

# Township of Frontenac Islands 2016 Development Charges Background Study

For Public Circulation and Comment

April 12, 2016



Plaza Three  
101-2000 Argentia Rd.  
Mississauga, Ontario  
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: [info@watson-econ.ca](mailto:info@watson-econ.ca)

[www.watson-econ.ca](http://www.watson-econ.ca)

 Planning for growth

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## List of Acronyms and Abbreviations

A.M.P.	Asset Management Plan
D.C.	Development Charge
D.C.A.	Development Charges Act
E.S.A.	Environmentally Safe Area
G.F.A.	Gross floor area
mm	Millimeters
N.F.P.O.W.	No fixed place of work
O.M.B.	Ontario Municipal Board
O.Reg.	Ontario Regulation
para.	Paragraph
P.P.U.	Persons per unit
R.S.O.	Revised Statute of Ontario
sq.ft.	Square foot
s.s.	Subsection

# 1. Introduction

## 1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the *Development Charges Act, 1997* (s.10), and accordingly, recommends new development charges and policies for the Township of Frontenac Islands.

The Township retained Watson & Associates Economists Ltd. (Watson) to undertake the development charges (D.C.) study process in 2015. Watson worked with senior staff of the Township and Council in preparing this development charge analysis and the policy recommendations.

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

This report has been prepared, in the first instance, to meet the statutory requirements applicable to the Township's D.C. background study, as summarized in Chapter 4. It also addresses the forecast amount, type and location of growth (Chapter 3), the requirement for "rules" governing the imposition of the charges (Chapter 7) and the proposed by-law to be made available as part of the approval process (Appendix D).

In addition, the report is designed to set out sufficient background on the legislation, the Township's former D.C. policy (Chapter 2) and the policies underlying the proposed by-law, to make the exercise understandable to interested parties. Finally, the D.C. background study addresses post-adoption implementation requirements (Chapter 8) which are critical to the successful application of the new policy.

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

## 1.2 Summary of the Process

A public meeting is required under Section 12 of the *Development Charges Act, 1997*. Two separate meetings have been scheduled on Howe Island and Wolfe Island for May 18, 2016 and May 19, 2016 respectively. The purpose of the public meeting is to

present the study to the public and to solicit input on the proposed D.C. by-law. The meetings are also being held to answer any questions regarding the study's purpose, methodology and the proposed modifications to the Township's development charges by-law. Figure 1-1 outlines the proposed schedule to be followed with respect to the development charge by-law adoption process.

In accordance with the legislation, the D.C. background study and proposed D.C. by-law were available for public review on April 13, 2016.

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

- consideration of responses received prior to, at or immediately following the public meetings; and
- finalization of the study and Council consideration of the by-law on June 13, 2016.

**Figure 1-1  
Schedule of Key Development Charge Process Dates**

Process Steps	Dates
1. Data collection, staff interviews, preparation of D.C. calculations	July 2015 – February 2016
2. Preparation of draft D.C. background study and review of draft findings with staff	February, 2015
3. Presentation of draft findings and D.C. policy discussions with Township Council at a Council Workshop	April 4, 2016
4. D.C. background study and proposed D.C. by-law available to public	April 13, 2016
5. Statutory notice of Public Meeting advertisement placed in newspaper(s)	No later than April 26, 2016
6. Public Meeting of Council	May 18 and 19, 2016
7. Council considers adoption of D.C. background study and passage of by-law	June 13, 2016
8. Newspaper notice given of by-law passage	By 20 days after passage
9. Last day for by-law appeal	40 days after passage

<b>Process Steps</b>	<b>Dates</b>
10. Township makes available D.C. pamphlet	by 60 days after in force date



## **2. Previous Township of Frontenac Islands D.C. Policy**

### **2.1 By-law Enactment**

On May 26, 2010 the Township of Frontenac Islands passed By-Law 20-2010 which subsequently lapsed on May 26, 2015. The by-law imposed development charges by service on an area-specific basis. (i.e. charges for services imposed on Howe and Wolfe Islands separately).

### **2.2 Services Covered**

The following services were included for Howe and Wolfe Islands under By-Law 20-2010:

- Transportation Services
- Fire Services
- Recreation and Cultural Services
- Other Services (Development Charges Study)

The by-law provided for optional indexing once or twice annually. The charges that were imposed by By-Law 20-2010 and the quantum of those charges in 2016 if indexing had been applied are provided in Table 2-1. The charges are presented in aggregate as well as a breakdown of the charges by service component.

**Table 2-1**  
**Township of Frontenac Islands Previous Development Charges**

Residential (Single Detached) Comparison Howe Island			Non-Residential (per ft <sup>2</sup> .) Comparison Howe Island		
Service	Previous	Previous (2016\$)	Service	Previous	Previous (2016\$)
<b>Municipal Wide Services:</b>			<b>Municipal Wide Services:</b>		
Transportation Services	3,758	4,184	Transportation Services	0.44	0.49
Fire Protection Services	268	299	Fire Protection Services	0.54	0.60
Ferries	-	-	Ferries	-	-
Parks and Recreation Services	125	140	Parks and Recreation Services	-	-
Library Services	-	-	Library Services	-	-
Administration Studies	57	63	Administration Studies	0.01	0.01
<b>Total Howe Island Services</b>	<b>4,209</b>	<b>4,686</b>	<b>Total Howe Island Services</b>	<b>0.99</b>	<b>1.11</b>

Residential (Single Detached) Comparison Wolfe Island			Non-Residential (per ft <sup>2</sup> .) Comparison Wolfe Island		
Service	Previous	Previous (2016\$)	Service	Previous	Previous (2016\$)
<b>Municipal Wide Services:</b>			<b>Municipal Wide Services:</b>		
Transportation Services	3,019	3,361	Transportation Services	0.84	0.94
Fire Protection Services	-	-	Fire Protection Services	-	-
Ferries	-	-	Ferries	-	-
Parks and Recreation Services	145	161	Parks and Recreation Services	-	-
Library Services	-	-	Library Services	-	-
Administration Studies	57	63	Administration Studies	0.01	0.01
<b>Total Wolfe Island Services</b>	<b>3,221</b>	<b>3,586</b>	<b>Total Wolfe Island Services</b>	<b>0.85</b>	<b>0.95</b>

## 2.3 Timing of D.C. Calculation and Payment

Development charges were due and payable at the time of building permit issuance for the development. The by-law also allowed the Township to enter into agreements with owners to accelerate or defer the timing of payment.

## 2.4 Redevelopment Credit

The by-law provided D.C. credits for residential and non-residential redevelopments, with no limitation to the time elapsed between demolition and the subsequent building permit issuance. However, where additional residential dwellings and/or non-residential gross floor area was created in excess of those demolished, these developments were subject to development charges.

## 2.5 Exemptions

The Township's D.C. by-law included statutory exemptions from payment of development charges with respect to:

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

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

- Hospitals, universities and cemeteries: Land owned by and used for the purposes of a hospital, health care centre, university or cemetery;
- development creating or adding an accessory use or structure not exceeding ten square meters of non-residential floor area;
- enlargement of an existing farm building, where the enlargement is less than 50% of the existing gross floor area of the farm building; and
- Non-residential reductions for gross floor area greater than 3,000 square feet.

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## **3. Anticipated Development in the Township of Frontenac Islands**

### **3.1 Requirements of the Act**

Chapter 4 provides the methodology for calculating a development charge as per the Development Charges Act, 1997. Figure 4-1 presents this methodology graphically. It is noted in the first box of the schematic that in order to determine the development charge that may be imposed, it is a requirement of Section 5 (1) of the Development Charges Act that “the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated.”

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which the Township of Frontenac islands will be required to provide services, over a 10-year and 20-year time horizon.

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

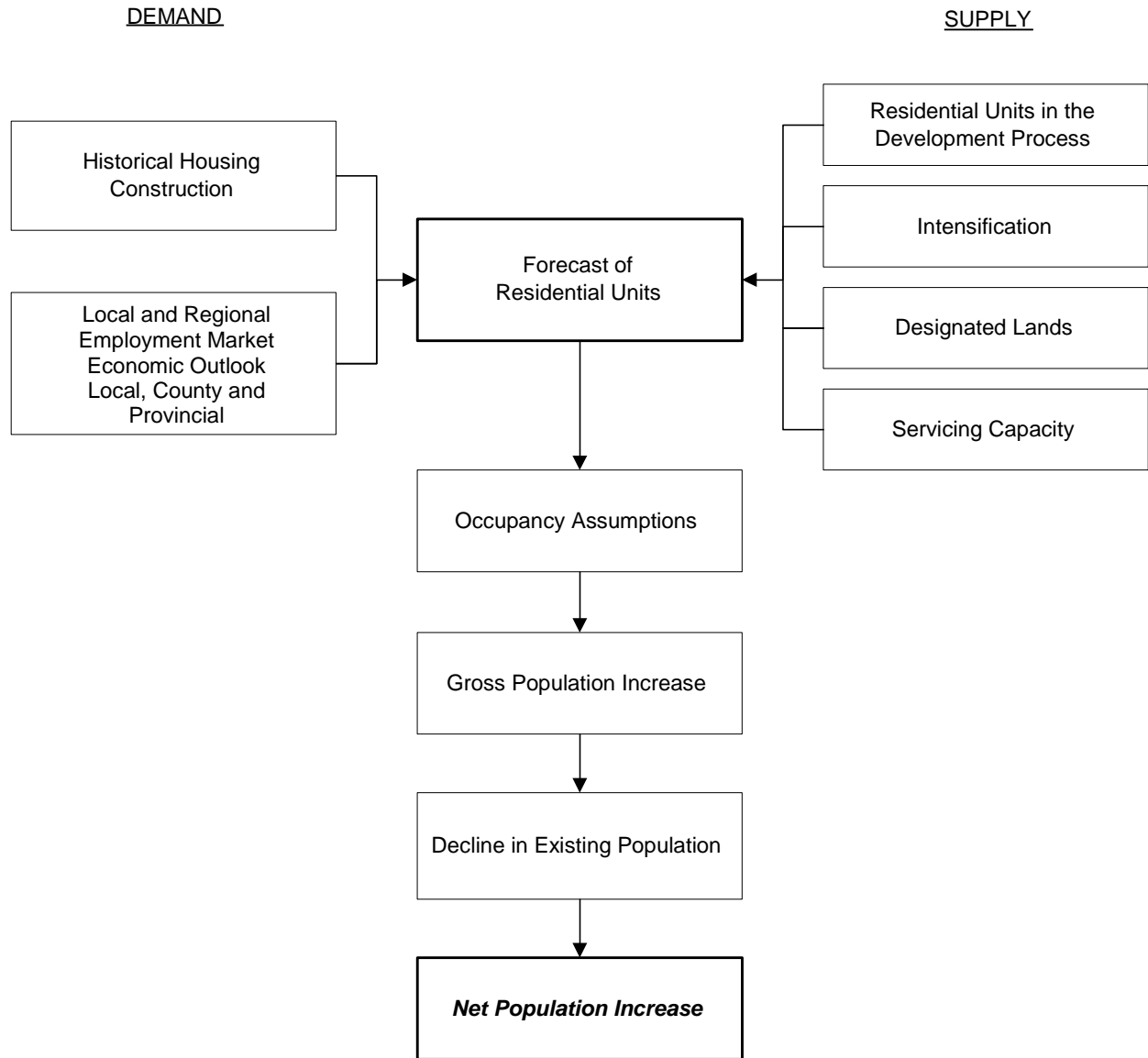
The D.C. growth forecast has been derived based on the Population, Housing and Employment Projections for the Frontenac’s, 2014 by Watson & Associates Economists Ltd. In compiling the growth forecast, the following information sources were also updated to help assess residential and non-residential development potential for the Township over the forecast period; including:

- A review of recent historical residential and non-residential development activity (i.e. new permanent and seasonal building permits).

### **3.3 Summary of Growth Forecast**

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

**Figure 3-1**  
**Household Formation-based Population and Household Forecast Model**



As identified in Table 3-1 and Schedule 1, the Township's population is anticipated to reach approximately 2,240 by 2026 and 2,445 by 2036. This represents an increase of 200 persons and 400 persons, respectively, over the 10-year and 20-year forecast periods. The population forecast summarized in Schedule 1 excludes the net Census undercount, which is estimated at approximately 2.5%. The Census undercount represents the net number of persons missed during Census enumeration. In calculating the D.C. for the Township of Frontenac Islands, the net Census undercount has been excluded from the growth forecast. Accordingly, all references provided herein to the population forecast exclude the net Census undercount. The Township's seasonal population is forecast to remain consistent with the 2011 population of 1,850. Including seasonal population, the Township's permanent and seasonal population is forecast to reach 4,295 by 2036.<sup>1</sup>

1. Unit Mix (Appendix A – Schedules 1 through 6)

- The unit mix for the Township was derived from historical development activity (as per Schedule 6), and discussions with planning staff regarding anticipated development trends for the Township.
- Based on the above, the long-term (2016-2036) household growth forecast is comprised of 100% low density development

2. Geographic Location of Residential Development (Appendix A – Schedule 2)

- Schedule 2 summarizes the anticipated amount, type and location of development for the Township of Frontenac Islands over the short-term and long-term planning periods.

