.

The appendix is structured into six subsections, with one section for each of the Township services:

- B.1 General Government
- B.2 Fire Protection
- B.3 Parks and Recreation
- B.4 Public Works
- B.5 Parks and Recreation
- B.6 Roads

Every sub-section contains a set of three tables, with the exception of General Government and Roads, providing the background data and analysis undertaken to arrive at the calculated development charge rates for that particular service. The following is an overview of the content and purpose of each of the five tables:

TABLE 1 HISTORIC SERVICE LEVELS

Table 1 provides the data utilized to determine the 10-year historic service level. The *DCA* and *Ontario Regulation 82/98* require that the development charges be set at a level no higher than the average service level provided in the Township over the 10-year period immediately preceding the preparation of the background study, on a service by service basis. For the purpose of this study, the historical inventory period has been defined as 1999 to 2008.

O. Reg. 82/98 requires that when defining and determining historical service levels that both quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by the consideration of the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of dollars per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the growth-related capital facilities that are to be charged to new

growth reflect not only the quantity (number and size) but also the quality (value or cost) of service provided historically by the Township. Both the quantitative and qualitative aspects of service levels used in the present analysis are based on information provided by staff of the Township. This information is generally based on historical records and experience with costs to acquire or construct similar facilities, equipment and infrastructure.

The final page of Table 1 shows the calculation of the maximum allowable, net of uncommitted excess capacity. The “maximum allowable” is defined as the 10-year historic service level (expressed as \$/capita) multiplied by the forecast increase in population in new units (or new households) over the planning period. The resulting value is the amount of capital infrastructure that must be constructed for that particular service in order to maintain the 10-year historic service level.

There is also a requirement in the *DCA* to consider “excess capacity” within the Township’s existing infrastructure that may be available to partially meet the future servicing requirements. If Council has expressed an intention, before or at the time the capacity was created, that the cost of providing the capacity would be paid for by new development, it is considered “committed excess capacity” under the *DCA* and the associated capital is eligible for recovery. If uncommitted excess capacity exists, the calculated maximum will be reduced by this amount.

TABLE 2 2009–2018 GROWTH-RELATED CAPITAL BUDGET & CALCULATION OF DEVELOPMENT CHARGE

The *DCA* requires the Township Council to express its intent to provide future capital facilities at the level incorporated in the development charges calculation. Based on the growth forecasts as provided in Appendix A, staff of the Township, in collaboration with the consultant, have developed a growth-related capital forecast setting out those projects that are required to service anticipated growth for the 10-year period from 2009 to 2018.

To determine the growth-related share of the program, the project costs are reduced by any “prior growth” and “replacement” shares. A prior growth share relates to a portion of a facility that is being constructed to alleviate an existing deficiency and service growth that has already occurred. In many situations, existing development charge reserve funds will be used to fund the prior growth share.

A replacement share is when a new facility will in part provide servicing for a municipal facility that is demolished, redeployed or will otherwise not be available to serve its former function. The

replacement share of the capital program is not deemed to be growth-related and is therefore removed from the development charge calculation.

The capital program less any prior growth and replacements shares yields the net growth-related program. Although deemed growth related, not all of the net growth-related capital program may be recoverable from development charges in the period 2009 to 2018. For many of the services a portion of the capital program will service growth that will not occur until beyond 2018. This portion of the capital program is deemed “pre-built” service capacity and is to be considered as committed excess capacity to be recovered under future development charges.

The capital costs associated with pre-built service capacity is removed from the capital program to produce the growth-related capital program for the period 2009 to 2018. In all cases, as required, this amount is equal to or less than the maximum allowable as calculated on the final page of Table 1. Finally, in calculating development charges, the growth-related net capital costs must be reduced by 10 per cent for all services except fire and roads services (*DCA*, s. 5. (1) 8.). The 10 per cent discount is applied to the other services. The result is the discounted growth-related net capital costs that are eligible for recovery against growth over the period 2009 to 2018.

Calculation of the Unadjusted Development Charge Rates

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

The first step in the determination of the unadjusted development charges rate is the allocation of the growth-related net capital costs between the residential and the non-residential sectors. For all services except library and parks and recreation, the growth-related costs have been allocated 70 per cent residential and 30 per cent non-residential based on changes in population and employment over the planning period and other considerations.

The growth-related costs associated with parks and recreation services have been allocated 100 per cent to residential services because the need for these services is driven by residential development.

The residential growth-related costs are then divided by the forecast population in new housing units resulting in the unadjusted residential development charge on a per capita basis. The

non-residential growth-related costs are divided by the forecast increase in non-residential gross floor area (GFA) yielding a charge per square metre of new non-residential GFA.

B.1 GENERAL GOVERNMENT

The *DCA* allows in the calculation of development charges the inclusion of the costs of undertaking studies related to the provision of growth-related infrastructure, including development charges background studies.

Table 1 provides a list of growth-related studies the Township of Norwich anticipates undertaking during the 2009-2018 period. As required by the *DCA*, two development charges studies are included in this period. A Master Drainage Plan is also included at a cost of \$90,000. The 10-year capital program totals \$115,000.

Table 1 also provides the calculation of the discounted growth-related capital costs for General Government. A portion of the program, \$5,100, has been identified as a prior growth share, and will be funded from development charges on hand. The remaining \$109,900 is identified as growth-related for the 2009-2018 period. As required, the total cost is discounted by 10 per cent, carrying forward \$98,900 in the development charge calculation.

As identified on Table 1, 70 per cent or \$69,200 of the growth-related cost is allocated against new residential development, and 30 per cent or \$29,700 against non-residential development. This yields unadjusted development charges of \$36.42/capita and \$0.32/square metre.

After cash flow considerations (Table 2), the calculated rates are \$39.85/capita and \$0.35/square metre. The following table summarizes the calculation of the General Government development charge.

GENERAL GOVERNMENT SUMMARY					
2009-2018		Unadjusted		Adjusted	
Growth-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m.	\$/capita	\$/sq.m.
\$115,000	\$98,889	\$36.42	\$0.32	\$39.85	\$0.35

TOWNSHIP OF NORWICH
2008 DEVELOPMENT CHARGES BACKGROUND STUDY
GROWTH-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Total Project Cost	Less Grants /Subsidies	Total Municipal Cost	Replacement and Benefit To Existing	Prior Growth	Growth-Related Costs		2009-2018 Discounted Growth-Related Net Capital Costs
								2009-2018	Post 2018	
1.00 GENERAL GOVERNMENT										
	1.1 Growth-Related Studies									
	1.1.1 Master Drainage Plan	2009	\$ 90,000	\$ -	\$ 90,000	\$ -	\$ 5,123	\$ 84,877	\$ -	\$ 90,000
	1.1.2 Development Charge Study	2013	\$ 12,500	\$ -	\$ 12,500	\$ -	\$ -	\$ 12,500	\$ -	\$ 12,500
	1.1.3 Development Charge Study	2018	\$ 12,500	\$ -	\$ 12,500	\$ -	\$ -	\$ 12,500	\$ -	\$ 12,500
	TOTAL GENERAL GOVERNMENT		\$ 115,000	\$ -	\$ 115,000	\$ -	\$ 5,123	\$ 109,877	\$ -	\$ 115,000

Non-Chargeable Growth-Related Net Capital Cost: \$ 10,988

Residential Development Charge Calculation		
Residential Share of 2009-2018 Discounted Growth-Related Capital Program	70%	\$69,223
10 Year Growth in Population in New Units		1,901
Unadjusted Development Charge Per Capita (\$)		\$36.42
Non-Residential Development Charge Calculation		
Non-Residential Share of 2009-2018 Discounted Growth-Related Capital Program	30%	\$ 29,667
10 Year Growth in Square Meters		94,100
Unadjusted Development Charge Per Sq.M (\$)		\$0.32

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
GENERAL GOVERNMENT
RESIDENTIAL DEVELOPMENT CHARGE

1.00 GENERAL GOVERNMENT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	(\$44.9)	(\$37.0)	(\$28.2)	(\$22.3)	(\$24.5)	(\$17.9)	(\$10.7)	(\$2.7)	\$3.2	
2009-2018 RESIDENTIAL FUNDING REQUIREMENTS											
- 1.00 General Government - constant (\$000)	\$53.5	\$0.0	\$0.0	\$0.0	\$7.9	\$0.0	\$0.0	\$0.0	\$0.0	\$7.9	\$69.22
- 1.00 General Government - current (\$000)	\$53.5	\$0.0	\$0.0	\$0.0	\$8.5	\$0.0	\$0.0	\$0.0	\$0.0	\$9.4	\$71.41
POPULATION GROWTH											
- Population in New Units	245	250	255	173	176	178	181	183	130	131	1,901
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$9.8	\$10.2	\$10.6	\$7.3	\$7.6	\$7.8	\$8.1	\$8.4	\$6.0	\$6.2	\$82.00
- Interest on Opening Balance	\$0.0	(\$2.5)	(\$2.0)	(\$1.6)	(\$1.2)	(\$1.3)	(\$1.0)	(\$0.6)	(\$0.1)	\$0.1	(\$10.24)
- Interest on In-year Transactions (excl.int.)	(\$1.2)	\$0.2	\$0.2	\$0.1	(\$0.0)	\$0.1	\$0.1	\$0.1	\$0.1	(\$0.1)	(\$0.29)
TOTAL REVENUE	\$8.6	\$7.9	\$8.8	\$5.9	\$6.3	\$6.6	\$7.3	\$8.0	\$6.0	\$6.2	\$71.47
CLOSING CASH BALANCE	(\$44.9)	(\$37.0)	(\$28.2)	(\$22.3)	(\$24.5)	(\$17.9)	(\$10.7)	(\$2.7)	\$3.2	\$0.1	
GENERAL GOVERNMENT PER CAPITA CHARGE											\$39.85

APPENDIX B.1
TABLE 4 - PAGE 2

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
GENERAL GOVERNMENT
NON-RESIDENTIAL DEVELOPMENT CHARGE

1.00 GENERAL GOVERNMENT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	(\$20.2)	(\$17.8)	(\$15.1)	(\$12.0)	(\$12.2)	(\$8.5)	(\$4.4)	\$0.2	\$2.2	
2009-2018 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- 1.00 General Government - constant (\$000)	\$22.9	\$0.0	\$0.0	\$0.0	\$3.4	\$0.0	\$0.0	\$0.0	\$0.0	\$3.4	\$29.67
- 1.00 General Government - current (\$000)	\$22.9	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	\$0.0	\$0.0	\$0.0	\$4.0	\$30.60
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	9,400	9,600	9,800	10,600	10,800	11,100	11,400	11,600	4,900	4,900	94,100
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$3.3	\$3.4	\$3.6	\$3.9	\$4.1	\$4.3	\$4.5	\$4.7	\$2.0	\$2.0	\$35.80
- Interest on Opening Balance	\$0.0	(\$1.1)	(\$1.0)	(\$0.8)	(\$0.7)	(\$0.7)	(\$0.5)	(\$0.2)	\$0.0	\$0.1	(\$4.87)
- Interest on In-year Transactions (excl.int.)	(\$0.5)	\$0.1	\$0.1	\$0.1	\$0.0	\$0.1	\$0.1	\$0.1	\$0.0	(\$0.1)	(\$0.13)
TOTAL REVENUE	\$2.8	\$2.4	\$2.7	\$3.1	\$3.4	\$3.7	\$4.1	\$4.5	\$2.0	\$2.0	\$30.80
CLOSING CASH BALANCE	(\$20.2)	(\$17.8)	(\$15.1)	(\$12.0)	(\$12.2)	(\$8.5)	(\$4.4)	\$0.2	\$2.2	\$0.2	
GENERAL GOVERNMENT SQ.M. CHARGE											\$0.35

B.2 FIRE PROTECTION SERVICES

The Norwich Fire Department offers fire protection services from four stations; Otterville, Norwich, Burgessville and Oxford Centre.

Table 1 Historic Service Levels

The current value of the total fire services capital infrastructure, including building, land, vehicles, furniture and equipment is \$5.93 million and has provided Norwich with a 10-year average historical service level of \$550.73 per household. This service level, multiplied by the 10-year forecast of population in new housing units equals a maximum allowable of \$1.05 million. No excess capacity is identified in this service and as such, the full \$1.05 is to be recovered through development charges.

Table 2 2009 – 2018 Growth-Related Capital Program

The 2009-2018 growth-related capital program focuses on the replacement and expansion of Otterville Station #1. It is intended that the new Otterville Station will replace the current station. The total gross cost for this project is \$1.1 million.

Of this gross cost, an amount of \$468,600 is identified as a replacement share, as the old Otterville station will be closed due to the construction of the new station. This portion is removed from the development charges calculations thus bringing the remainder, \$631,400 to be recovered. No legislative discount is required for fire protection services and the amount of \$631,400 will be fully recovered through development charges.

The growth-related cost is allocated 70% or \$441,900 against new residential development, and 30% or \$189,400 against non-residential development. This yields unadjusted development charges of \$232.54/capita and \$2.01/sq.m.

Table 3 Cash Flow Analysis

After cash flow consideration, the calculated residential charge increase to \$266.55/capita and the non-residential charge is increased to \$2.33/square metre. The following table summarizes the calculation of the fire development charge.

FIRE SERVICES SUMMARY						
10-year Hist. Service Level \$/capita	2009-2018 Growth-Related Capital Program		Unadjusted Development Charge		Adjusted Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m.	\$/capita	\$/sq.m.
\$550.73	\$1,100,000	\$631,400	\$232.54	\$2.01	\$266.55	\$2.33

APPENDIX B.2
TABLE 1 - PAGE 1

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
FIRE PROTECTION SERVICES

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	UNIT COST (\$/sq.ft.)
BUILDINGS (sq.ft.)											
Oterville Station # 1	2,343	2,343	2,343	2,343	2,343	2,343	2,343	2,343	2,343	2,343	\$165
Old Norwich Station # 2	1,595	1,595	1,595	1,595	1,595	1,595	1,595	1,595	1,595	1,595	\$165
New Norwich Station # 2											\$165
Burgessville Station # 3	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171	2,171	\$165
Oxford Centre Station # 4	2,164	2,164	2,164	2,164	2,164	2,164	2,164	2,164	2,164	2,164	\$165
Out Buildings (3)	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	1,740	\$90
Total (sq.ft.)	10,013	10,013	10,013	10,013	10,013	10,013	10,013	10,013	10,013	10,213	
Total (\$000)	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,554.6	

(1) New Norwich Station oversized for future growth.

	UNIT COST (\$/ha)
LAND (hectares)	
Oterville Station # 1	0.09
Old Norwich Station # 2	0.26
New Norwich Station # 2	
Burgessville Station # 3	2.06
Oxford Centre Station # 4	0.70
Total (ha)	3.11
Total (\$000)	\$574.7

	UNIT COST (\$/vehicle)
VEHICLES (# at all stations & divisions)	
Oterville Station # 1	
Pumper/Rescue	1
Tanker	1
Norwich Station # 2	
Pumper	1
Pumper/Rescue	1
Burgessville Station # 3	
Pumper	1
Tanker	1
Mini/Pumper	1
Oxford Centre Station # 4	
Tanker	1
Pumper	1
Total (#)	9
Total (\$000)	\$2,350.0

	UNIT COST (\$/firefighter)
FURNITURE & EQUIPMENT (excluding computers)	
Oterville Station # 1	\$226,200
Old Norwich Station # 2	\$308,300
New Norwich Station # 2	
Burgessville Station # 3	\$260,700
Oxford Centre Station # 4	\$148,700
Breathing Air System	\$35,000
SCBA	45
Firefighter Equipment	66
Total (\$000)	\$1,366.8

APPENDIX B.2
TABLE 1 - PAGE 2

TOWNSHIP OF NORWICH
CALCULATION OF SERVICE LEVELS
FIRE PROTECTION SERVICES

Historical Population	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
10,511	10,494	10,478	10,479	10,479	10,479	10,480	10,480	10,481	10,877	11,081
INVENTORY SUMMARY (\$000)										
Buildings	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,521.6	\$1,554.6
Land	\$574.7	\$574.7	\$574.7	\$574.7	\$574.7	\$574.7	\$574.7	\$574.5	\$574.5	\$653.4
Vehicles	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0	\$2,350.0
Equipment	\$1,366.8	\$1,369.2	\$1,369.2	\$1,369.2	\$1,369.2	\$1,369.2	\$1,369.2	\$1,369.2	\$1,374.0	\$1,374.0
Total (\$000)	\$5,813.1	\$5,815.5	\$5,815.5	\$5,815.5	\$5,815.5	\$5,815.5	\$5,815.5	\$5,815.3	\$5,820.1	\$5,932.0
SERVICE LEVEL (\$/capita)										
Buildings	\$144.77	\$145.00	\$145.22	\$145.21	\$145.21	\$145.20	\$145.19	\$145.18	\$139.89	\$140.29
Land	\$54.68	\$54.76	\$54.85	\$54.85	\$54.84	\$54.84	\$54.82	\$54.81	\$52.82	\$58.97
Vehicles	\$223.58	\$223.93	\$224.28	\$224.27	\$224.25	\$224.24	\$224.23	\$224.22	\$216.05	\$222.11
Equipment	\$130.04	\$130.47	\$130.67	\$130.67	\$130.66	\$130.65	\$130.64	\$130.64	\$126.32	\$129.48
Total (\$/capita)	\$553.07	\$554.16	\$555.02	\$554.99	\$554.96	\$554.93	\$554.88	\$554.85	\$535.07	\$550.73

TOWNSHIP OF NORWICH
CALCULATION OF MAXIMUM ALLOWABLE
FIRE PROTECTION SERVICES

10 Year Average Service Level (1999-2006)	\$550.73 per capita
2008 Population	11,081
Population Growth in New Units 2009-2018	1,901
Population Growth in New Units 2009-2031	3,455

	Maximum Allowable		Excess Calculation (\$000)	
	10 Years	2031	Using Average Service Level	New Maximum Allowable
Total Fire Protection Services	\$1,046.8	\$1,903.0	\$6,102.7	\$1,046.8
			\$0.0	\$1,903.0



APPENDIX B.2
TABLE 2

TOWNSHIP OF NORWICH
2008 DEVELOPMENT CHARGES BACKGROUND STUDY
GROWTH-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Total Project Cost	Less Grants /Subsidies	Total Municipal Cost	Replacement and Benefit To Existing	Growth-Related Costs			2009-2018 Discounted Growth-Related Net Capital Costs
							Prior Growth	2009-2018	Post 2018	
2.00 FIRE PROTECTION SERVICES										
2.1 Buildings, Land & Furnishings										
2.1.1	Replacement and Expansion of Otterville Station #1	2009	\$ 1,100,000	\$ -	\$ 1,100,000	\$ 468,600	\$ -	\$ 631,400	\$ 631,400	100%
	TOTAL FIRE PROTECTION SERVICES		\$ 1,100,000	\$ -	\$ 1,100,000	\$ 468,600	\$ -	\$ 631,400	\$ 631,400	100%