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<sup>1</sup> Seasonal population defined as population in units which are not permanently occupied on a year round basis (i.e. cottages). Includes 100% seasonal population.

**Table 3-1**  
**Township of Frontenac Islands**  
**Residential Growth Forecast Summary**

Year	Permanent Population <sup>1</sup>	Permanent Population (Including Census Undercount)	Seasonal Population	Total Permanent and Seasonal Population	Housing Units										Permanent Person Per Unit (PPU)	Permanent + 100% Seasonal Person Per Unit (PPU)	
					Singles & Semi-Detached	Conversions <sup>2</sup>	Singles & Semi Detached Family Less Conversions	Multiples <sup>3</sup>	Apartments <sup>4</sup>	Other	Total w/o Conversions <sup>2</sup>	Total w/ Conversions <sup>2</sup>	Seasonal Households Adjusted for Conversions <sup>2</sup>	Total Households w/ Seasonal			
Historical	<i>Mid 2001</i>	1,638	1,680	0	1,638	640		640	5	10	5	660	660		660	2.48	2.48
	<i>Mid 2006</i>	1,862	1,910	0	1,862	770		770	0	10	0	780	780	0	780	2.39	2.39
	<i>Mid 2011</i>	1,950	2,000	1,850	3,800	800		800	0	10	0	810	810	505	1,315	2.41	2.89
Forecast	<i>Mid 2016</i>	2,044	2,100	1,850	3,894	851	4	847	0	10	0	857	861	505	1,366	2.37	2.85
	<i>Mid 2026</i>	2,242	2,295	1,850	4,092	955	18	937	0	10	0	947	965	505	1,470	2.32	2.78
	<i>Mid 2036</i>	2,445	2,505	1,850	4,295	1,065	25	1,040	0	10	0	1,050	1,075	505	1,580	2.27	2.72
Incremental	<b>Mid 2001 - Mid 2006</b>	<b>224</b>	<b>230</b>	<b>0</b>	<b>224</b>	<b>130</b>	<b>0</b>	<b>130</b>	<b>-5</b>	<b>0</b>	<b>-5</b>	<b>120</b>	<b>120</b>	<b>0</b>	<b>120</b>		
	<b>Mid 2006 - Mid 2011</b>	<b>88</b>	<b>90</b>	<b>1,850</b>	<b>1,938</b>	<b>30</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>30</b>	<b>505</b>	<b>535</b>		
	<b>Mid 2011 - Mid 2016</b>	<b>94</b>	<b>100</b>	<b>0</b>	<b>94</b>	<b>51</b>	<b>4</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>51</b>	<b>0</b>	<b>51</b>		
	<b>Mid 2016 - Mid 2026</b>	<b>199</b>	<b>195</b>	<b>0</b>	<b>199</b>	<b>104</b>	<b>14</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>104</b>	<b>0</b>	<b>104</b>		
	<b>Mid 2016 - Mid 2036</b>	<b>401</b>	<b>405</b>	<b>0</b>	<b>401</b>	<b>214</b>	<b>21</b>	<b>193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>193</b>	<b>214</b>	<b>0</b>	<b>214</b>		

Source: Watson & Associates Economists Ltd., 2016.

1. Population excludes net Census Undercount of approximately 2.5%.
2. Conversions represent seasonal dwellings which change into permanent households
3. Includes townhomes and apartments in duplexes.
4. Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

- In accordance with forecast demand and available land supply, housing growth has been allocated to the following areas over the 2016 to 2036 forecast period:
  - Wolfe Island – 75%
  - Howe Island – 25%

### 3. Planning Period

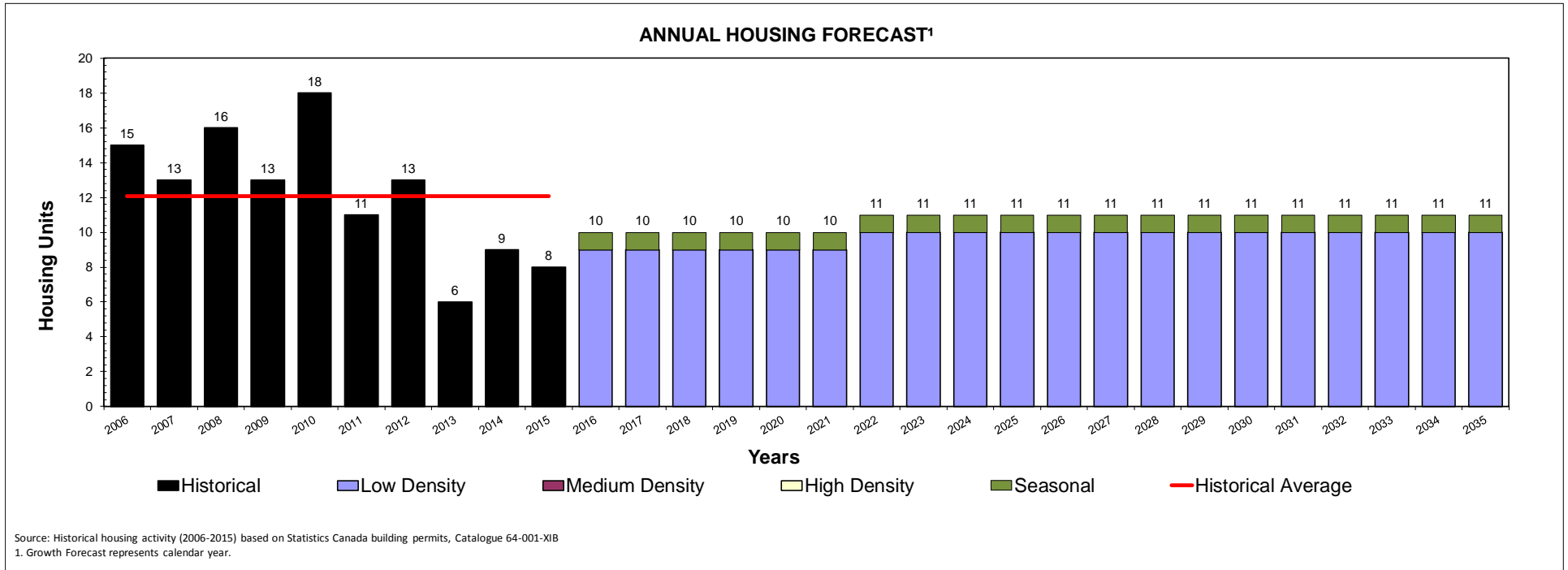
- Short- and longer-term time horizons are required for the D.C. process. The D.C.A. limits the planning horizon for certain services, such as parks, recreation and libraries, to a 10-year planning horizon. Roads and fire services utilize a longer planning period (i.e. 2016 to 2036).

### 4. Population in New Units (Appendix A - Schedules 3 through 5)

- The number of housing units to be constructed in the Township of Frontenac Islands during the short-term and long-term periods is presented on Figure 3-2. Over the 20-year forecast periods, the Township is anticipated to average 10 new permanent and seasonal housing units per year.
- Population in new units is derived from Schedules 3, 4, and 5, which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit by dwelling type for new units.
- Schedule 7 summarizes the average number of persons per unit (P.P.U.) for the new housing units by age and dwelling size, based on 2011 custom Census data for the Township. Due to data limitations, P.P.U.'s were derived from Frontenac County as outlined in Schedule 7. The total calculated P.P.U. has been adjusted to account for the downward P.P.U. trend which has been recently experienced in both new and older units, largely due to the aging of the population. Adjusted 20-year average P.P.U.'s by dwelling type are as follows:
  - Low density: 2.75



Figure 3-2



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5. Existing Units and Population Change (Appendix A - Schedules 3, 4 and 5)

- Existing households as of 2016 are based on the 2011 Census permanent and seasonal households, plus estimated permanent and seasonal residential units constructed between 2011 and 2016, assuming a 6-month lag between construction and occupancy (see Schedule 3).
- The decline in average occupancy levels for existing housing units is calculated in Schedules 3 through 5, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2016 to 2036 forecast period is estimated at approximately 185.

6. Employment (Appendix A, Schedules 9a through 11)

- Employment projections are largely based on the activity rate method, which is defined as the number of jobs in a Township divided by the number of residents. Key employment sectors include primary, industrial, commercial/ population-related, institutional, and work at home, which are considered individually below.
- The Township's 2011<sup>1</sup> employment base by place of work is outlined in Schedule 9a. The 2011 employment base is comprised of the following sectors:
  - 10 primary (approx. 3%);
  - 154 work at home employment (approx. 48%);
  - 37 industrial (approx. 11%);
  - 87 commercial/population-related (approx. 27%); and
  - 38 institutional (approx. 11%).
- The 2011 employment base by usual place of work, including work at home, is approximately 325 jobs.
- Schedule 9b, Appendix A, summarizes the employment forecast, excluding work at home employment, which is the basis for the D.C. employment forecast. The impact on municipal services from work at home employees have already been included in the population forecast. Accordingly, work at home employees have been removed from the D.C. employment forecast and calculation.
- Total employment for the Township of Frontenac Islands (excluding work at home employment) is anticipated to reach approximately 182 by 2026

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<sup>1</sup> 2011 employment based on Statistics Canada 2011 Place of Work employment dataset.

and 191 by 2036. This represents an employment increase of 9 and 18 additional jobs over the 10-year and 20-year forecast periods, respectively.

7. Non-Residential Sq.ft. Estimates (Gross Floor Area (G.F.A.)), Appendix A, Schedule 9b)

- Square footage estimates were calculated in Schedule 9b based on the following employee density assumptions:<sup>1</sup>
  - 550 sq.ft. per employee for commercial/population-related; and
  - 700 sq.ft. per employee for institutional employment.
- The Township-wide incremental non-residential G.F.A. increase is anticipated to be approximately 5,700 sq.ft. over the 10-year forecast period and 11,400 sq.ft. over the 20-year forecast period.
- In terms of percentage growth, the 20-year incremental G.F.A. forecast by sector is broken down as follows:
  - commercial/population-related – approx. 44%; and
  - institutional – approx. 56%.

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<sup>1</sup> Based on Watson & Associates Economists Ltd. employment surveys across Eastern Ontario.

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## 4. The Approach to the Calculation of the Charge

This chapter addresses the requirements of s.s.5(1) of the D.C.A., 1997 with respect to the establishment of the need for service which underpins the development charge calculation. These requirements are illustrated schematically in Figure 4-1.

### 4.1 Services Potentially Involved

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

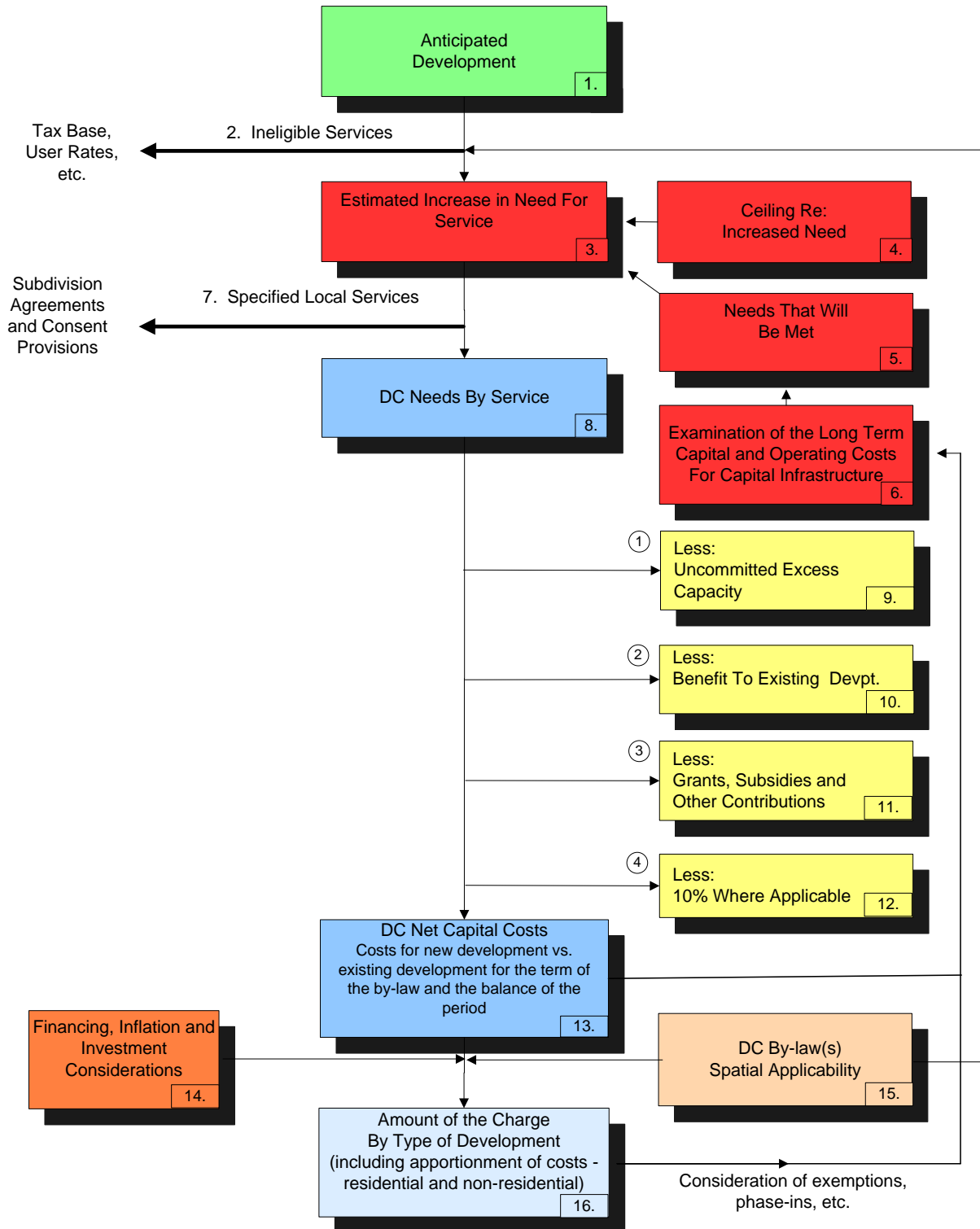
A number of these services are defined in s.s.2(4) of the D.C.A., 1997 as being ineligible for inclusion in development charges. These are shown as “ineligible” on Table 4-1. In addition, two ineligible costs defined in s.s.5(3) of the D.C.A. are “computer equipment” and “rolling stock with an estimated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

### 4.2 Local Service Policy

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

Some of the need for services generated by additional development consists of local services related to new development. As such, they will be required as a condition of subdivision agreements or consent conditions.

**Figure 4-1**  
**The Process of Calculating a Development Charge under the Act**



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

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
1. Services Related to a Highway	Yes	1.1 Arterial roads	100
	Yes	1.2 Collector roads	100
	Local Service	1.3 Local roads	100
	Yes	1.4 Intersections and Traffic signals	100
	Yes	1.5 Sidewalks and streetlights	100
2. Other Transportation Services	n/a	2.1 Transit vehicles	100
	n/a	2.2 Other transit infrastructure	100
	n/a	2.3 Municipal parking spaces - indoor	90
	No	2.4 Municipal parking spaces - outdoor	90
	Yes	2.5 Works Yards	100
	Yes	2.6 Rolling stock <sup>1</sup>	100
	Yes	2.7 Ferries	90
	n/a	2.8 Airport facilities	90
3. Storm Water Drainage and Control Services	Local Service	3.1 Main channels and drainage trunks	100
	Local Service	3.2 Channel connections	100
	Local Service	3.3 Retention/detention ponds	100
4. Fire Protection Services	Yes	4.1 Fire stations	100
	Yes	4.2 Fire pumpers, aerials and rescue vehicles	100
	Yes	4.3 Small equipment and gear	100
5. Outdoor Recreation Services (i.e. Parks and Open Space)	Ineligible	5.1 Acquisition of land for parks, woodlots and E.S.A.s	0
	Yes	5.2 Development of area municipal parks	90
	Yes	5.3 Development of district parks	90
	Yes	5.5 Development of special purpose parks	90
	Yes	5.6 Parks rolling stock <sup>1</sup> and yards	90

<sup>1</sup>with 7+ year life time

<sup>2</sup>same percentage as service component to which it pertains  
computer equipment excluded throughout

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
6. Indoor Recreation Services	Yes	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	90
	Yes	6.2 Recreation vehicles and equipment <sup>1</sup>	90
7. Library Services	Yes	7.1 Public library space (incl. furniture and equipment)	90
	n/a	7.2 Library materials	90
8. Electrical Power Services	Ineligible	8.1 Electrical substations	0
	Ineligible	8.2 Electrical distribution system	0
	Ineligible	8.3 Electrical system rolling stock <sup>1</sup>	0
9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	9.1 Cultural space (e.g. art galleries, museums and theatres)	0
	Ineligible	9.2 Tourism facilities and convention centres	0
10. Waste Water Services	n/a	10.1 Treatment plants	100
	n/a	10.2 Sewage trunks	100
	n/a	10.3 Local systems	100
11. Water Supply Services	n/a	11.1 Treatment plants	100
	n/a	11.2 Distribution systems	100
	n/a	11.3 Local systems	100
12. Waste Management Services	n/a	12.1 Collection, transfer vehicles and equipment	90
	Ineligible	12.3 Landfills and other disposal facilities	0
	n/a	12.3 Other waste diversion facilities	90
13. Police Services	n/a	13.1 Police detachments	100
	n/a	13.2 Police rolling stock <sup>1</sup>	100
	n/a	13.3 Small equipment and gear	100
14. Homes for the Aged	n/a	14.1 Homes for the aged space	90
15. Day Care	n/a	15.1 Day care space	90

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
16. Health	n/a	16.1 Health department space	90
17. Social Services	n/a	17.1 Social service space	90
18. Ambulance	n/a n/a	18.1 Ambulance station space	90
		18.2 Vehicles <sup>1</sup>	90
19. Hospital Provision	Ineligible	19.1 Hospital capital contributions	0
20. Provision of Head-quarters for the General Administration of Municipalities and Area Municipal Boards	Ineligible Ineligible Ineligible	20.1 Office space (all services)	0
		20.2 Office furniture	0
		20.3 Computer equipment	0
21. Other Services	Yes	21.1 Studies in connection with acquiring buildings, rolling stock, materials and equipment, and improving land <sup>2</sup> and facilities, including the D.C. background study cost	0-100
	n/a	21.2 Interest on money borrowed to pay for growth-related capital	0-100

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

<sup>1</sup>with 7+ year life time

<sup>2</sup>same percentage as service component to which it pertains  
computer equipment excluded throughout



### **4.3 Capital Forecast**

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

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

The capital costs include:

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

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

### **4.4 Treatment of Credits**

Section 8 para. 5 of O.Reg. 82/98 indicates that a development charge background study must set out, “the estimated value of credits that are being carried forward relating to the service.” s.s.17 para. 4 of the same Regulation indicates that, “...the value of the credit cannot be recovered from future development charges,” if the credit pertains to an ineligible service. This implies that a credit for eligible services can be recovered from

future development charges. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs.

The Township currently has no outstanding D.C. credit obligations.

#### **4.5 Eligible Debt and Committed Excess Capacity**

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

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

The Township does not have any outstanding debt payments attributable to growth related projects.

#### **4.6 Existing Reserve Funds**

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

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

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

The Township’s uncommitted Development Charge Reserve Funds balances, by service, as estimated for December 31, 2015, are presented in Table 4-2 below. The balances presented in Table 4-2 reflect adjustments for capital expenditures during the 2010-2015 period that did not receive the full D.C. funding allowable under the Township’s 2010 D.C. background study. These adjustments amount to \$280,000 in draws that should have been made from the D.C. reserve funds. These adjusted

reserve fund balances have been applied against future spending requirements for all services.

**Table 4-2**  
**Township of Frontenac Islands**  
**D.C. Reserve Funds Balances (as estimated for December 31, 2015)**

**Howe Island D.C. Reserve Fund Balances**

Service	Totals
Transportation Services	(3,316)
Fire Protection Services	11,501
Ferries	
Parks and Recreation Services	6,243
Library Services	
Administration Studies	4,891
Total	19,319

**Wolfe Island D.C. Reserve Fund Balances**

Service	Totals
Transportation Services	(166,647)
Fire Protection Services	43,427
Ferries	-
Parks and Recreation Services	(23,084)
Library Services	-
Administration Studies	4,891
Total	(141,413)

## 4.7 Deductions

The D.C.A., 1997 potentially requires that five deductions be made to the increase in the need for service. These relate to:

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

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

### ***4.7.1 Reduction Required by Level of Service Ceiling***

This is designed to ensure that the increase in need included in 4.2 does "...not include an increase that would result in the level of service (for the additional development

increment) exceeding the average level of the service provided in the Township over the 10-year period immediately preceding the preparation of the background study...” O.Reg. 82.98 (s.4) goes further to indicate that, “...both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service.”

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

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

#### ***4.7.2 Reduction for Uncommitted Excess Capacity***

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

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

#### ***4.7.3 Reduction for Benefit to Existing Development***

This step involves a further reduction to the need, by the extent to which such an increase in service would benefit existing development. The level of services cap in section 4.4 is related, but is not the identical requirement. Wastewater (sanitary), stormwater and water trunks are highly localized to growth areas and can be more

readily allocated in this regard than other services such as roads which do not have a fixed service area.

Where existing development has an adequate service level which will not be tangibly increased by an increase in service, no benefit would appear to be involved. For example, where expanding existing library facilities simply replicates what existing residents are receiving, they receive very limited (or no) benefit as a result. On the other hand, where a clear existing service problem is to be remedied, a deduction should be made accordingly.

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

#### ***4.7.4 Reduction for Anticipated Grants, Subsidies and Other Contributions***

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

#### ***4.7.5 The 10% Reduction***

Paragraph 8 of s.s.(1) of the D.C.A. requires that, “the capital costs must be reduced by 10 percent.” This paragraph does not apply to water services, wastewater services, stormwater drainage and control services, services related to a highway, police

services, fire protection services and transit services. The primary services that the 10% reduction does apply to include services such as parks and recreation, libraries, childcare/social services, ambulance, homes for the aged and health.

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

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## 5. Development Charge Eligible Cost Analysis by Service

This chapter outlines the basis for calculating development charge eligible costs for the development charges to be applied in Howe Island and Wolfe Island. The required calculation process set out in s.5(1) paragraphs 2 to 8 in the D.C.A., 1997, and described in Chapter 4, was followed in determining D.C. eligible costs.

The nature of the capital projects and timing identified in this chapter reflects Council's current intention. However, over time, municipal projects and Council priorities change and, accordingly, Council's intentions may alter and different capital projects (and timing) may be required to meet the need for services required by new growth.

### 5.1 Service Levels and 10-Year Capital Costs for Howe Island D.C. Calculation

This section evaluates the development-related capital requirements for select services on Howe Island over the 10-year planning period (2016-2026). Each service component is evaluated on two format sheets: the average historical 10-year level of service calculation (see Appendix B), which "caps" the D.C. amounts; and the infrastructure cost calculation, which determines the potential D.C. recoverable cost.

#### 5.1.1 *Transportation Services*

Howe Island has a current inventory of 497 kilometres of arterial and collector roads. This historical level of infrastructure investment equates to a \$16,261 per capita level of service. When applied to the forecast net population growth to 2026 (i.e. 54 population), a maximum D.C. eligible cost of \$878,067 could be expected to meet the future increase in needs for service. In addition to roads, the Township's public works department on Howe Island utilizes 3,760 square feet of facility space, and operates a fleet of 6 vehicles and equipment. In this regard, a historical average level of service of \$1,085 per capita has been provided, resulting in a D.C. eligible cap of \$58,619.

Review of the Township's Howe Island road needs for the forecast period identified \$1.73 million in gross capital costs. These capital needs include provisions for roads improvements previously identified in the Township's 2010 D.C Background Study.

Approximately \$3,000 has been added to the gross capital needs for existing reserve fund deficits, accounting for unfunded growth-related capital project commitments.

Recognizing the benefit to existing development through the replacement of existing infrastructure at the time of addressing growth needs, \$1.62 million has been deducted. As a result, approximately \$110,000 in capital needs have been included in the D.C. calculation.

The net growth-related costs for transportation services have been allocated wholly to future residential development as non-residential development is not forecast to occur on Howe Island within the 10-year forecast period (i.e. 100% residential / 0% non-residential).

### **5.1.2 Fire Protection Services**

The Township currently has one fire station on Howe Island with approximately 5,400 square feet of floor space. The Howe Island fire department also has a current inventory of 7 vehicles, and provides 20 sets of equipment for outfitting firefighters. In total, the inventory of fire protection assets provides a historic average level of service of \$2,925 per capita. The historical level of investment in fire services provides for a D.C. eligible limit over the forecast period of \$157,930.

Based on the Township's capital plan and discussions with staff, the Township will require the addition of four dry hydrants to service growth and a new rescue van to service future development. The gross capital cost estimates for the increase in service total \$89,800. After deducting approximately \$11,500 for existing reserve fund balances representing funds already collected towards these needs, potential D.C. recoverable costs of \$78,299 have been included in the calculation of the charge.