Non-Chargeable Growth-Related Net Capital Cost \$ -

Residential Development Charge Calculation	
Residential Share of 2009-2018 Discounted Growth-Related Capital Program	70%
10 Year Growth in Population in New Units	1,901
Unadjusted Development Charge Per Capita (\$)	\$232.54
Non-Residential Development Charge Calculation	
Non-Residential Share of 2009-2018 Discounted Growth-Related Capital Program	30%
10 Year Growth in Square Meters	189,420
Unadjusted Development Charge Per Sq.M (\$)	\$2.01

APPENDIX B.2
TABLE 5 - PAGE 1

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE SERVICES
RESIDENTIAL DEVELOPMENT CHARGE

2.00 FIRE SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	(\$387.1)	(\$339.3)	(\$286.1)	(\$251.9)	(\$214.2)	(\$172.7)	(\$127.0)	(\$76.9)	(\$40.1)	
2009-2018 RESIDENTIAL FUNDING REQUIREMENTS											
- 2.00 Fire - constant (\$000)	\$442.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$441.98
- 2.00 Fire - current (\$000)	\$442.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$441.98
POPULATION GROWTH											
- Population in New Units	245	250	255	173	176	178	181	183	130	131	1,901
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$65.2	\$67.9	\$70.7	\$49.0	\$50.7	\$52.4	\$54.2	\$56.1	\$40.4	\$41.6	\$548.20
- Interest on Opening Balance	\$0.0	(\$21.3)	(\$18.7)	(\$15.7)	(\$13.9)	(\$11.8)	(\$9.5)	(\$7.0)	(\$4.2)	(\$2.2)	(\$104.25)
- Interest on In-year Transactions (excl.int.)	(\$10.4)	\$1.2	\$1.2	\$0.9	\$0.9	\$0.9	\$0.9	\$1.0	\$0.7	\$0.7	(\$1.91)
TOTAL REVENUE	\$54.8	\$47.8	\$53.3	\$34.1	\$37.7	\$41.5	\$45.7	\$50.1	\$36.9	\$40.1	\$442.04
CLOSING CASH BALANCE	(\$387.1)	(\$339.3)	(\$286.1)	(\$251.9)	(\$214.2)	(\$172.7)	(\$127.0)	(\$76.9)	(\$40.1)	\$0.1	
FIRE PER CAPITA CHARGE											\$266.55

APPENDIX B.2
TABLE 5 - PAGE 2

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
FIRE SERVICES
NON-RESIDENTIAL DEVELOPMENT CHARGE

2.00 FIRE SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	(\$172.1)	(\$158.4)	(\$142.9)	(\$124.1)	(\$103.2)	(\$79.8)	(\$53.8)	(\$25.2)	(\$13.0)	
2009-2018 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- 2.00 Fire Services - constant (\$000)	\$189.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$189.42
- 2.00 Fire Services - current (\$000)	\$189.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$189.42
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	9,400	9,600	9,800	10,600	10,800	11,100	11,400	11,600	4,900	4,900	94,100
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$21.9	\$22.8	\$23.8	\$26.2	\$27.2	\$28.6	\$29.9	\$31.0	\$3.4	\$13.6	\$238.40
- Interest on Opening Balance	\$0.0	(\$9.5)	(\$8.7)	(\$7.9)	(\$6.8)	(\$5.7)	(\$4.4)	(\$3.0)	(\$1.4)	(\$0.7)	(\$47.99)
- Interest on In-year Transactions (excl.int.)	(\$4.6)	\$0.4	\$0.4	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.2	\$0.2	(\$0.82)
TOTAL REVENUE	\$17.3	\$13.7	\$15.5	\$18.8	\$20.9	\$23.4	\$26.0	\$28.6	\$12.2	\$13.1	\$189.59
CLOSING CASH BALANCE	(\$172.1)	(\$158.4)	(\$142.9)	(\$124.1)	(\$103.2)	(\$79.8)	(\$53.8)	(\$25.2)	(\$13.0)	\$0.2	
FIRE SERVICES SQ.M. CHARGE											\$2.33

B.3 PARKS AND RECREATION

The Township of Norwich has an extensive inventory of recreation facilities, including the Norwich Arena and Community Centre and numerous sports fields, and parkland.

Table 1 Historic Service Levels

The Township's inventory of recreation capital infrastructure includes major facilities and the land and equipment associated with these buildings. The Township offers 58,900 square feet of indoor recreation space with a value of \$14.32 million. The land adds another \$2.05 million to the inventory and the equipment is valued at \$87.0 million. The total inventory associated with the major facilities amounts to \$16.46 million.

The cost of development parkland is also included as part of the historic service level. In total, the Township has over 40 hectares of parkland space, the largest park being Otter Creek Passive Parklands. These 40 hectares are valued at \$4.15 million.

Park facilities located in the parkland are also included. Such facilities include baseball diamonds, an outdoor swimming pool, playgrounds, basketball courts, picnic pavilions, soccer pitches and various other park amenities. The total value of these facilities amounts to \$5.71 million.

These major facilities, parkland and park facilities have provided the Township with a 10-year average historical service level of \$2,421.70/capita. The maximum allowable for inclusion in the development charge is \$4.60 million. No excess capacity is identified in this service and as such, the full \$4.60 million is eligible for DC recovery.

Table 2 2009 – 2018 Growth-Related Capital Program

The 2009-2018 growth-related capital program consists of phases 1 and 2 of the Burgessville Library expansion, the Oxford Hall parking lot expansion, the Norwich Arena parking lot expansion and the construction of a new Otterville Hall. The Township also plans to add soccer pitches and an entertainment pavilion to Dillon Park. The gross cost of all these projects amounts to \$1.59 million, however, the Township will receive several grants and other subsidies to fund these capital projects and as such, these amounts have been deducted as shown on Table 2. These grants and other subsidies amount to \$544,000.

After deducting the subsidies, the cost to the Township for these projects amounts to \$1.04 million. As the new Otterville Hall will replace the old Hall, a replacement share has also been deducted from the cost and this share is \$400,200. The remaining cost, \$640,800 is related to growth in the 10 year period 2009 to 2018 and is subject to the mandatory 10% discount. The discounted growth-related cost that is carried forward to the development charge calculation totals \$576,700.

The total discounted growth-related capital costs for the 2009-2018 period is allocated in full to residential development, yielding a development charge of \$303.43/capita.

Table 3 Cash Flow Analysis

After cash flow consideration, the calculated residential charge increases to \$316.20/capita. The following table summarizes the calculation of the parks and recreation development charge.

PARKS AND RECREATION SUMMARY						
10-year Hist. Service Level \$/capita	2009-2018		Unadjusted		Adjusted	
	Growth-Related Total	Capital Program Net DC Recoverable	Development Charge \$/capita	Development Charge \$/sq.m.	Development Charge \$/capita	Development Charge \$/sq.m.
\$2,421.70	\$1,041,000	\$576,720	\$303.43	\$0.00	\$316.20	\$0.00

APPENDIX B.3
TABLE 1 - PAGE 1

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PARKS & RECREATION DEPARTMENT
INDOOR RECREATION - MAJOR FACILITIES

MAJOR FACILITIES (sq.ft.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	UNIT COST (\$/sq. ft.)
Norwich Arena	24,753	24,753	24,753	24,753	24,753	24,753	28,080	28,080	28,080	28,080	\$280
Norwich Community Centre	12,488	12,488	12,488	12,488	12,488	12,488	14,168	14,168	14,168	14,168	\$280
Oxford Centre Hall	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$280
Oxford Centre Seniors/Library	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	\$180
Otterville Hall	2,400	2,400	2,400	2,400	2,400	2,400	2,400				\$150
Curries Hall	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	\$150
Cornell Hall	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	\$150
Woodlawn Adult Community Centre	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	\$150
Burgessville Library	700	700	700	700	700	700	700	700	700	700	\$150
Total (sq. ft.)	52,241	52,241	52,241	52,241	52,241	52,241	57,248	54,848	54,848	54,848	
Total (\$000)	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$14,683.4	\$14,323.4	\$14,323.4	\$14,323.4	

(1) Program space only, library space accounted for by the County

LAND (ha)	UNIT COST (\$/ha.)
Norwich Arena & Community Centre	4.60
Oxford Centre Hall	0.50
Oxford Centre Seniors/Library	0.65
Otterville Hall	0.80
Curries Hall	1.23
Cornell Hall	0.80
Woodlawn Adult Community Centre	0.23
Burgessville Library	0.40
Total (ha)	9.21
Total (\$000)	\$2,252.0

EQUIPMENT (\$ value)

Ice Resurfacer	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$80,000
Floor Scrubber	\$4,000	\$4,000	\$5,000	\$5,000	\$5,000	\$6,000	\$6,000	\$6,000	\$6,000	\$7,000	\$7,000
Total (\$000)	\$79.0	\$79.0	\$80.0	\$80.0	\$80.0	\$81.0	\$81.0	\$81.0	\$81.0	\$87.0	\$87.0

APPENDIX B.3
TABLE 1 - PAGE 2

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION DEPARTMENT
PARK DEVELOPMENT