Similar to Transportation Services, the allocation of net growth-related costs for fire protection services between residential and non-residential development is 100% residential and 0% non-residential.

### **5.1.3 Ferry Services**

The Township maintains infrastructure related to the provision of ferry services on Howe Island including, a waiting room, workshop, foot ferry, ramps and ferry house. In total this inventory of assets provides a historical average level of service of \$609 per capita. The historical level of investment in ferry services on Howe Island provides for a D.C. eligible amount over the forecast period of approximately \$33,000.

Based on the Township's capital plan relating to the growth forecast supporting this study, no capital needs have been identified for inclusion in the calculation of the charge at this time.



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#### **5.1.4 Parks and Recreation Services**

On Howe Island, the Township currently maintains parkland amenities including floodlights, playground equipment and a boat ramp and provides approximately 2,000 metres of trails. Furthermore, the Township formerly utilized one parks and recreation vehicle which was taken out of service in 2013. The Township's level of service, over the historic 10-year period for Howe Island, averaged \$114 per capita. In total, the maximum D.C. eligible amount for parks and recreation services over the 10-year forecast period is \$6,158 based on the established level of service standards.

Currently no parks and recreation capital needs to accommodate growth on Howe Island have been identified. Furthermore, the existing D.C. reserve fund balance of \$6,243 for Howe Island parks and recreation services has been deducted against the total potential D.C. recoverable costs across all services on Howe Island, reducing the calculated charge.

#### **5.1.5 Library Services**

Library services in the Township are provided by the Kingston Frontenac Public Library. As per the terms of the service provision agreement, The Township provides only the facility space for the provision of library services. The Howe Island library branch facility space totals 682 square feet, which produces a historical level of service averaging \$129 per capita over the past 10-year period. Based on this service standard, the Township would be eligible to collect approximately \$7,000 from development charges for the provision of library facility space on Howe Island over the ten year forecast period.

The Kingston Frontenac Public Library Branch Services Master Plan does not identify any new capital needs regarding the provision of facility space for the Howe Island branch. As a result no capital needs have been identified for inclusion in the D.C. calculation.

#### **5.1.6 Administration Services (Growth-Related Studies)**

The D.C.A permits the inclusion of studies undertaken to facilitate the completion of the Township's capital works program. The Township has made provision for the inclusion Howe Island's share (based on forecast growth on Howe and Wolfe Islands) of new studies undertaken to facilitate this D.C. process, as well as other studies which benefit growth, e.g. Official Plan Review. Additionally, the need for a Community Centre

Feasibility Study and an update to the Howe Island Transportation Study have also been identified through discussions with staff and Council.

The cost of these projects total approximately \$37,000 over the 10-year forecast period. A deduction \$4,891 has been applied for existing reserve fund balances, and \$24,303 has been deducted against all studies except development charge studies, in recognition of the benefits to the existing population. Deducting the 10% statutory deduction, the net growth-related capital costs included in the calculation of the charge total approximately \$6,100. These costs have been allocated 100% residential and 0% non-residential based on the incremental growth in population to employment on Howe Island, for the 10-year forecast period.

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

Prj .No	Increased Service Needs Attributable to Anticipated Development  2016-2026	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  100%	Non-Residential Share  0%
1	Provision of Annual Road Needs \$173,000 annually		1,730,000	-		1,730,000	1,624,202		105,798	105,798	-
			-	-		-	-		-	-	-
	Reserve Fund Adjustment		-	-		-	-		3,316	3,316	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
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	<b>Total</b>		<b>1,730,000</b>	<b>-</b>	<b>-</b>	<b>1,730,000</b>	<b>1,624,202</b>	<b>-</b>	<b>109,115</b>	<b>109,115</b>	<b>-</b>



**Infrastructure Costs Covered in the D.C. Calculation – Howe Island Ferry Services**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2016-2026		-	-	-	-	-	-	-	-	-	100%	0%
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
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			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
	<b>Total</b>		-	-	-	-	-	-	-	-	-	-	-

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

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non-Residential Share
	2016-2026		-	-		-	-					100%	0%
			-	-		-	-					-	-
			-	-		-	-					-	-
			-	-		-	-					-	-
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			-	-		-	-					-	-
			-	-		-	-					-	-
<b>Total</b>			-	-	-	-	-	-	-	-	-	-	-

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

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non- Residential Share
	2016-2026		-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
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			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
<b>Total</b>			-	-	-	-	-	-	-	-	-	-	-

**Infrastructure Costs Covered in the D.C. Calculation – Howe Island Administration Services**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2016-2026										100%	0%	
1	DC Background Study		5,526	-		5,526	-		5,526	553	4,974	4,974	-
2	OP Review		11,053	-		11,053	5,526		5,526	553	4,974	4,974	-
3	Community Centre Feasibility Study		5,000	-		5,000	4,694		306	31	275	275	-
4	Howe Island Transportation Study Update		15,000	-		15,000	14,083		917	92	826	826	-
	Reserve Fund Adjustment		-	-		-	-		-	-	(4,891)	(4,891)	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
	<b>Total</b>		<b>36,579</b>	-	-	<b>36,579</b>	<b>24,303</b>	-	<b>12,276</b>	<b>1,228</b>	<b>6,157</b>	<b>6,157</b>	-



## **5.2 Service Levels and 10-Year Capital Costs for Wolfe Island D.C. Calculation**

This section evaluates the development-related capital requirements on Wolfe Island for select services over the 10-year planning period (2016-2026). Each service component is evaluated on two format sheets: the average historical 10-year level of service calculation (see Appendix B), which “caps” the D.C. amounts; and the infrastructure cost calculation, which determines the potential D.C. recoverable cost.

### ***5.2.1 Transportation Services***

The inventory of arterial and collector roads on Wolfe Island totals 199 kilometres, in addition to three culverts that are maintained. This historical investment in infrastructure produces a per capita level of service of \$24,933. This level of service produces maximum D.C. eligible costs of \$3.61 million to meet the future increase in need when applied to the forecast net population growth to 2026 (i.e. 145 population).

Furthermore, the Wolfe Island public works department utilizes 9,794 square feet of facility space, and operates a fleet of 15 vehicles and equipment. With regard to facility space and vehicles and equipment, a historical average level of service of \$1,200 per capita has been provided, resulting in a D.C. eligible service cap of \$174,052.

Township staff have identified a specific growth-related expansion to the road network on Wolfe Island at a gross capital cost of \$300,000 in addition to a provision of road needs of \$50,000 annually which will benefit growth and existing development proportionately.

After deducting \$468,271 for the benefit to existing development and adding approximately \$167,000 to the potential D.C. recoverable costs reflective of D.C. reserve fund deficits, the resultant capital needs included in the D.C. calculation for Wolfe Island total approximately \$498,000.

The net growth-related costs for transportation services have been allocated to future residential and non-residential development on the basis of forecast population and employment growth on the Island within the 10-year forecast period (i.e. 94% to residential and 6% to non-residential).

### ***5.2.2 Fire Protection Services***

The Township’s Wolfe Island Fire Department provides service through the provision of one fire hall and one equipment storage facility which total a combined 7,425 square

feet of gross floor area. In addition, the Wolfe Island fire department also has a current inventory of 10 vehicle and equipment items. The average level of service provided by the inventory of fire protection assets is \$937 per capita. This level of service when applied to the forecast growth over the 10-year period produces a D.C. eligible amount of approximately \$136,000.

Presently no growth-related capital needs are anticipated for the Wolfe Island fire protection service. However, \$43,427 has been deducted from the total potential D.C. recoverable costs across all services in the calculation of the charge to account for the existing Wolfe Island fire protection reserve fund balance.

The allocation of the reserve fund balance between residential and non-residential development is 94% residential and 6% non-residential, based on relationship of population to employment growth on Wolfe Island over the 10-year forecast period.

### ***5.2.3 Ferry Services***

The Township's inventory of assets related to the provision of ferry services on Wolfe Island totals six items, including buildings, docks, and the Simcoe Ferry. The average level of service provided by these assets over the past 10-year period totals approximately \$183 per capita and results in maximum D.C. eligible costs of \$26,535 for the incremental forecast development.

Based on the Township's capital plan relating to the growth forecast supporting this study, no capital needs have been identified for inclusion in the calculation of the charge.

### ***5.2.4 Parks and Recreation Services***

The Township provides parks and recreation services on Wolfe Island through the provision of various parkland amenities, outdoor ice rink, three vehicles and 3,000 square feet of indoor facility space (i.e. Community Hall and Community Centre). The historic 10-year level of service for parks and recreation services averaged \$753 per capita. This historical level of service produces a maximum D.C. eligible amount of \$109,155 for the forecast incremental development.

Parks and recreation capital needs anticipated to accommodate growth on Wolfe Island were identified in the Township's previous D.C. background study and through discussions with Township staff. These capital projects include various parkland amenity improvements and the construction of an accessible washroom at the Community Centre. The total gross capital cost of these needs is \$104,900.

Deductions for benefit to existing development and the 10% statutory deduction have been applied to the gross capital costs, totalling \$57,901. Furthermore, the existing D.C. reserve fund deficit of \$23,084 for Wolfe Island parks and recreation services has been applied to total potential D.C. recoverable costs reflective of past D.C. eligible works that were completed but not funded from the D.C. reserve fund. The net D.C. recoverable costs total approximately \$70,000. As the predominant uses of parks and recreation services tend to be residential, these costs are allocated 95% residential and 5% non-residential.

### **5.2.5 Library Services**

Similar to Howe Island, library services in the Township are provided by the Kingston Frontenac Public Library. As per the terms of the service provision agreement, The Township provides only the facility space for the provision of library services. The library facility space on Wolfe Island totals 1,500 square feet, which produces a historical level of service averaging \$213 per capita over the past 10-year period. Based on this service standard, the Township would be eligible to collect approximately \$31,000 from development charges for library facility space on Wolfe Island over the ten year forecast period.

The Kingston Frontenac Public Library Branch Services Master Plan does not identify any new capital needs regarding the provision of facility space for the Wolfe Island branch. As a result, no D.C. recoverable costs included in the calculation for library services.

### **5.2.6 Administration Services (Growth-Related Studies)**

The Township has made provision for the inclusion Wolfe Island's share of new studies undertaken to facilitate this D.C. process and the Official Plan Review. Furthermore, a Secondary Plan for the Marysville community has been identified as a need related to growth on the Island.

The total gross capital costs of these projects totals \$108,421 of which \$39,618 has been deducted to account for the benefit to existing development and 10% statutory deduction. After a further deduction of \$4,891 to account for funds that have already been collected towards this service, in the form of existing reserve fund balances, potential D.C. recoverable costs included in the calculation of the charge total \$63,912. These costs have been distributed between residential and non-residential development on the basis of the incremental population to employment growth over the 10-year period on Wolfe Island (i.e. 94% residential and 6% non-residential).

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

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
2016-2026									94%	6%	
1	Division Street Extension		300,000	-		300,000	-		300,000	281,570	18,430
2	Provision of Annual Road Needs \$50,000 annually		500,000	-		500,000	468,271		-	-	-
	Reserve Fund Adjustment		-	-		-	-		166,647	156,409	10,238
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
			-	-		-	-		-	-	-
	<b>Total</b>		<b>800,000</b>	-	-	<b>800,000</b>	<b>468,271</b>	<b>-</b>	<b>498,376</b>	<b>467,759</b>	<b>30,617</b>

**Infrastructure Costs Covered in the D.C. Calculation – Wolfe Island Fire Protection Services**

Prj .No	Increased Service Needs Attributable to Anticipated Development  2016-2026	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 94%	Non-Residential Share 6%
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-
	<b>Total</b>		-	-	-	-	-	-	-	-	-

**Infrastructure Costs Covered in the D.C. Calculation – Wolfe Island Ferry Services**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2016-2026											94%	6%
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
	<b>Total</b>		-	-	-	-	-	-	-	-	-	-	-



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

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less:	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development		Other (e.g. 10% Statutory Deduction)	Total	Residential Share	Non- Residential Share
	2016-2026											95%	5%
				-		-	-		-	-	-	-	-
				-		-	-		-	-	-	-	-
				-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
<b>Total</b>			-	-	-	-	-	-	-	-	-	-	-



### Infrastructure Costs Covered in the D.C. Calculation – Wolfe Island Administration Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2016\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share	Non-Residential Share
	2016-2026										94%	6%	
1	DC Background Study		19,474	-		19,474	-		19,474	1,947	17,526	16,502	1,024
2	OP Review		38,947	-		38,947	19,474		19,474	1,947	17,526	16,502	1,024
3	Marysville Secondary Plan		50,000	-		50,000	12,500		37,500	3,750	33,750	31,778	1,972
	Reserve Fund Adjustment		-	-		-	-		-	-	(4,891)	(4,605)	(286)
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
			-	-		-	-		-	-	-	-	-
	<b>Total</b>		<b>108,421</b>	<b>-</b>	<b>-</b>	<b>108,421</b>	<b>31,974</b>	<b>-</b>	<b>76,447</b>	<b>7,645</b>	<b>63,912</b>	<b>60,177</b>	<b>3,735</b>

### 5.3 Infrastructure Sustainability and Asset Management Plan

The Township's Asset Management Plan is contained in Appendix C. The Asset Management Plan includes transportation services, protection services, recreation and cultural services and other services related to vehicles, moveable equipment, ferries, buildings and land improvement infrastructure. The Plan recommends an increase of 2% in annual capital funding for these services over the 5-year period, followed by inflationary increases thereafter, to address the existing infrastructure deficits:

- Roads Infrastructure – Annual Deficit \$1.89 million;
- Non-Roads Infrastructure – Annual Deficit \$0.20 million.

Table 5-1 summarizes the additional capital funding requirements for the growth-related capital needs to be funded from the D.C. by-law (i.e. \$795,198). Based on this level of incremental capital emplacement, the annual lifecycle costs at full emplacement would total \$16,703 for transportation services, \$4,456 for fire protection services and \$2,586 for parks and recreation services. Based on the Asset Management Plan infrastructure deficit and strategy to increase annual funding, these costs would increase the required annual funding to increase by 0.03%. Based on this assessment, the growth-related capital lifecycle impacts are minimal and as such financial sustainable.

**Table 5-1**  
**Township of Frontenac Islands**  
**Annual Incremental Operating Costs Associated with New Capital Infrastructure**

Service	Non- Replacement Capital Needs	Lifecycle Term	Annual Lifecycle Costs	Township's AMP Annual Infrastructure Needs (Infrastructure Deficit)	Town's AMP Annual % Increase
Transportation Services	405,798	20	16,703		
Fire Protection Services	89,800	15-80	4,456		
Ferries					
Parks and Recreation Services	104,900	30	2,586		
Library Services					
Administration Studies	n/a	n/a	n/a		
<b>Total</b>	795,198		30,786	2,089,865	2.03%

## 6. Development Charge Calculation

The proposed development charges to be imposed in Howe Island and Wolfe Island are calculated in Tables 6-1 and 6-2 respectively.

The calculation for residential development is generated on a per capita basis and is based upon four forms of housing types (single and semi-detached, apartments 2+ bedrooms, bachelor and 1 bedroom apartments, and other multiples). The non-residential development charge has been calculated on a per square foot of gross floor area basis for commercial, industrial and institutional development.

The D.C. eligible costs for each service component are provided in Chapter 5 for all municipal services, based on their proposed capital programs.

For the residential calculations, the total cost is divided by the “gross” (new resident) population to determine the per capita amount. The eligible D.C. cost calculations are based on the net anticipated population increase (the forecast new unit population less the anticipated decline in existing units). The cost per capita is then multiplied by the average occupancy of the new units (Appendix A) to calculate the charge.

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

Summarized in Table 6-3 and 6-4 are calculated maximum development charges that could be imposed by Council by residential dwelling type and non-residential gross floor area for Howe Island and Wolfe Island respectively. Table 6-5 compares the Township’s previous charges, and indexed charges, to the charges calculated herein for single detached residential development and non-residential development.

**Table 6-1  
Development Charge Calculation  
Howe Island Area  
2016-2026**

SERVICE	2016 \$ DC Eligible Cost		2016 \$ DC Eligible Cost	
	Residential	Non-Residential	SDU	per ft <sup>2</sup>
1. Transportation Services	109,115	-	4,609	
2. Fire Protection Services	78,299	-	3,308	
3. Ferries	-	-	-	
4. Parks and Recreation Services	-	-	-	
5. Library Services	-	-	-	
6. Administration Studies	6,157	-	260	
<b>TOTAL</b>	<b>\$193,571</b>	<b>\$0</b>	<b>\$8,177</b>	<b>\$0.00</b>
Reserve Fund Adjustment	(\$6,243)	\$0		
<b>DC ELIGIBLE CAPITAL COST</b>	<b>\$187,328</b>	<b>\$0</b>		
10 Year Gross Population / GFA Growth (ft <sup>2</sup> )	63	-		
Cost Per Capita / Non-Residential GFA (ft <sup>2</sup> )	\$2,973			
<u>By Residential Unit Type</u>	<u>p.p.u</u>			
Single and Semi-Detached Dwelling	2.75	\$8,177		
Apartments - 2 Bedrooms +	1.72	\$5,114		
Apartments - Bachelor and 1 Bedroom	1.19	\$3,538		
Other Multiples	2.18	\$6,482		

\*Reserve fund adjustment includes balance of \$6,243 for parks and recreation services

**Table 6-2  
Development Charge Calculation  
Wolfe Island Area  
2016-2026**

SERVICE	2016 \$ DC Eligible Cost		2016 \$ DC Eligible Cost	
	Residential	Non-Residential	SDU	per ft <sup>2</sup>
1. Transportation Services	467,759	30,617	5,397	4.99
2. Fire Protection Services	-	-	-	-
3. Ferries	-	-	-	-
4. Parks and Recreation Services	66,573	3,504	768	0.57
5. Library Services	-	-	-	-
6. Administration Studies	60,177	3,735	694	0.61
<b>TOTAL</b>	<b>\$594,509</b>	<b>\$37,856</b>	<b>\$6,859</b>	<b>\$6.17</b>
Reserve Fund Adjustment	(\$40,759)	(\$2,668)		
<b>DC ELIGIBLE CAPITAL COST</b>	<b>\$553,750</b>	<b>\$35,188</b>		
10 Year Gross Population / GFA Growth (ft <sup>2</sup> .)		222	5,700	
Cost Per Capita / Non-Residential GFA (ft <sup>2</sup> .)	\$2,494	\$6.17		
<u>By Residential Unit Type</u>	<u>p.p.u</u>			
Single and Semi-Detached Dwelling	2.75	\$6,860		
Apartments - 2 Bedrooms +	1.72	\$4,290		
Apartments - Bachelor and 1 Bedroom	1.19	\$2,968		
Other Multiples	2.18	\$5,438		

\*Reserve fund adjustment includes balance of \$43,427 for fire protection services

**Table 6-3  
Schedule of Development Charges  
Howe Island Area**

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per ft <sup>2</sup> of Gross Floor Area)
<b>Municipal Wide Services:</b>					
Transportation Services	4,609	2,883	1,994	3,654	-
Fire Protection Services	3,308	2,069	1,431	2,622	-
Ferries	-	-	-	-	-
Parks and Recreation Services	-	-	-	-	-
Library Services	-	-	-	-	-
Administration Studies	260	163	113	206	-
<b>Total Municipal Wide Services</b>	<b>8,177</b>	<b>5,115</b>	<b>3,538</b>	<b>6,482</b>	<b>-</b>

**Table 6-4**  
**Schedule of Development Charges**  
**Wolfe Island Area**

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per ft <sup>2</sup> of Gross Floor Area)
<b>Wolfe Island Services:</b>					
Transportation Services	5,397	3,376	2,335	4,278	4.99
Fire Protection Services	-	-	-	-	-
Ferries	-	-	-	-	-
Parks and Recreation Services	768	480	332	609	0.57
Library Services	-	-	-	-	-
Administration Studies	694	434	300	550	0.61
<b>Total Wolfe Island Services</b>	<b>6,859</b>	<b>4,290</b>	<b>2,967</b>	<b>5,437</b>	<b>6.17</b>

**Table 6-5**  
**Comparison of Current and Calculated Development Charges**  
**for Single Detached Residential and Non-Residential Development**

Residential (Single Detached) Comparison  
Howe Island

Service	Previous	Previous (2016\$)	Calculated
<b>Municipal Wide Services:</b>			
Transportation Services	3,758	4,184	4,609
Fire Protection Services	268	299	3,308
Ferries	-	-	-
Parks and Recreation Services	125	140	-
Library Services	-	-	-
Administration Studies	57	63	260
<b>Total Howe Island Services</b>	<b>4,209</b>	<b>4,686</b>	<b>8,177</b>

Non-Residential (per ft<sup>2</sup>.) Comparison  
Howe Island

Service	Previous	Previous (2016\$)	Calculated
<b>Municipal Wide Services:</b>			
Transportation Services	0.44	0.49	-
Fire Protection Services	0.54	0.60	-
Ferries	-	-	-
Parks and Recreation Services	-	-	-
Library Services	-	-	-
Administration Studies	0.01	0.01	-
<b>Total Howe Island Services</b>	<b>0.99</b>	<b>1.11</b>	<b>-</b>

Residential (Single Detached) Comparison  
Wolfe Island

Service	Previous	Previous (2016\$)	Calculated
<b>Municipal Wide Services:</b>			
Transportation Services	3,019	3,361	5,397
Fire Protection Services	-	-	-
Ferries	-	-	-
Parks and Recreation Services	145	161	768
Library Services	-	-	-
Administration Studies	57	63	694
<b>Total Wolfe Island Services</b>	<b>3,221</b>	<b>3,586</b>	<b>6,859</b>

Non-Residential (per ft<sup>2</sup>.) Comparison  
Wolfe Island

Service	Previous	Previous (2016\$)	Calculated
<b>Municipal Wide Services:</b>			
Transportation Services	0.84	0.94	4.99
Fire Protection Services	-	-	-
Ferries	-	-	-
Parks and Recreation Services	-	-	0.57
Library Services	-	-	-
Administration Studies	0.01	0.01	0.61
<b>Total Wolfe Island Services</b>	<b>0.85</b>	<b>0.95</b>	<b>6.17</b>

## **7. Development Charge Policy Recommendations and Development Charge By-law Rules**

This chapter outlines the development charge policy recommendations and by-law rules. The rules provided are based on the Township's existing policies; however, there are items under consideration at this time and these may be refined prior to adoption of the by-law.

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

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

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

s.s.5(6) establishes the following restrictions on the rules:

- the total of all development charges that would be imposed on anticipated development must not exceed the capital costs determined under 5(1) 2-8 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay development charges that exceed the capital costs that arise from the increase in the need for service for that type of development; however, this requirement does not relate to any particular development;
- if the rules provide for a type of development to have a lower development charge than is allowed, the rules for determining development charges may not provide for any resulting shortfall to be made up via other development; and
- with respect to “the rules,” subsection 6 states that a D.C. by-law must expressly address the matters referred to above re s.s.5(1) para. 9 and 10, as well as how the rules apply to the redevelopment of land.

## 7.1 Development Charge By-law Structure

**It is recommended that:**

- the Township impose one D.C. By-Law, with area-specific development charges for all municipal services on Howe Island and Wolfe Island respectively.

## 7.2 Development Charge By-law Rules

The following sets out the recommended rules governing the calculation, payment and collection of development charges in accordance with subsection 6 of the Development Charges Act, 1997.

**It is recommended that the following provides the basis for the development charges:**

### ***7.2.1 Payment in any Particular Case***

In accordance with the Development Charges Act, 1997, s.2(2), a development charge be calculated, payable and collected where the development requires one or more of the following:

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



### **7.2.2 Determination of the Amount of the Charge**

The following conventions be adopted:

- 1) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type constructed during the previous decade. Costs allocated to non-residential uses will be assigned to industrial and commercial/institutional uses based on the gross floor area constructed.
- 2) Costs allocated to residential and non-residential uses are based upon a number of conventions, as may be suited to each municipal circumstance. These are summarized in Chapter 5 herein.

### **7.2.3 Application to Redevelopment of Land (Demolition and Conversion)**

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

- 1) the number of dwelling units demolished/converted multiplied by the applicable residential development charge in place at the time the development charge is payable; and/or
- 2) the gross floor area of the building demolished/converted multiplied by the current non-residential development charge in place at the time the development charge is payable.

The demolition credit is allowed only if the land was improved by occupied structures, and if the demolition permit related to the site was issued less than 60 months (5 years) prior to the issuance of a building permit. The credit can, in no case, exceed the amount of development charges that would otherwise be payable.

### **7.2.4 Exemptions (full or partial)**

- a) Statutory exemptions
  - Industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only

the portion of the addition in excess of 50% is subject to development charges (s.4(3));

- Buildings or structures owned by and used for the purposes of any Township, local board or Board of Education (s.3); and
- Residential development that results in only the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in s.2 of O.Reg. 82/98).

b) Non-statutory exemptions

- a place of worship classified as exempt from taxation under Section 3 of the Assessment Act;
- hospitals under the *Public Hospitals Act*;
- non-residential farm buildings;
- development creating or adding an accessory use or structure not exceeding ten square meters of non-residential floor area;
- land owned by and used for the purposes of a health care centre, university or cemetery;
- a senior's residence; and
- a temporary use building;

### ***7.2.5 D.C. Reduction and Phase in Provision(s)***

In discussion with Township Council, the full calculated charges identified in Chapter 6 have been reduced to \$6,000 per single detached residential unit (with similar reductions for other dwelling types) and \$2.50 per square foot of gross floor area for non-residential development. No provisions for phasing in the reduced development charges are provided in the proposed development charge by-law.