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Development Cost Per Ha
PARKS (Hectares of Developed Area)											
Cornell Passive Parklands	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	\$100,000
Curries Park	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	\$100,000
Dillon Park - Norwich	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	9.20	\$100,000
Ducky Dennis Park - Burgessville	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	\$100,000
Elgin Street Parkette	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	\$100,000
Harold Bishop Park (aka North Court)	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	\$100,000
Lossing Forest - Norwich	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	\$100,000
Marshall Street Park	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	\$100,000
Otter Creek Passive Parklands	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70	\$100,000
Ottenville Mill Park	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	\$150,000
Ottenville Park	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	\$100,000
Oxford Centre Park	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	\$100,000
Oxford Pioneer Passive Parklands	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	\$100,000
Springford Park	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	\$100,000
Westside Estates - Norwich	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	\$100,000
Total (Ha)	40.91	40.91	40.91	40.91	40.91	40.91	40.91	40.91	40.91	40.91	
Total (\$000)	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1

APPENDIX B.3
TABLE 1 - PAGE 3

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION DEPARTMENT
PARK FACILITIES

BASEBALL DIAMONDS (#)	# of Diamonds											UNIT COST (\$/diamond)	
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008			
With Lights	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Dillon Park	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Ducky Dennis Park	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Harold Bishop Park (aka North Court)	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Otterville Park	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Oxford Centre Park	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Springford Park	1	1	1	1	1	1	1	1	1	1	1	1	\$125,000
Without Lights													
Curries Park	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Dillon Park	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Ducky Dennis Park	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Harold Bishop Park (aka North Court)	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Springford Park	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Total (#)	11	11	11	11	11	11	11	11	11	11	11	11	
Total (\$000)	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0	\$1,125.0

OUTDOOR SWIMMING POOLS (#)	# of Pools											UNIT COST (\$/pool)	
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008			
Pool Name													
Otterville Park	1	1	1	1	1	1	1	1	1	1	1	1	\$1,500,000
Total (#)	1	1	1	1	1	1	1	1	1	1	1	1	
Total (\$000)	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0	\$1,500.0

PLAYGROUNDS (#)	# of Playgrounds											UNIT COST (\$/playground)	
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008		
Park Name													
Curries Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Dillon Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Ducky Dennis Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Harold Bishop Park (aka North Court)	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Marshall Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Otterville Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Oxford Centre Park	1	1	1	1	1	1	1	1	1	1	1	1	\$75,000
Springford Park	1	1	1	1	1	1	1	1	1	1	1	1	\$50,000
Total (#)	8	8	8	8	8	8	6	6	6	6	6	6	
Total (\$000)	\$475.0	\$475.0	\$475.0	\$475.0	\$475.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0	\$350.0

BASKETBALL COURTS (#)	# of Courts											UNIT COST (\$/court)	
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008		
1/2 COURTS													
Dillon Park	1	1	1	1	1	1	1	1	1	1	1	1	\$20,000
Ducky Dennis Park	1	1	1	1	1	1	1	1	1	1	1	1	\$20,000
Otterville Park	1	1	1	1	1	1	1	1	1	1	1	1	\$20,000
Springford Park	1	1	1	1	1	1	1	1	1	1	1	1	\$20,000
FULL COURTS													
Springford Park	1	1	1	1	1	1	1	1	1	1	1	1	\$40,000
Total (#)	5	5	5	5	5	5	5	5	5	5	5	5	
Total (\$000)	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0



TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION DEPARTMENT
PARK FACILITIES

PICNIC PAVILLION (#)	# of Pavilions											UNIT COST (\$/pavillion)
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		
Dillon Park	2	2	2	2	2	2	2	2	2	2	2	\$150,000
Ducky Dennis Park	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Harold Bishop Park (aka North Court)												\$150,000
Otterville Mill Park	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Otterville Park	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Springford Park	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Total (#)	6	6	6	6	6	6	6	6	6	6	6	
Total (\$000)	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$900.0	\$1,050.0	\$1,050.0

OUTDOOR PAVILLION (#)	# of Pavilions											UNIT COST (\$/pavillion)
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		
Otterville Pavillion (heritage designated)	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Total (#)	1	1	1	1	1	1	1	1	1	1	1	
Total (\$000)	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0

SOCCER PITCHES (#)	# of Pitches											UNIT COST (\$/court)
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		
Dillon Park					2	2	2	2	2	2	2	\$100,000
Springford Park					1	1	1	1	1	1	1	\$50,000
Total (#)	-	-	-	-	3	3	3	3	3	3	3	
Total (\$000)	\$0.0	\$0.0	\$0.0	\$0.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0	\$250.0

OTHER FACILITIES/AMENITIES (#)	# of Amenities											UNIT COST
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007		
Ducky Dennis Park - Concession Stand	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Ducky Dennis Park - skate park, tennis court												\$100,000
Harold Bishop Park (aka NC) Concession Stand	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Harold Bishop Park - walking trail	1	1	1	1	1	1	1	1	1	1	1	\$250,000
Curries Park - picnic tables, benches (2 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$2,000
Otterville Park - tennis court	1	1	1	1	1	1	1	1	1	1	1	\$150,000
Dillon Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Ducky Dennis Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Springford Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Harold Bishop Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Otterville Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Otterville Mill Park - picnic tables, benches (10 of ea)	1	1	1	1	1	1	1	1	1	1	1	\$10,000
Total (#)	11	11	11	11	11	11	11	11	11	11	12	
Total (\$000)	\$962.0	\$962.0	\$962.0	\$962.0	\$962.0	\$962.0	\$962.0	\$962.0	\$1,062.0	\$1,062.0	\$1,062.0	\$1,062.0

Total Park Facilities (\$000)	\$5,332.0	\$5,332.0	\$5,332.0	\$5,332.0	\$5,582.0	\$5,457.0	\$5,457.0	\$5,457.0	\$5,707.0	\$5,707.0	\$5,707.0	\$5,707.0
--------------------------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------	------------------

APPENDIX B.3
TABLE 1 - PAGE 5

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PARKS AND RECREATION DEPARTMENT

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Historical Population	10,511	10,494	10,478	10,479	10,479	10,480	10,480	10,481	10,877	11,081
INVENTORY SUMMARY (\$000)										
Major Facilities	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$13,281.5	\$14,683.4	\$14,323.4	\$14,323.4	\$14,323.4
Land	\$2,252.0	\$2,252.0	\$2,252.0	\$2,252.0	\$2,252.0	\$2,252.0	\$2,252.0	\$2,052.0	\$2,052.0	\$2,052.0
Equipment	\$79.0	\$79.0	\$80.0	\$80.0	\$81.0	\$81.0	\$81.0	\$81.0	\$87.0	\$87.0
Park Development	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1	\$4,151.1
Park Facilities	\$5,332.0	\$5,332.0	\$5,332.0	\$5,332.0	\$5,582.0	\$5,457.0	\$5,457.0	\$5,457.0	\$5,707.0	\$5,707.0
Total (\$000)	\$25,095.6	\$25,095.6	\$25,096.6	\$25,096.6	\$25,346.6	\$25,222.6	\$26,624.5	\$26,064.5	\$26,320.5	\$26,320.5
SERVICE LEVEL (\$/capita)										
Major Facilities	\$1,263.61	\$1,265.58	\$1,267.41	\$1,267.49	\$1,267.41	\$1,267.34	\$1,401.04	\$1,366.61	\$1,316.82	\$1,292.61
Land	\$214.26	\$214.59	\$214.91	\$214.90	\$214.89	\$214.88	\$214.88	\$195.78	\$188.65	\$185.18
Equipment	\$7.52	\$7.53	\$7.63	\$7.63	\$7.63	\$7.73	\$7.73	\$7.73	\$7.85	\$7.70
Park Development	\$394.94	\$395.55	\$396.17	\$396.15	\$396.13	\$396.10	\$396.08	\$396.06	\$381.63	\$374.61
Park Facilities	\$507.29	\$508.08	\$508.88	\$508.85	\$532.67	\$520.72	\$520.69	\$520.66	\$524.67	\$515.02
Total (\$/capita)	\$2,387.61	\$2,391.34	\$2,395.17	\$2,395.03	\$2,418.75	\$2,406.78	\$2,540.41	\$2,486.84	\$2,419.77	\$2,375.28
Average Service Level										

TOWNSHIP OF NORWICH
CALCULATION OF MAXIMUM ALLOWABLE
PARKS AND RECREATION DEPARTMENT

10 Year Average Service Level (1999-2008)	\$2,421.70	per capita
2008 Population	11,081	
Population Growth in New Units 2009-2018	1,901	
Population Growth in New Units 2009-2031	3,455	
Average Service Level		
	\$2,421.70	per capita
TOTAL PARKS AND RECREATION DEPARTMENT		
	\$2,421.70	per capita
Excess Calculation (\$000)		
	Using	New Maximum
	Average	Allowable
	Service Level	10 Years
	2031	
2008 Inventory	\$26,320.5	\$0.0
Excess Capacity	\$26,834.9	\$8,368.1
	\$4,602.9	\$8,368.1