### ***7.2.6 Timing of Collection***

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

### ***7.2.7 Indexing***

Indexing of the development charges shall be implemented on a mandatory basis commencing on January 1, 2017 and annually thereafter, in accordance with the

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Statistics Canada Quarterly, Non-Residential Building Construction Index (CANSIM Table 327-0043)<sup>1</sup> for the most recent year-over-year period.

### ***7.2.8 Area Specific Development Charges***

The Township previously imposed development charges through a Township-wide D.C. by-law for needs that are provided on Howe and Wolfe Islands. The Township's D.C. by-law imposed development charges on an area specific basis for all services except of administrative studies which were imposed on a Township-wide basis.

As noted in Section 2.1 of this report, the treatment of area-specific charges was considered through the D.C. study process. It was determined that the characteristics of Wolfe Island and Howe Island, including service needs and potential growth are significantly different and localized to justify the calculation of the charge on an area specific basis (i.e. imposition of separately calculated charges for Howe Island and Wolfe Islands).

## **7.3 Other Development Charge By-law Provisions**

### ***7.3.1 Categories of Services for Reserve Fund and Credit Purposes***

It is recommended that the Township's development charge collections be contributed into six separate reserve funds for Howe Island and Wolfe Island respectively, including: Transportation Services; Fire Protection Services, Ferry Services; Parks and Recreation Services; Library Services; and Administration Services.

### ***7.3.2 By-law In-force Date***

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

### ***7.3.3 Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing***

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

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<sup>1</sup> O.Reg 82/98 referenced "The Statics Canada Quarterly, Construction Price Statistics, catalogue number 62-007" as the index source. As of the end of December 2013 this catalogue has been discontinued and replaced by this web based table.

## 7.4 Other Recommendations

### It is recommended that Council:

“Approve the capital project listing set out in Chapter 5 of the Development Charges Background Study dated April 12, 2016, subject to further annual review during the capital budget process;”

“Approve the Development Charges Background Study dated April 12, 2016;”

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

“Approve the Development Charge By-Law as set out in Appendix D.”

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## 8. By-law Implementation

### 8.1 Public Consultation

This chapter addresses the mandatory, formal public consultation process (subsection 8.1.2), as well as the optional, informal consultation process (subsection 8.1.3). The latter is designed to seek the co-operation and involvement of those involved, in order to produce the most suitable policy. Section 8.2 addresses the anticipated impact of the development charge on development, from a generic viewpoint.

#### *8.1.1 Public Meeting of Council*

Section 12 of the D.C.A., 1997 indicates that before passing a development charge by-law, Council must hold at least one public meeting, giving at least 20 clear days' notice thereof, in accordance with the Regulation. Council must also ensure that the proposed by-law and background report are made available to the public at least two weeks prior to the (first) meeting.

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

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

#### *8.1.2 Other Consultation Activity*

There are three broad groupings of the public who are generally the most concerned with municipal development charge policy:

1. The residential development community, consisting of land developers and builders, who are typically responsible for generating the majority of the development charge revenues. Others, such as realtors, are directly impacted by development charge policy. They are, therefore, potentially interested in all aspects of the charge, particularly the quantum by unit type, projects to be

funded by the D.C. and the timing thereof, and municipal policy with respect to development agreements, D.C. credits and front-ending requirements.

2. The second public grouping embraces the public at large and includes taxpayer coalition groups and others interested in public policy (e.g. in encouraging a higher non-automobile modal split).
3. The third grouping is the industrial/commercial/institutional development sector, consisting of land developers and major owners or organizations with significant construction plans, such as hotels, entertainment complexes, shopping centres, offices, industrial buildings and institutions. Also involved are organizations such as Industry Associations, the Chamber of Commerce, the Board of Trade and the Economic Development Agencies, who are all potentially interested in municipal development charge policy. Their primary concern is frequently with the quantum of the charge, gross floor area exclusions such as basement, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

## **8.2 Anticipated Impact of the Charge on Development**

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

On the other hand, development charges or other municipal capital funding sources need to be obtained in order to help ensure that the necessary infrastructure and amenities are installed. The timely installation of such works is a key initiative in providing adequate service levels and in facilitating strong economic growth, investment and wealth generation.

## **8.3 Implementation Requirements**

Once the Township has calculated the charge, prepared the complete background study, carried out the public process and passed a new by-law, the emphasis shifts to implementation matters.

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

The following provides an overview of the requirements in each case.

### ***8.3.1 Notice of Passage***

In accordance with s.13 of the D.C.A., when a D.C. by-law is passed, the municipal clerk shall give written notice of the passing and of the last day for appealing the by-law (the day that is 40 days after the day it was passed). Such notice must be given not later than 20 days after the day the by-law is passed (i.e. as of the day of newspaper publication or the mailing of the notice).

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

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

### ***8.3.2 By-law Pamphlet***

In addition to the "notice" information, the Township must prepare a "pamphlet" explaining each development charge by-law in force, setting out:

- a description of the general purpose of the development charges;
- the "rules" for determining if a charge is payable in a particular case and for determining the amount of the charge;
- the services to which the development charges relate; and
- a general description of the general purpose of the Treasurer's statement and where it may be received by the public.

Where a by-law is not appealed to the O.M.B., the pamphlet must be readied within 60 days after the by-law comes into force. Later dates apply to appealed by-laws.

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

### ***8.3.3 Appeals***

Sections 13 to 19 of the D.C.A., 1997 set out requirements relative to making and processing a D.C. by-law appeal and an O.M.B. Hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the O.M.B. by filing a notice of appeal with the municipal clerk, setting out the objection to the by-law and the reasons supporting the objection. This must be done by the last day for appealing the by-law, which is 40 days after the by-law is passed.

### ***8.3.4 Complaints***

A person required to pay a development charge, or his agent, may complain to Municipal Council imposing the charge that:

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

Sections 20 to 25 of the D.C.A., 1997 set out the requirements that exist, including the fact that a complaint may not be made later than 90 days after a D.C. (or any part of it) is payable. A complainant may appeal the decision of Municipal Council to the O.M.B.

### ***8.3.5 Credits***

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

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

### ***8.3.6 Front-Ending Agreements***

The Township and one or more landowners may enter into a front-ending agreement which provides for the costs of a project which will benefit an area in the Township to which the D.C. by-law applies. Such an agreement can provide for the costs to be



borne by one or more parties to the agreement who are, in turn, reimbursed in future by persons who develop land defined in the agreement.

Part III of the D.C.A., 1997 (Sections 44 to 58) addresses front-ending agreements and removes some of the obstacles to their use which were contained in the D.C.A., 1989. Accordingly, the Township assesses whether this mechanism is appropriate for its use, as part of funding projects prior to municipal funds being available.

### ***8.3.7 Severance and Subdivision Agreement Conditions***

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

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

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

In this regard, if the Township in question is a commenting agency, in order to comply with subsection 59(4) of the Development Charges Act, 1997 it would need to provide to the approval authority, information regarding the applicable municipal development charges related to the site.

If the Township is an approval authority for the purposes of Section 51 of the Planning Act, it would be responsible to ensure that it collects information from all entities which can impose a development charge.

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

# **Appendix A – Background Information on Residential and Non-Residential Growth Forecast**

# Appendix A – Background Information on Residential and Non-Residential Growth Forecast

The following appendix contains the tables outlining the detailed growth forecast calculations as follows:

- Page A-3 Residential Growth Forecast Summary and Annual Housing Forecast
- Page A-4 Estimate of the Anticipated Amount, Type and Location of Residential Development for which Development Charges can be Imposed
- Page A-5 Current Year Growth Forecast
- Page A-6 Ten Year Growth Forecast
- Page A-7 Twenty Year Growth Forecast
- Page A-8 Historical Residential Building Permits
- Page A-9 Persons Per Unit by Age and Type of Dwelling (Frontenac County)
- Page A-10 Graphical Presentations of Persons Per Unit by Age and Type of Dwelling (Frontenac County)
- Page A-11 Employment Forecast, 2016 to 2036
- Page A-12 Employment Gross Floor Area (G.F.A.) Forecast, 2016 to 2036
- Page A-13 Estimate of the Anticipated amount, Type and Location of Non-residential Development for which Development Charges can be Imposed
- Page A-14 Non-residential Construction Value, Years 2002-2014
- Page A-15 Employment to Population Ratio by Major Employment Sector, 2001 to 2011

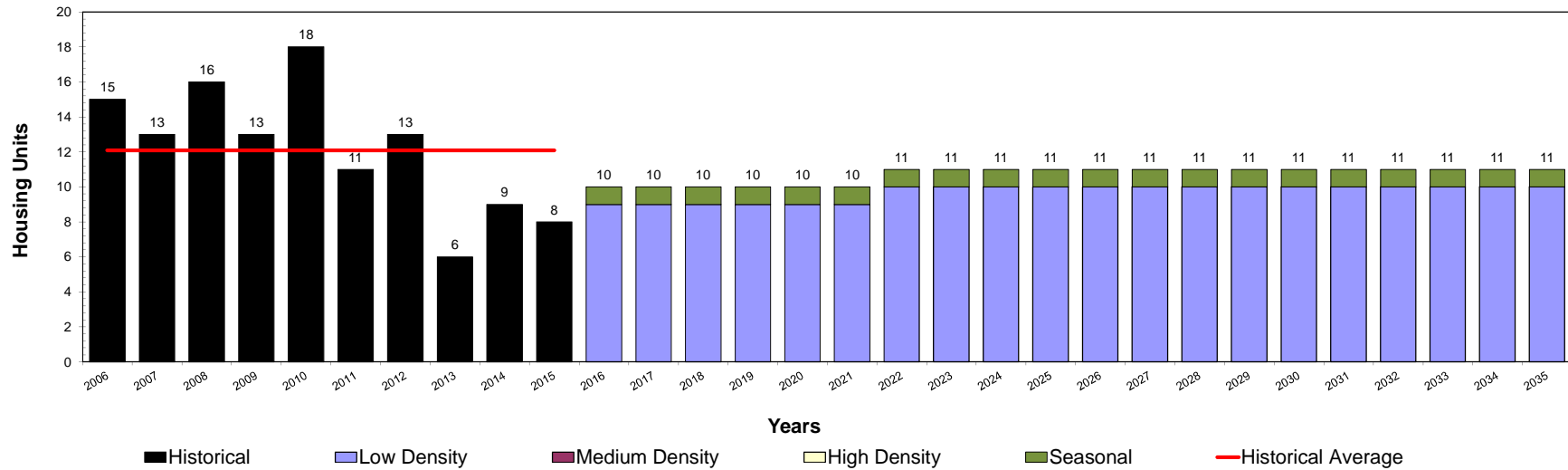
**Schedule 1  
Township Of Frontenac Islands  
Residential Growth Forecast Summary**

Year	Permanent Population <sup>1</sup>	Permanent Population (Including Census Undercount)	Seasonal Population	Total Permanent and Seasonal Population	Housing Units										Permanent + 100% Seasonal Person Per Unit (PPU)		
					Singles & Semi-Detached	Conversions <sup>2</sup>	Singles & Semi Detached Family Less Conversions	Multiples <sup>3</sup>	Apartments <sup>4</sup>	Other	Total w/o Conversions <sup>2</sup>	Total w/ Conversions <sup>2</sup>	Seasonal Households Adjusted for Conversions <sup>2</sup>	Total Households w/ Seasonal		Permanent Person Per Unit (PPU)	
Historical	Mid 2001	1,638	1,680	0	1,638	640		640	5	10	5	660	660		660	2.48	2.48
	Mid 2006	1,862	1,910	0	1,862	770		770	0	10	0	780	780	0	780	2.39	2.39
	Mid 2011	1,950	2,000	1,850	3,800	800		800	0	10	0	810	810	505	1,315	2.41	2.89
Forecast	Mid 2016	2,044	2,100	1,850	3,894	851	4	847	0	10	0	857	861	505	1,366	2.37	2.85
	Mid 2026	2,242	2,295	1,850	4,092	955	18	937	0	10	0	947	965	505	1,470	2.32	2.78
	Mid 2036	2,445	2,505	1,850	4,295	1,065	25	1,040	0	10	0	1,050	1,075	505	1,580	2.27	2.72
Incremental	Mid 2001 - Mid 2006	224	230	0	224	130	0	130	-5	0	-5	120	120	0	120		
	Mid 2006 - Mid 2011	88	90	1,850	1,938	30	0	30	0	0	0	30	30	505	535		
	Mid 2011 - Mid 2016	94	100	0	94	51	4	47	0	0	0	47	51	0	51		
	Mid 2016 - Mid 2026	199	195	0	199	104	14	90	0	0	0	90	104	0	104		
	Mid 2016 - Mid 2036	401	405	0	401	214	21	193	0	0	0	193	214	0	214		

Source: Watson & Associates Economists Ltd., 2016. Derived from Population, Housing, and Employment Projections for the Frontenacs, June 13, 2014.

1. Population excludes net Census Undercount of approximately 2.5%.
2. Conversions represent seasonal dwellings which change into permanent households
3. Includes townhomes and apartments in duplexes.
4. Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

**FIGURE A-1  
ANNUAL HOUSING FORECAST<sup>1</sup>**



Source: Historical housing activity (2005-2014) based on Statistics Canada building permits, Catalogue 64-001-XIB

1. Growth Forecast represents calendar year.

**Schedule 2**  
**Township Of Frontenac Islands**  
**Estimate Of The Anticipated Amount, Type And Location Of**  
**Development For Which Development Charges Can Be Imposed**

Development Location	Timing	Single & Semi-Detached	Multiples <sup>1</sup>	Apartments <sup>2</sup>	Total Residential Units Unadjusted for Conversions <sup>3</sup>	Conversions <sup>3</sup>	Total Units Adjusted for Conversions <sup>3</sup>	Seasonal Units Unadjusted for Conversions <sup>3</sup>	Seasonal Units Adjusted for Conversions <sup>3</sup>	Total Permanent + Seasonal Housing Units
Howe Island	2016 - 2026	23	-	-	23	-	23	-	-	23
	2016 - 2036	48	-	-	48	5	53	5	-	53
Wolfe Island	2016 - 2026	67	-	-	67	14	81	14	-	81
	2016 - 2036	145	-	-	145	16	161	16	-	161
Township of Frontenac Islands	2016 - 2026	90	-	-	90	14	104	14	-	104
	2016 - 2036	193	-	-	193	21	214	21	-	214

Development Location	Timing	Gross Permanent Population in New Units	Existing Unit Population Change	Net Population Increase (Including Seasonal Population Equivalent)
Howe Island	2016 - 2026	63	(9)	54
	2016 - 2036	146	(19)	127
Wolfe Island	2016 - 2026	222	(78)	145
	2016 - 2036	442	(167)	275
Township of Frontenac Islands	2016 - 2026	286	(87)	199
	2016 - 2036	588	(186)	401

Source: Watson & Associates Economists Ltd., 2015

Residential distribution based on a combination of historical permit activity, available housing supply and discussions with County staff regarding future development prospects.

1. Includes townhomes and apartments in duplexes.
2. Includes bachelor, 1 bedroom and 2 bedroom+ apartments.
3. Conversions represent seasonal dwellings which change into permanent households

**Schedule 3  
Township Of Frontenac Islands  
Current Year Growth Forecast  
Mid 2011 TO Mid 2016**

		POPULATION
Mid 2011 Population		3,800
Occupants of New Housing Units, Mid 2011 to Mid 2016	<i>New Units (2)</i>	51
	<i>multiplied by persons per unit (3)</i>	2.82
	<i>gross population increase</i>	144
		144
	<i>Total Units</i>	55
	<i>Total gross population increase</i>	144
Decline in Housing Unit Occupancy, Mid 2011 to Mid 2016	<i>Units (4)</i>	810
	<i>multiplied by ppu decline rate (5)</i>	-0.0623
	<i>total decline in population</i>	-50
Population Estimate to Mid 2016		3,894
<i>Net Population Increase, Mid 2011 to Mid 2016</i>		94

(1) 2011 population based on StatsCan Census unadjusted for Census Undercount.

(2) Estimated residential units constructed, Mid 2011 to the beginning of the growth period, assuming a six month lag between construction and occupancy.

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

Structural Type	Persons Per Unit <sup>1</sup>	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	2.82	100%	2.82
<i>Multiples (6)</i>	2.18	0%	0.00
<i>Apartments (7)</i>	1.64	0%	0.00
<b>Total</b>		100%	2.82

<sup>1</sup> Based on 2011 Census custom database

<sup>2</sup> Based on Building permit/completion activity

(4) Mid 2016 households based upon 810 (2011 Census) + 39 (Mid 2011 to Mid 2015 unit estimate) = 849

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

**Schedule 4  
Township Of Frontenac Islands  
Ten Year Growth Forecast  
Mid 2016 TO Mid 2026**

		POPULATION
Mid 2016 Population		3,894
Occupants of New Housing Units, Mid 2016 to Mid 2026	<i>New Units (2)</i>	104
	<i>multiplied by persons per unit (3)</i>	2.75
	<i>gross population increase</i>	286
	<i>Total Units</i>	104
		286
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2026	<i>Units (4)</i>	857
	<i>multiplied by ppu decline rate (5)</i>	-0.1011
	<i>total decline in population</i>	-87
Population Estimate to Mid 2026		4,092
<i>Net Population Increase, Mid 2016 to Mid 2026</i>		198

(1) Mid 2016 Population based on:

2011 Population (3,800) + Mid 2011 to Mid 2016 estimated housing units to beginning of forecast period (51 x 2.82 = 144) + (810 x -0.0623 = -50) = 3,894

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

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

Structural Type	Persons Per Unit <sup>1</sup>	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	2.75	100%	2.75
<i>Multiples (6)</i>	2.18	0%	0.00
<i>Apartments (7)</i>	1.64	0%	0.00
<i>one bedroom or less</i>	1.19		
<i>two bedrooms or more</i>	1.72		
<b>Total</b>		100%	2.75

<sup>1</sup> Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Mid 2016 households based upon 810 (2011 Census) + 39 (Mid 2011 to Mid 2015 unit estimate) = 849

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

**Schedule 5  
Township Of Frontenac Islands  
Long Term Growth Forecast  
Mid 2016 to Mid 2036**

		POPULATION
Mid 2016 Population		3,894
Occupants of New Housing Units, Mid 2016 to Mid 2036	<i>New Units (2)</i>	214
	<i>multiplied by persons per unit (3)</i>	2.75
	<i>gross population increase</i>	588
	<i>Total Units</i>	214
		588
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2036	<i>Units (4)</i>	857
	<i>multiplied by ppu. decline rate (5)</i>	-0.2173
	<i>total decline in population</i>	-186
		-186
Population Estimate to Mid 2036		4,295
<i>Net Population Increase, Mid 2016 to Mid 2036</i>		<i>401</i>

(1) Mid 2016 Population based on:

2011 Population (3,800) + Mid 2011 to Mid 2016 estimated housing units to beginning of forecast period (51 x 2.82 = 144) + (810 x -0.0623 = -50) = 3,894

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

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

Structural Type	Persons Per Unit <sup>1</sup>	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	2.75	100%	2.75
<i>Multiples (6)</i>	2.18	0%	0.00
<i>Apartments (7)</i>	1.64	0%	0.00
<i>one bedroom or less</i> 1.19			
<i>two bedrooms or more</i> 1.72			
<b>Total</b>		100%	2.75

<sup>1</sup> Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Mid 2016 households based upon 810 (2011 Census) + 51 (Mid 2011 to Mid 2016 unit estimate) = 857

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



**Schedule 6**

**Township Of Frontenac Islands  
Historical Residential Building Permits  
Years 2006 - 2015**

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples <sup>1</sup>	Apartments <sup>2</sup>	Total
2006	15	0	0	15
2007	13	0	0	13
2008	16	0	0	16
2009	13	0	0	13
2010	18	0	0	18
Sub-total	75	0	0	75
<b>Average (2006 - 2010)</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>15</b>
% Breakdown	100.0%	0.0%	0.0%	100.0%
2011	11	0	0	11
2012	13	0	0	13
2013	6	0	0	6
2014	9	0	0	9
2015	8	0	0	8
Sub-total	47	0	0	47
<b>Average (2011 - 2015)</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>
% Breakdown	100.0%	0.0%	0.0%	100.0%
2006 - 2015				
Total	122	0	0	122
<b>Average</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>
% Breakdown	100.0%	0.0%	0.0%	100.0%

Sources:

Building Permits - Statistics Canada Publication, 64-001XIB

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

## Schedule 7

### Frontenac County Persons Per Unit By Age And Type Of Dwelling (2011 Census)

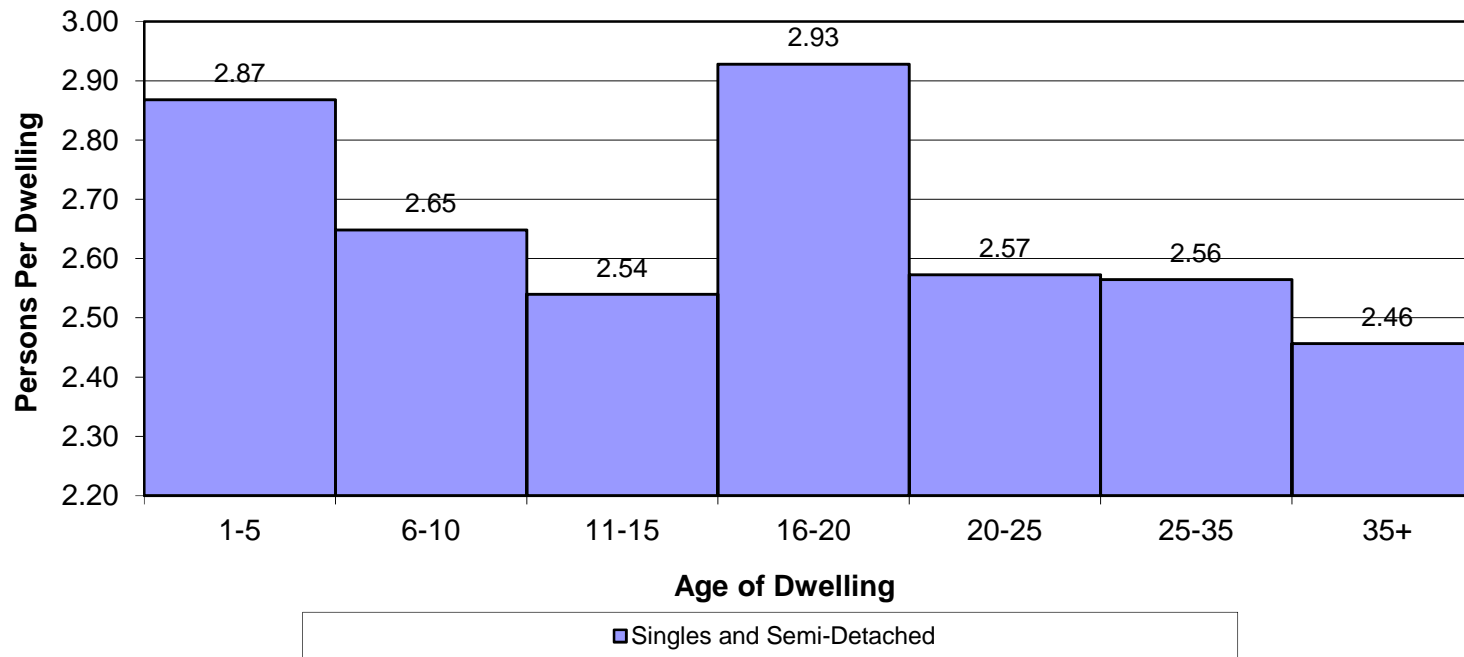
Age of Dwelling	Singles and Semi-Detached						20 Year Average
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	
1-5	-	-	2.900	2.703	-	<b>2.868</b>	
6-10	-	-	2.238	2.655	3.556	<b>2.648</b>	
11-15	-	-	2.080	2.549	5.167	<b>2.540</b>	
16-20	-	1.444	2.636	2.947	5.800	<b>2.928</b>	2.75
20-25	-	-	1.730	2.680	3.727	<b>2.573</b>	
25-35	-	-	1.650	2.730	3.200	<b>2.564</b>	
35+	-	1.326	1.765	2.661	2.764	<b>2.457</b>	
<b>Total</b>	-	<b>1.367</b>	<b>1.902</b>	<b>2.685</b>	<b>3.248</b>	<b>2.548</b>	

1. The Census PPU has been adjusted to account for the downward PPU trend which has been recently experienced in both new and older units, largely due to the aging of the population

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

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

**Schedule 8  
Frontenac County  
Persons Per Unit By Structural Type And Age Of Dwelling  
(2011 Census)**



Multiple and Apartment PPU's are based on Frontenac County.