APPENDIX B.3
TABLE 2

TOWNSHIP OF NORWICH
2008 DEVELOPMENT CHARGES BACKGROUND STUDY
GROWTH-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Total Project Cost	Less Grants /Subsidies	Total Municipal Cost	Replacement and Benefit To Existing	Prior Growth	Growth-Related Costs		2009-2018 Discounted Growth-Related Net Capital Costs	
								2009-2018	Post 2018		Total
3.00 PARKS AND RECREATION DEPARTMENT											
3.1 Major Facilities											
	3.1.1 Burgessville Library Accessibility & Expansion, phase 1	2009	\$ 60,000	\$ 35,000	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ -	90%	\$ 22,500
	3.1.2 Burgessville Library Accessibility & Expansion, phase 2	2010	\$ 20,000	\$ 11,000	\$ 9,000	\$ -	\$ -	\$ 9,000	\$ -	90%	\$ 8,100
	3.1.3 Oxford Hall Parking Lot Expansion	2010	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	\$ 50,000	\$ -	90%	\$ 45,000
	3.1.4 Norwich Arena Parking Lot Expansion	2012	\$ 280,000	\$ 115,000	\$ 165,000	\$ -	\$ -	\$ 165,000	\$ -	90%	\$ 148,500
	3.1.5 Construction of New Otterville Hall	2012	\$ 1,000,000	\$ 333,000	\$ 667,000	\$ 400,200	\$ -	\$ 266,800	\$ -	90%	\$ 240,120
	Sub-total Major Facilities		\$ 1,410,000	\$ 494,000	\$ 916,000	\$ 400,200	\$ -	\$ 515,800	\$ -		\$ 464,220
3.2 Park Facilities											
	3.2.1 Dillon Park Soccer Pitches	2014	\$ 75,000	\$ -	\$ 75,000	\$ -	\$ -	\$ 75,000	\$ -	90%	\$ 67,500
	3.2.2 Dillon Park Entertainment Pavillion	2014	\$ 100,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ 50,000	\$ -	90%	\$ 45,000
	Sub-total Park Facilities		\$ 175,000	\$ 50,000	\$ 125,000	\$ -	\$ -	\$ 125,000	\$ -		\$ 112,500
	TOTAL PARKS AND RECREATION DEPARTMENT		\$ 1,585,000	\$ 544,000	\$ 1,041,000	\$ 400,200	\$ -	\$ 640,800	\$ -	90%	\$ 576,720

Non-Chargeable Growth-Related Net Capital Cost

\$ 64,080

Residential Development Charge Calculation	
Residential Share of 2009-2018 Discounted Growth-Related Capital Program	100%
10 Year Growth in Population in New Units	1,901
Unadjusted Development Charge Per Capita (\$)	\$303.43
Non-Residential Development Charge Calculation	
Non-Residential Share of 2009-2018 Discounted Growth-Related Capital Program	0%
10 Year Growth in Square Meters	94,100
Unadjusted Development Charge Per Sq.M (\$)	\$0.00

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PARKS AND RECREATION
RESIDENTIAL DEVELOPMENT CHARGE

3.00 PARKS AND RECREATION

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	\$55.9	\$84.7	\$173.0	(\$184.8)	(\$133.8)	(\$204.8)	(\$150.7)	(\$91.3)	(\$47.5)	
2009-2018 RESIDENTIAL FUNDING REQUIREMENTS											
- 3.00 Parks and Recreation - constant (\$000)	\$22.5	\$53.1	\$0.0	\$388.6	\$0.0	\$112.5	\$0.0	\$0.0	\$0.0	\$0.0	\$576.72
- 3.00 Parks and Recreation - current (\$000)	\$22.5	\$54.2	\$0.0	\$412.4	\$0.0	\$124.2	\$0.0	\$0.0	\$0.0	\$0.0	\$613.28
POPULATION GROWTH											
- Population in New Units	245	250	255	173	176	178	181	183	130	131	1,901
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$77.4	\$80.6	\$83.9	\$58.2	\$60.2	\$62.2	\$64.3	\$66.5	\$48.0	\$49.4	\$650.70
- Interest on Opening Balance	\$0.0	\$2.0	\$3.0	\$6.1	(\$10.2)	(\$7.4)	(\$11.3)	(\$8.3)	(\$5.0)	(\$2.6)	(\$33.73)
- Interest on In-year Transactions (excl.int.)	\$1.0	\$0.5	\$1.5	(\$9.7)	\$1.1	(\$1.7)	\$1.1	\$1.2	\$0.8	\$0.9	(\$3.51)
TOTAL REVENUE	\$78.4	\$83.0	\$88.3	\$54.5	\$51.1	\$53.1	\$54.2	\$59.4	\$43.8	\$47.7	\$613.46
CLOSING CASH BALANCE	\$55.9	\$84.7	\$173.0	(\$184.8)	(\$133.8)	(\$204.8)	(\$150.7)	(\$91.3)	(\$47.5)	\$0.2	
PARKS AND RECREATION PER CAPITA CHARGE											\$316.20

B.4 PUBLIC WORKS

The Engineering Department in the Township of Norwich is responsible for the design and construction of the Township's network of public roads and related infrastructure, and their maintenance. This section deals with the buildings associated with providing these services, related furniture and equipment, and municipal fleet of the Public Works operations. Roads and related infrastructure construction is included in section B.5 of this appendix.

Table 1 Historic Service Levels

The current value of the public works buildings, its associated land value, equipment have a total value of approximately \$2.20 million. The associated municipal fleet adds an additional \$2.19 million bringing the total Public Works 2008 inventory to \$4.39 million. The historic capital inventory yields a 10-year average service level of \$409.96/capita. The calculated maximum allowable to be included in the development charges calculation is \$779,200. No excess capacity is identified for this service.

Table 2 2009 – 2018 Growth-Related Capital Program

The 2009-2018 growth-related capital budget provides for the construction of the Norwich Storage Shed at Middletown Line Yard. This project is slated for construction in 2010 at a cost of \$210,000. This amount is discounted by 10 per cent, and the discounted \$189,000 is carried forward to the development charge calculation.

Of the discounted growth-related capital cost, 70 per cent or \$132,300 is allocated against new residential development and 30 per cent or \$56,700 is allocated against non-residential development. This yields an unadjusted development charge of \$69.61/capita and \$0.60/square metre.

Table 3 Cash Flow Analysis

After cash flow consideration, the calculated charges are increased to \$77.45/capita and \$0.68/square metre. The following table summarizes the calculation of the public works development charge.

PUBLIC WORKS SUMMARY						
10-year Hist. Service Level \$/capita	2009-2018 Growth-Related Capital Program		Unadjusted Development Charge		Adjusted Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m.	\$/capita	\$/sq.m.
\$409.96	\$210,000	\$189,000	\$69.61	\$0.60	\$77.45	\$0.68

APPENDIX B.4
TABLE 1 - PAGE 1

TOWNSHIP OF NORWICH
INVENTORY OF CAPITAL ASSETS
PUBLIC WORKS & FLEET

BUILDINGS (sq.ft.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	UNIT COST (\$/sq.ft.)
Oterville Main Shop	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	\$150
Oterville Brown Barn	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	\$30
Burgessville Main Shop	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	\$150
Burgessville Green Barn	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	\$50
Burgessville Sand Dome	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$40
Total (sq.ft.)	13,350	13,350	13,350	13,350	13,350	13,350	13,350	13,350	13,350	13,350	
Total (\$000)	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	

LAND (ha)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	UNIT COST (\$/ha)
Oterville Main Shop	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	\$250,000
Oterville Brown Barn	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	\$250,000
Burgessville Main Shop	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	\$250,000
Burgessville Green Barn	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	\$200,000
Burgessville Sand Dome	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	\$200,000
10 Acres Land	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	\$100,000
Total (ha)	6.75	6.75	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	
Total (\$000)	\$1,054.5	\$1,054.5	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	

FURNITURE AND EQUIPMENT (\$000)

Oterville Tools/Equipment	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Burgessville Tools/Equipment	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Total (\$000)	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0

FLEET

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	UNIT COST (\$/vehicle)
Pick-up Trucks	3	3	3	3	3	3	3	3	3	3	\$25,000
T/A Snowplow Truck	4	4	4	4	4	4	4	4	4	4	\$110,000
S/A Sander/Flow Truck	3	3	3	3	3	3	3	3	3	3	\$120,000
Grader	3	3	3	3	3	3	3	3	3	3	\$185,000
Loader	1	1	1	1	1	1	1	1	1	1	\$110,000
Loader	1	1	1	1	1	1	1	1	1	1	\$150,000
Backhoe	1	1	1	1	1	1	1	1	1	1	\$100,000
Tractor/Mower	2	2	2	2	2	2	2	2	2	2	\$50,000
Woodchipper	1	1	1	1	1	1	1	1	1	1	\$100,000
Asphalt Roller	1	1	1	1	1	1	1	1	1	1	\$75,000
Total (#)	20	20	20	20	20	20	20	20	20	21	
Total (\$000)	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,075.0	\$2,075.0	\$2,185.0	\$2,185.0	

APPENDIX B.4
TABLE 1 - PAGE 2

TOWNSHIP OF NORWICH
CALCULATION OF SERVICE LEVELS
PUBLIC WORKS

Historical Population	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	10,511	10,494	10,478	10,479	10,479	10,480	10,480	10,481	10,877	11,081

INVENTORY SUMMARY (\$000)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Buildings	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5	\$1,292.5
Land	\$1,054.5	\$1,054.5	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0	\$867.0
Furniture	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0
Fleet	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,065.0	\$2,075.0	\$2,075.0	\$2,185.0	\$2,185.0
Total (\$000)	\$4,462.0	\$4,462.0	\$4,274.5	\$4,274.5	\$4,274.5	\$4,274.5	\$4,284.5	\$4,284.5	\$4,394.5	\$4,394.5

SERVICE LEVEL (\$/capita)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average Service Level
Buildings	\$122.97	\$123.16	\$123.35	\$123.35	\$123.34	\$123.33	\$123.33	\$123.32	\$118.83	\$116.64	\$122.16
Land	\$100.33	\$100.48	\$82.74	\$82.74	\$82.74	\$82.73	\$82.73	\$82.72	\$79.71	\$78.24	\$85.52
Furniture	\$4.76	\$4.76	\$4.77	\$4.77	\$4.77	\$4.77	\$4.77	\$4.77	\$4.60	\$4.51	\$4.73
Fleet	\$196.47	\$196.77	\$197.08	\$197.07	\$197.06	\$197.05	\$197.99	\$197.98	\$200.88	\$197.18	\$197.55
Total (\$/capita)	\$424.52	\$425.18	\$407.95	\$407.93	\$407.90	\$407.88	\$408.81	\$408.79	\$404.01	\$396.58	\$409.96

TOWNSHIP OF NORWICH
CALCULATION OF MAXIMUM ALLOWABLE
PUBLIC WORKS & FLEET

10 Year Average Service Level (1999-2008) \$409.96 per capita

2008 Population 11,081
Population Growth in New Units 2009-2018 1,901
Population Growth in New Units 2009-2031 3,455

Average Service Level	Maximum Allowable (\$000)		Excess Calculation (\$000)	
	10 Years	2031	Using Average Service Level	New Maximum Allowable
			2008 Inventory	10 Years
	\$409.96 per capita	\$779.2	\$4,394.5	\$779.2
		\$1,416.6	\$0.0	\$1,416.6



APPENDIX B.4
TABLE 2

TOWNSHIP OF NORWICH
2008 DEVELOPMENT CHARGES BACKGROUND STUDY
GROWTH-RELATED CAPITAL PROGRAM

Service	Project Description	Timing	Total Project Cost	Less Grants /Subsidies	Total Municipal Cost	Replacement and Benefit To Existing	Growth-Related Costs			2009-2018 Discounted Growth-Related Net Capital Costs
							Prior Growth	2009-2018	Post 2018	
4.00 PUBLIC WORKS										
4.1 Buildings, Land & Equipment										
4.1.1	Norwich Storage Shed Middletown Line Yard	2010	\$ 210,000	\$ -	\$ 210,000	\$ -	\$ 210,000	\$ -	\$ 210,000	90%
	TOTAL PUBLIC WORKS		\$ 210,000	\$ -	\$ 210,000	\$ -	\$ 210,000	\$ -	\$ 210,000	90%

Non-Chargeable Growth-Related Net Capital Cost \$ 21,000

Residential Development Charge Calculation	
Residential Share of 2009-2018 Discounted Growth-Related Capital Program	70%
10 Year Growth in Population in New Units	1,901
Unadjusted Development Charge Per Capita (\$)	\$69.61
Non-Residential Development Charge Calculation	
Non-Residential Share of 2009-2018 Discounted Growth-Related Capital Program	30%
10 Year Growth in Square Meters	94,100
Unadjusted Development Charge Per Sq. M (\$)	\$0.60

APPENDIX B.4
TABLE 3 - PAGE 1

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
RESIDENTIAL DEVELOPMENT CHARGE

4.00 PUBLIC WORKS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	\$19.3	(\$98.4)	(\$83.0)	(\$73.0)	(\$62.0)	(\$50.0)	(\$36.6)	(\$22.1)	(\$11.3)	
2009-2018 RESIDENTIAL FUNDING REQUIREMENTS											
- 4.00 Public Works - constant (\$000)	\$0.0	\$132.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$132.30
- 4.00 Public Works - current (\$000)	\$0.0	\$134.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$134.95
POPULATION GROWTH											
- Population in New Units	245	250	255	173	176	178	181	183	130	131	1,901
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$19.0	\$19.7	\$20.5	\$14.3	\$14.7	\$15.2	\$15.8	\$16.3	\$11.8	\$12.1	\$159.40
- Interest on Opening Balance	\$0.0	\$0.7	(\$5.4)	(\$4.6)	(\$4.0)	(\$3.4)	(\$2.7)	(\$2.0)	(\$1.2)	(\$0.6)	(\$23.32)
- Interest on In-year Transactions (excl.int.)	\$0.3	(\$3.2)	\$0.4	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.2	\$0.2	(\$0.72)
TOTAL REVENUE	\$19.3	\$17.2	\$15.4	\$10.0	\$10.9	\$12.1	\$13.3	\$14.6	\$10.8	\$11.7	\$135.35
CLOSING CASH BALANCE	\$19.3	(\$98.4)	(\$83.0)	(\$73.0)	(\$62.0)	(\$50.0)	(\$36.6)	(\$22.1)	(\$11.3)	\$0.4	
PUBLIC WORKS PER CAPITA CHARGE											\$77.45

APPENDIX B.4
TABLE 3 - PAGE 2

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
PUBLIC WORKS
NON-RESIDENTIAL DEVELOPMENT CHARGE

4.00 PUBLIC WORKS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	\$6.5	(\$45.8)	(\$41.3)	(\$35.8)	(\$29.8)	(\$23.0)	(\$15.4)	(\$7.0)	(\$3.4)	
2009-2018 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- 4.00 Public Works - constant (\$000)	\$0.0	\$56.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$56.70
- 4.00 Public Works - current (\$000)	\$0.0	\$57.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$57.83
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	9,400	9,600	9,800	10,600	10,800	11,100	11,400	11,600	4,900	4,900	94,100
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$6.4	\$6.7	\$6.9	\$7.6	\$7.9	\$8.3	\$8.7	\$9.1	\$3.9	\$4.0	\$69.50
- Interest on Opening Balance	\$0.0	\$0.2	(\$2.5)	(\$2.3)	(\$2.0)	(\$1.6)	(\$1.3)	(\$0.8)	(\$0.4)	(\$0.2)	(\$10.85)
- Interest on In-year Transactions (excl.int.)	\$0.1	(\$1.4)	\$0.1	\$0.1	\$0.1	\$0.1	\$0.2	\$0.2	\$0.1	\$0.1	(\$0.31)
TOTAL REVENUE	\$6.5	\$5.5	\$4.5	\$5.5	\$6.1	\$6.8	\$7.6	\$8.4	\$3.6	\$3.9	\$58.35
CLOSING CASH BALANCE	\$6.5	(\$45.8)	(\$41.3)	(\$35.8)	(\$29.8)	(\$23.0)	(\$15.4)	(\$7.0)	(\$3.4)	\$0.5	
PUBLIC WORKS SQ.M. CHARGE											\$0.68

B.5 ROADS

This section sets out the 2009 – 2018 growth-related capital program and the calculation of the development charge for the roads and related service. The cost, quantum and timing of the projects included in the forecast have been provided by the Public Works Department. Consistent with s. 5. (1)7. of the DCA, there is no legislated percentage reduction in the eligible growth-related capital cost for the provision of roads and related infrastructure. Table 1 provides details of the projects. The total gross cost of the roads and related program is \$6.55 million of which \$3.60 million will be funded by Federal or Provincial gas tax monies. The net cost of the program is therefore \$2.95 million.

Table 1 also provides the calculation of the net growth-related costs to be included in the development charge. Approximately \$535,800 is identified as a non-growth (i.e. benefit to existing) share and will require funding from other Township sources. The method for calculating the non-growth share is explained in the table footnotes. Another portion, \$440,700 is considered to benefit growth beyond 2018 and is deducted from the development charge calculation. A prior growth share of \$109,300, is identified on Table 2 and will be applied to the first roads projects in the capital program.

Table 2 provides the calculation of the development charge. The total net growth-related capital cost of the program of \$1.86 million is fully recoverable from development charges as there is no mandatory 10% reduction for roads under the DCA. The cost is allocated 70% to residential, and results in an unadjusted per capita development charge of \$686.32. The non-residential share is 30% and the resulting unadjusted charge is \$5.94 per square metre.

Table 3 presents the cashflow analysis. As a result of the cashflow the residential charge increases to \$716.15 per capita (page 1), and the non-residential charge increases to \$6.23 per square metre (page 2). The following table summarizes the calculation of the roads development charge.

ROADWAYS SUMMARY					
2009-2018		Unadjusted		Adjusted	
Growth-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m.	\$/capita	\$/sq.m.
\$6,552,992	\$1,972,899	\$686.32	\$5.94	\$716.15	\$6.23

TOWNSHIP OF NORWICH
2009 DEVELOPMENT CHARGES STUDY
TOWNSHIP-WIDE ROADS AND RELATED CAPITAL PROGRAM

ROADS AND RELATED		Estimated Project Costs (2009\$)														
		Anticipated Timing		Gross Cost		Grants and Subsidies		Remaining Benefit to Existing Share ²		Net Growth-Related Cost		Post Period Benefit	Net DC Recoverable 2009-2018			
		From	To	Type of Work ¹	Type of Road	Length (m)	Gross Cost	Funding Gross Cost	Funding BTE	Remaining Benefit to Existing Share ²	Net Growth-Related Cost	Post Period Benefit	Net DC Recoverable 2009-2018			
1	Beaconsfield Road	Zenda Line	Cedar Line	C	R	1,800	2009	\$110,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2	Milldale Road	Zenda Line	Lot 25	C	R	1,800	2009	\$148,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Carman Street	Stover Street	Pitcher Street	C	U	175	2009	\$92,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Middletown Line Road	Cornell Road	Oterville Road	PS	R	2,000	2009	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Old Stage Road	Middletown Line Road	Easterly	PP	U	600	2009	\$204,407	\$36,000	\$0	\$137,907	\$0	\$0	\$0	\$137,907	\$0
6	North/Maple/Grove Streets			PP	U	3,900	2009	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	Bond Street	North Street	Main Street	PP	U	100	2009	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	Beaconsfield Road	Zenda Line	Highway 59	PS	R	3,600	2010	\$232,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Milldale Road	Lot 25	Oxford Road 13	C	R	1,800	2010	\$187,200	\$0	\$89,895	\$18,105	\$79,200	\$34,146	\$45,054	\$45,054	\$0
10	Washington Street	South Court Street	North Court Street	C	U	75	2010	\$50,000	\$0	\$0	\$4,500	\$0	\$0	\$0	\$45,500	\$0
11	Clyde Street	Main Street	South Court Street	C	U	300	2010	\$113,543	\$0	\$0	\$18,000	\$0	\$0	\$0	\$95,543	\$0
12	Milldale Road	Oxford Road 13	Middletown Line	C	R	3,600	2011	\$367,132	\$106,395	\$216,000	\$0	\$0	\$0	\$44,737	\$25,449	\$0
13	North Court Street	Clyde Street	Stover Street	C	U	320	2011	\$166,400	\$0	\$0	\$19,200	\$0	\$0	\$147,200	\$0	\$0
14	Pitcher Street	Palmer Street	Main Street	C	U	425	2011	\$59,766	\$0	\$0	\$25,500	\$0	\$0	\$34,266	\$0	\$0
15	Firehall Road	Highway 59	Middletown Line	C	R	3,600	2012	\$396,000	\$106,395	\$216,000	\$0	\$0	\$0	\$73,605	\$31,734	\$41,871
16	John Street	Elgin Street	Brook Street	C	U	427	2012	\$207,695	\$0	\$0	\$25,620	\$0	\$0	\$182,075	\$0	\$0
17	Evergreen Street	Highway 59	Slant Road	C	R	1,800	2013	\$404,000	\$214,395	\$108,000	\$0	\$0	\$0	\$81,605	\$35,183	\$46,422
18	Baseline Road	Oxford County Rd 21	Norwich Road	PP	R	5,250	2013	\$210,000	\$0	\$0	\$210,000	\$0	\$0	\$0	\$0	\$0
19	Evergreen Street	Slant Road	Base Line	C	R	1,800	2014	\$210,000	\$210,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20	Horn Road	Oxford County Rd 12	Stage Road	PP	R	1,200	2014	\$220,000	\$40,395	\$72,000	\$0	\$0	\$0	\$107,605	\$46,392	\$61,213
21	Albert Street	Main Street	South Court Street	C	U	300	2014	\$160,000	\$0	\$0	\$18,000	\$0	\$0	\$162,000	\$0	\$162,000
22	Baseline Road	Norwich Rd	Mall Road	PP	R	1,280	2014	\$15,395	\$0	\$0	\$15,395	\$0	\$0	\$0	\$0	\$0
23	Maple Dell Road	Oxford Road 13	Lot 18	C	R	1,800	2015	\$250,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
24	Firehall Road	Middletown Line	Lot 10	C	R	1,800	2015	\$250,000	\$0	\$72,395	\$35,605	\$142,000	\$61,221	\$80,779	\$80,779	\$0
25	Albert Street N.	North Court Street	north of North Street	C	U	400	2015	\$136,735	\$0	\$0	\$24,000	\$0	\$0	\$112,735	\$0	\$112,735

APPENDIX B.5
TABLE 1 - PAGE 2

TOWNSHIP OF NORWICH
2009 DEVELOPMENT CHARGES STUDY
TOWNSHIP-WIDE ROADS AND RELATED CAPITAL PROGRAM

ROADS AND RELATED				Estimated Project Costs (2009\$)									
Road	From	To	Type of Work ¹	Type of Road	Length (m)	Anticipated Timing	Gross Cost	Grants and Subsidies		Remaining Benefit to Existing Share ²	Net Growth-Related Cost	Post Period Benefit	Net DC Recoverable 2009-2018
								Funding Gross Cost	Funding BTE				
26	Maple Dell Road	Lot 18	C	R	1,800	2016	\$275,000	\$275,000	\$0	\$0	\$0	\$0	\$0
27	Firehall Road	Middletown Line	C	R	1,800	2016	\$285,000	\$0	\$47,395	\$60,605	\$157,000	\$67,688	\$89,312
28	Palmer Street	Pitcher Street	C	U	300	2016	\$108,415	\$0	\$0	\$18,000	\$90,415	\$0	\$90,415
29	Maple Dell Road	Oxford Road 13	PS	R	5,400	2017	\$660,446	\$0	\$322,395	\$1,605	\$336,446	\$145,053	\$191,393
30	Maple Dell Rd.	Zenda Line	C	R	1,800	2018	\$322,395	\$322,395	\$0	\$0	\$0	\$0	\$0
31	Front St.	Church Street	C	U	170	2018	\$375,000	\$0	\$0	\$10,200	\$364,800	\$0	\$364,800
32	Brock Street	Stover Street	C	U	525	2018	\$50,443	\$0	\$0	\$31,500	\$18,943	\$0	\$18,943
TOTAL ROADS AND RELATED							\$6,552,992	\$2,423,475	\$1,180,080	\$535,835	\$2,413,602	\$440,703	\$1,972,899

Notes:

- 1) Type of Work:
C = Total Reconstruction
PP = Pulverize and Pave
PS = Pulverize and Shoulder

2) Benefit to existing based on the following:

\$60.00 per m

Note: If a benefit to existing share exists, the provincial or federal gas tax revenue is applied.

3) Post-period benefit based on future shares of population and employment growth:

43%

37%
63%

APPENDIX B.5
TABLE 2

TOWNSHIP OF NORWICH
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES
ROADS AND RELATED - 2009 TO 2018

Population Growth in New Units 2009-2018 1,901
Additional Non-Residential Floorspace in Square Meters 2009-2018 94,100

	Growth-Related Capital Forecast						Total Growth-Related Net Capital Costs (\$000)	Residential Share %	Non-Residential Share %
	Total Gross Costs (\$000)	Grants and Subsidies (\$000)	Prior Growth (\$000)	Remaining Benefit to Existing Share (\$000)	Pre-Built Service (Calculated Oversizing) (\$000)				
ROADS AND RELATED Roads and Related Projects	\$ 6,552.99	\$ 3,603.56	\$ 109.33	\$ 535.84	\$ 440.70	\$ 1,863.56	70%	30%	
TOTAL ROADS AND RELATED Unadjusted Development Charge Per Capita (\$) Unadjusted Development Charge Per Sq. M. (\$)	\$ 6,552.99	\$ 3,603.56	\$ 109.33	\$ 535.84	\$ 440.70	\$ 1,863.56	\$ 1,304.50	\$ 559.07	

Roads: Residential	Charge Per Capita	Charge By Unit Type (1)		
		Single & Semi-Detached	Rows & Other Multiples	Apartments 2 Bedrooms & Larger Bachelor & 1 Bedroom
Roads and Related	\$686.32	\$2,265	\$1,579	\$1,098

(1) Based on Persons Per Unit Of:

3.30 2.30 1.60 1.20

Roads: Non-Residential	
Calculated Charge	
Per Square Metre of GFA	\$ 5.94
Per Square Foot of GFA	\$ 0.55

APPENDIX B.5
TABLE 3 - PAGE 1

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADWAYS
RESIDENTIAL DEVELOPMENT CHARGE

5.00 ROADWAYS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	\$80.1	\$133.4	\$178.0	\$148.7	\$256.7	\$233.2	\$234.3	\$248.7	\$207.8	
2009-2018 RESIDENTIAL FUNDING REQUIREMENTS											
- 5.00 Roadways - constant (\$000)	\$96.5	\$130.3	\$144.9	\$156.8	\$32.5	\$156.2	\$135.5	\$125.8	\$134.0	\$268.6	\$1,381.03
- 5.00 Roadways - current (\$000)	\$96.5	\$132.9	\$150.7	\$166.4	\$35.2	\$172.5	\$152.5	\$144.5	\$157.0	\$321.0	\$1,529.22
POPULATION GROWTH											
- Population in New Units	245	250	255	173	176	178	181	183	130	131	1,901
REVENUE - current (\$000)	\$175.3	\$182.5	\$189.9	\$131.8	\$136.2	\$140.9	\$145.7	\$150.6	\$108.7	\$111.9	\$1,473.50
- Dev. Charge Receipts											
- Interest on Opening Balance	\$0.0	\$2.8	\$4.7	\$6.2	\$5.2	\$9.0	\$8.2	\$8.2	\$8.7	\$7.3	\$60.24
- Interest on In-year Transactions (excl.int.)	\$1.4	\$0.9	\$0.7	(\$1.0)	\$1.8	(\$0.9)	(\$0.2)	\$0.1	(\$1.3)	(\$5.8)	(\$4.28)
TOTAL REVENUE	\$176.7	\$186.2	\$195.3	\$137.1	\$143.2	\$149.0	\$153.7	\$158.9	\$116.1	\$113.4	\$1,529.46
CLOSING CASH BALANCE	\$80.1	\$133.4	\$178.0	\$148.7	\$256.7	\$233.2	\$234.3	\$248.7	\$207.8	\$0.2	
ROADWAYS PER CAPITA CHARGE											\$716.15

APPENDIX B.5
TABLE 3 - PAGE 2

TOWNSHIP OF NORWICH
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE
ROADWAYS
NON-RESIDENTIAL DEVELOPMENT CHARGE

5.00 ROADWAYS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
OPENING CASH BALANCE FROM APPLICABLE RESERVES											
OPENING CASH BALANCE (\$000)	\$0.0	\$17.5	\$22.3	\$21.9	\$21.5	\$81.0	\$86.3	\$104.2	\$129.3	\$101.5	
2009-2018 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- 5.00 Roadways - constant (\$000)	\$41.4	\$55.8	\$62.1	\$67.2	\$13.9	\$67.0	\$58.1	\$53.9	\$57.4	\$115.1	\$591.87
- 5.00 Roadways - current (\$000)	\$41.4	\$56.9	\$64.6	\$71.3	\$15.1	\$73.9	\$65.4	\$61.9	\$67.3	\$137.6	\$655.38
NON-RESIDENTIAL GROWTH											
- Sq. Metres in New Buildings	9,400	9,600	9,800	10,600	10,800	11,100	11,400	11,600	4,900	4,900	94,100
REVENUE - current (\$000)											
- Dev. Charge Receipts	\$58.6	\$61.0	\$63.5	\$70.1	\$72.8	\$76.4	\$80.0	\$83.0	\$35.8	\$36.5	\$637.70
- Interest on Opening Balance	\$0.0	\$0.6	\$0.8	\$0.8	\$0.8	\$2.8	\$3.0	\$3.6	\$4.5	\$3.6	\$20.49
- Interest on In-year Transactions (excl.int.)	\$0.3	\$0.1	(\$0.0)	(\$0.0)	\$1.0	\$0.0	\$0.3	\$0.4	(\$0.9)	(\$2.8)	(\$1.66)
TOTAL REVENUE	\$58.9	\$61.7	\$64.2	\$70.8	\$74.6	\$79.3	\$83.3	\$87.0	\$39.5	\$37.3	\$656.53
CLOSING CASH BALANCE	\$17.5	\$22.3	\$21.9	\$21.5	\$81.0	\$86.3	\$104.2	\$129.3	\$101.5	\$1.1	
ROADWAYS SQ.M. CHARGE											\$6.23

APPENDIX C

RESERVE FUNDS

APPENDIX C**DEVELOPMENT CHARGES RESERVE FUND
UNALLOCATED BALANCES**

The *DCA* requires that a reserve fund be established for each service for which development charges are collected. Table 1 shows the uncommitted reserve fund balances that are available to help fund the growth-related net capital costs identified in this study. The opening balances as at December 31, 2007 have been adjusted to account for current commitments to growth-related projects which are considered in this study. All of the available reserve fund balances are therefore accounted for.

As shown on Table 1, the December 31, 2008 balance was \$120,213. The accounting of the reserve funds for Township services is discussed in Appendix B. In essence, application of these funds to the early years of the capital program for each service reduces and defers capital requirements brought forward into the development charge calculation.

APPENDIX C

TABLE 1

TOWNSHIP OF NORWICH
TOWNSHIP-WIDE DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT
YEAR ENDING DECEMBER 31, 2008

CATEGORY - TOWNSHIP WIDE RESERVES	Reserve Fund Balance as at Dec. 31, 2008	2009 Capital Budget Draws	Available Reserve Funds
General Government	\$5,122.92	\$0.00	\$5,122.92
Fire Services	\$0.00	\$0.00	\$0.00
Joint Police Services	\$5,756.12	\$0.00	\$5,756.12
Roadways	\$109,334.06	\$0.00	\$109,334.06
TOTAL DEVELOPMENT CHARGE RESERVES	\$120,213.10	\$0.00	\$120,213.10

APPENDIX D

***CAPITAL AND OPERATING
COST IMPACT ANALYSIS***

HEMSON

APPENDIX D
TABLE 1

TOWNSHIP OF NORWICH
ESTIMATED NET OPERATING COST OF THE PROPOSED
GROWTH-RELATED CAPITAL PROGRAM
(in constant 2008 dollars)

	Net Cost (in 2008 \$)	Estimated Operating Costs (\$000)															
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018						
Fire																	
New Fire Station # 2 - Additional 5,500 sq.ft.	\$5.00 per sq.ft.	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5	\$27.5
Parks and Recreation																	
Park Development	\$0.05 per \$ of new infrastructure	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8.8	\$8.8	\$8.8	\$8.8	\$8.8	\$8.8	\$8.8
Public Works																	
Fleet and Public Works Buildings Additions	\$0.10 per \$ of new infrastructure	\$0.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0	\$21.0
Roads																	
New Roads Construction	\$200.00 per new household	\$14.8	\$30.0	\$45.4	\$55.9	\$66.6	\$77.4	\$88.3	\$99.4	\$107.3	\$115.2	\$123.1	\$131.0	\$138.9	\$146.8	\$154.7	\$162.6
TOTAL ESTIMATED OPERATING COSTS (\$000)		\$42.3	\$78.5	\$93.9	\$104.4	\$115.1	\$134.6	\$145.6	\$156.7	\$164.5	\$172.4	\$180.3	\$188.2	\$196.1	\$204.0	\$211.9	\$219.8

APPENDIX D
TABLE 2

TOWNSHIP OF NORWICH
SUMMARY OF TAX SUPPORTED FUNDING REQUIREMENTS

Net Capital Cost of Growth Related Projects	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	TOTAL (\$000)
General Government											
Total Net Cost (1)	90.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	12.5	115.0
Net Cost From Development Charges (2)	76.4	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	11.3	98.9
Net Cost From Non-DC Sources	13.6	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3	16.1
- Discount Portion (3)	8.5	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3	11.0
- Prior Growth (4)	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1
- Replacement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- For Post 2018 Growth (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fire Protection Services											
Total Net Cost (1)	1,100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,100.0
Net Cost From Development Charges (2)	631.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	631.4
Net Cost From Non-DC Sources	468.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	468.6
- Discount Portion (3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Prior Growth (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Replacement	468.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	468.6
- For Post 2018 Growth (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parks and Recreation											
Total Net Cost (1)	25.0	59.0	0.0	832.0	0.0	125.0	0.0	0.0	0.0	0.0	1,041.0
Net Cost From Development Charges (2)	22.5	53.1	0.0	388.6	0.0	112.5	0.0	0.0	0.0	0.0	576.7
Net Cost From Non-DC Sources	2.5	5.9	0.0	443.4	0.0	12.5	0.0	0.0	0.0	0.0	464.3
- Discount Portion (3)	2.5	5.9	0.0	43.2	0.0	12.5	0.0	0.0	0.0	0.0	64.1
- Prior Growth (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Replacement	0.0	0.0	0.0	400.2	0.0	0.0	0.0	0.0	0.0	0.0	400.2
- For Post 2018 Growth (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Works											
Total Net Cost (1)	0.0	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	210.0
Net Cost From Development Charges (2)	0.0	189.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	189.0
Net Cost From Non-DC Sources	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0
- Discount Portion (3)	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0
- Prior Growth (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Replacement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- For Post 2018 Growth (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roads											
Total Net Cost (1)	839.9	583.2	593.3	603.7	614.0	625.4	636.7	648.4	660.4	747.8	6,553.0
Net Cost From Development Charges (2)	137.9	186.1	206.9	223.9	46.4	223.2	193.5	179.7	191.4	383.7	1,972.9
Net Cost From Non-DC Sources	702.0	397.1	386.4	379.7	567.6	402.2	443.2	468.7	469.1	364.1	4,580.1
- Discount Portion (3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Prior Growth (4)	109.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	109.3
- Replacement	0.0	40.6	44.7	25.6	210.0	33.4	59.6	78.6	1.6	41.7	535.8
- For Post 2018 Growth (5)	0.0	34.1	19.3	31.7	35.2	46.4	61.2	67.7	145.1	0.0	440.7
Total Township-Wide											
Total Net Cost (1)	2,054.9	852.2	593.3	1,435.7	626.5	750.4	636.7	648.4	660.4	760.3	9,019.0
Net Cost From Development Charges (2)	868.2	428.2	206.9	612.6	57.7	335.7	193.5	179.7	191.4	385.0	3,468.9
Net Cost From Non-DC Sources	1,186.7	424.0	386.4	823.1	568.8	414.7	443.2	468.7	469.1	365.3	5,550.1
- Discount Portion (3)	11.0	26.9	0.0	43.2	1.3	12.5	0.0	0.0	0.0	1.3	96.1
- Prior Growth (4)	114.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114.5
- Replacement	468.6	40.6	44.7	425.8	210.0	33.4	59.6	78.6	1.6	41.7	1,404.6
- For Post 2018 Growth (5)	0.0	34.1	19.3	31.7	35.2	46.4	61.2	67.7	145.1	0.0	440.7

Notes: (1) For total growth related capital forecast see Appendix B. Also includes committed excess capacity where applicable.
 (2) Share of Capital program to be funded from development charges if calculated rates are fully implemented
 (3) Mandatory 10% reduction for applicable services
 (4) Portion of growth-related capital forecast identified as prior growth (to be funded from present Development Charge reserve fund balances).
 (5) Post-2018 growth related net capital costs may be eligible for development charges in future DC by-laws, but interim financing of this share may be required