**Schedule 9a  
Township Of Frontenac Islands  
Employment Forecast, 2016 to Mid 2036**

Period	Population	Activity Rate						Employment					
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total
<b>Mid 2001</b>	1,638	0.006	0.095	0.027	0.049	0.006	0.183	10	155	45	80	10	300
<b>Mid 2006</b>	1,862	0.005	0.081	0.019	0.046	0.019	0.170	10	150	36	86	35	316
<b>Mid 2011</b>	1,950	0.005	0.079	0.019	0.045	0.018	0.166	10	154	37	87	36	324
<b>Mid 2016</b>	2,044	0.005	0.079	0.019	0.045	0.018	0.166	10	161	39	88	36	334
<b>Mid 2026</b>	2,242	0.005	0.078	0.017	0.041	0.018	0.159	10	174	39	93	40	356
<b>Mid 2036</b>	2,445	0.004	0.075	0.016	0.040	0.018	0.153	10	182	39	97	45	373
<b>Incremental Change</b>													
<b>Mid 2001 - Mid 2006</b>	224	-0.001	-0.014	-0.008	-0.003	0.013	-0.013	0	-5	-10	6	25	16
<b>Mid 2006 - Mid 2011</b>	88	-0.0002	-0.0016	0.0000	-0.0013	-0.0004	-0.003	0	4	2	2	1	8
<b>Mid 2011 - Mid 2016</b>	94	0.0000	0.0000	-0.0005	0.0000	0.0000	-0.001	0	7	2	1	0	10
<b>Mid 2016 - Mid 2026</b>	199	-0.0005	-0.0013	-0.0014	-0.0033	-0.0005	-0.007	0	13	0	5	4	22
<b>Mid 2016 - Mid 2036</b>	401	-0.0009	-0.0044	-0.0027	-0.0049	0.0000	-0.013	0	21	0	9	9	39
<b>Annual Average</b>													
<b>Mid 2001 - Mid 2006</b>	45	-0.00015	-0.00281	-0.00168	-0.00058	0.00254	-0.0027	0	-1	-2	1	5	3
<b>Mid 2006 - Mid 2011</b>	18	0.0000	-0.0003	0.0000	-0.0003	-0.0001	-0.0007	0	1	0	0	0	2
<b>Mid 2011 - Mid 2016</b>	19	0.0000	0.0000	-0.0001	0.0000	0.0000	-0.0001	0	1	0	0	0	2
<b>Mid 2016 - Mid 2026</b>	20	-0.00005	-0.00013	-0.00014	-0.00033	-0.00005	-0.0007	0	1	0	0	0	2
<b>Mid 2016 - Mid 2036</b>	11	-0.00003	-0.00013	-0.00008	-0.00014	0.00000	-0.0004	0	1	0	0	0	2

Source: Watson & Associates Economists Ltd., 2016. Derived from Population, Housing, and Employment Projections for the Frontenacs, June 13, 2014.

**Schedule 9b**  
**Township Of Frontenac Islands**  
**Employment & Gross Floor Area (GFA) Forecast, 2015 to 2036**

Period	Population	Employment					Gross Floor Area in Square Feet (Estimated) <sup>1</sup>			
		Primary	Industrial	Commercial/ Population Related	Institutional	Total	Industrial	Commercial/ Population Related	Institutional	Total
<b>Mid 2001</b>	1,638	10	45	80	10	145				
<b>Mid 2006</b>	1,862	10	36	86	35	166				
<b>Mid 2011</b>	1,950	10	37	87	36	170				
<b>Mid 2016</b>	2,044	10	39	88	36	173				
<b>Mid 2026</b>	2,242	10	39	93	40	182				
<b>Mid 2036</b>	2,445	10	39	97	45	191				
<b>Incremental Change</b>										
<b>Mid 2001 - Mid 2006</b>	224	0	-10	6	25	21				
<b>Mid 2006 - Mid 2011</b>	88	0	2	2	1	4				
<b>Mid 2016 - Mid 2026</b>	199	0	0	5	4	9	0	2,800	2,900	5,700
<b>Mid 2016 - Mid 2036</b>	401	0	0	9	9	18	0	5,000	6,400	11,400
<b>Annual Average</b>										
<b>Mid 2001 - Mid 2006</b>	45	0	-2	1	5	4				
<b>Mid 2006 - Mid 2011</b>	18	0	0	0	0	1				
<b>Mid 2016 - Mid 2026</b>	20	0	0	0	0	1	0	280	290	570
<b>Mid 2016 - Mid 2036</b>	11	0	0	0	0	1	0	143	183	326

Source: Watson & Associates Economists Ltd., 2016.

1. Square Foot Per Employee Assumptions

Urban Industrial	1,500
Rural Industrial	2,500
Commercial/ Population Related	550
Institutional	700

**Schedule 9c**

**Estimate Of The Anticipated Amount, Type And Location Of  
Non-Residential Development For Which Development Charges Can Be Imposed**

Development Location	Timing	Industrial	Commercial	Institutional	Total Non-Res	Employment
		GFA S.F.	GFA S.F.	GFA S.F.	GFA S.F.	Increase <sup>1</sup>
Howe Island	2016 - 2026	-	-	-	-	-
	2016 - 2036	-	-	-	-	-
Wolfe Island	2016 - 2026	-	2,700	2,900	5,600	9
	2016 - 2036	-	4,900	6,400	11,300	18
Township of Frontenac Islands	2016 - 2026	-	2,800	2,900	5,700	9
	2016 - 2036	-	5,000	6,400	11,400	18

Source: Watson & Associates Economists Ltd., 2016

1. Employment Increase does not include No Fixed Place of Work.

2. Square feet per employee assumptions:

<i>Urban Industrial</i>	1,500
<i>Rural Industrial</i>	2,500
Commercial	550
Institutional	700

**Schedule 10**  
**Township Of Frontenac Islands**  
**Non-Residential Construction Value**  
**Years 2002 - 2015**  
**(000's 2014 \$)**

YEAR	Industrial				Commercial				Institutional				Total			
	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total
2002	105	0	0	105	77	0	0	77	0	0	0	0	182	0	0	182
2003	19	33	0	52	20	74	0	94	0	0	13	13	38	107	13	159
2004	0	0	0	0	13	0	0	13	0	0	33	33	13	0	33	46
2005	5	0	0	5	0	0	32	32	0	0	599	599	5	0	631	636
2006	0	0	578	578	0	0	0	0	0	0	540	540	0	0	1,118	1,118
2007	0	0	0	0	0	0	459	459	0	0	4,469	4,469	0	0	4,928	4,928
2008	0	0	0	0	0	0	4,055	4,055	69	0	0	69	69	0	4,055	4,125
2009	67	0	0	67	136	0	0	136	0	0	0	0	203	0	0	203
2010	287	21	0	308	0	0	0	0	71	0	0	71	358	21	0	379
2011	27	75	0	102	13	0	0	13	0	0	0	0	40	75	0	115
2012	138	21	0	159	0	0	0	0	0	0	0	0	138	21	0	159
2013	219	338	0	557	38	650	0	688	0	14	0	14	257	1,002	0	1,259
2014	0	0	0	0	40	45	0	85	0	0	0	0	40	45	0	85
2015	0	90	69	159	0	0	0	0	0	0	25	25	0	90	93	183
Subtotal	867	579	647	2,093	335	769	4,546	5,650	140	14	5,679	5,833	1,342	1,362	10,872	13,576
Percent of Total	41%	28%	31%	100%	6%	14%	80%	100%	2%	0%	97%	100%	10%	10%	80%	100%
<b>Average</b>	<b>62</b>	<b>41</b>	<b>46</b>	<b>149</b>	<b>24</b>	<b>55</b>	<b>325</b>	<b>404</b>	<b>10</b>	<b>1</b>	<b>406</b>	<b>417</b>	<b>96</b>	<b>97</b>	<b>777</b>	<b>970</b>
2002 - 2015 Period Total				2,093				5,650				5,833				13,576
<b>2002-2015 Average</b>				<b>149</b>				<b>404</b>				<b>417</b>				<b>970</b>
% Breakdown				15.4%				41.6%				43.0%				100.0%

Source: Statistics Canada Publication, 64-001-XIB

Note: Inflated to year-end 2014 (January, 2015) dollars using Reed Construction Cost Index

Schedule 11

Township Of Frontenac Islands

Employment To Population Ratio By Major Employment Sector, 2001 To 2011

NAICS		Year			Change		Comments
		2001	2006	2011	01-06	06-11	
<b>Employment by industry</b>							
<b>Primary Industry Employment</b>							
11	<i>Agriculture, forestry, fishing and hunting</i>	110	75	62	-35	-13	Categories which relate to local land-based resources.
21	<i>Mining and oil and gas extraction</i>	0	0	0	0	0	
<b>Sub-total</b>		<b>110</b>	<b>75</b>	<b>62</b>	<b>-35</b>	<b>-13</b>	
<b>Industrial and Other Employment</b>							
22	<i>Utilities</i>	0	0	0	0	0	Categories which relate primarily to industrial land supply and demand.
23	<i>Construction</i>	35	30	25	-5	-5	
31-33	<i>Manufacturing</i>	0	35	29	35	-6	
41	<i>Wholesale trade</i>	0	10	8	10	-2	
48-49	<i>Transportation and warehousing</i>	20	0	0	-20	0	
56	<i>Waste management and remediation services</i>	5	18	14	13	-4	
<b>Sub-total</b>		<b>60</b>	<b>93</b>	<b>76</b>	<b>33</b>	<b>-17</b>	
<b>Population Related Employment</b>							
44-45	<i>Retail trade</i>	25	0	0	-25	0	Categories which relate primarily to population growth within the municipality.
51	<i>Information and cultural industries</i>	0	10	8	10	-2	
52	<i>Finance and insurance</i>	0	0	0	0	0	
53	<i>Real estate and rental and leasing</i>	0	10	8	10	-2	
54	<i>Professional, scientific and technical services</i>	0	10	8	10	-2	
55	<i>Management of companies and enterprises</i>	0	0	0	0	0	
56	<i>Administrative and support</i>	5	18	14	13	-4	
71	<i>Arts, entertainment and recreation</i>	25	10	8	-15	-2	
72	<i>Accommodation and food services</i>	35	35	29	0	-6	
81	<i>Other services (except public administration)</i>	20	10	8	-10	-2	
<b>Sub-total</b>		<b>110</b>	<b>103</b>	<b>84</b>	<b>-7</b>	<b>-19</b>	
<b>Institutional</b>							
61	<i>Educational services</i>	10	20	17	10	-3	
62	<i>Health care and social assistance</i>	0	10	8	10	-2	
91	<i>Public administration</i>	10	15	12	5	-3	
<b>Sub-total</b>		<b>20</b>	<b>45</b>	<b>37</b>	<b>25</b>	<b>-8</b>	
<b>Total Employment</b>		<b>300</b>	<b>316</b>	<b>260</b>	<b>16</b>	<b>-56</b>	
<b>Population</b>		<b>1,638</b>	<b>1,862</b>	<b>1,950</b>	<b>224</b>	<b>88</b>	
<b>Employment to Population Ratio</b>							
<b>Industrial and Other Employment</b>		<b>0.04</b>	<b>0.05</b>	<b>0.04</b>	<b>0.01</b>	<b>-0.01</b>	
<b>Population Related Employment</b>		<b>0.07</b>	<b>0.06</b>	<b>0.04</b>	<b>-0.01</b>	<b>-0.01</b>	
<b>Institutional Employment</b>		<b>0.01</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>-0.01</b>	
<b>Primary Industry Employment</b>		<b>0.07</b>	<b>0.04</b>	<b>0.03</b>	<b>-0.03</b>	<b>-0.01</b>	
<b>Total</b>		<b>0.18</b>	<b>0.17</b>	<b>0.13</b>	<b>-0.01</b>	<b>-0.04</b>	

Source: Statistics Canada Employment by Place of Work

Note: 2001-2011 employment figures are classified by North American Industry Classification System (NAICS) Code



## **Appendix B – Level of Service**

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## Appendix B – Level of Service

The following appendix contains the tables outlining the detailed service standard calculations as follows:

- Page B-3 Level of Service Summary – Howe Island
- Page B-4 Level of Service Summary – Wolfe Island
- Page B-5 Fire Facilities – Howe Island
- Page B-6 Fire Vehicles – Howe Island
- Page B-7 Fire Small Equipment and Gear – Howe Island
- Page B-8 Roads – Howe Island
- Page B-9 Depots and Domes – Howe Island
- Page B-10 Roads and Related Vehicles – Howe Island
- Page B-11 Ferries – Howe Island
- Page B-12 Parkland Amenities – Howe Island
- Page B-13 Parkland Trails – Howe Island
- Page B-14 Parks Vehicles and Equipment – Howe Island
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- Page B-16 Fire Facilities – Wolfe Island
- Page B-17 Fire Vehicles – Wolfe Island
- Page B-18 Fire Small Equipment and Gear – Wolfe Island
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- Page B-22 Ferries – Wolfe Island
- Page B-23 Parkland Amenities – Wolfe Island
- Page B-24 Parks Vehicles and Equipment – Wolfe Island
- Page B-25 Indoor Recreation Facilities – Wolfe Island
- Page B-26 Library Facilities – Wolfe Island

**APPENDIX B - LEVEL OF SERVICE CEILING**

Township of Frontenac Islands - Howe Island

**SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997**

Service Category	Sub-Component	10 Year Average Service Standard				Maximum Ceiling LOS	Utilized	Remaining
		Cost (per capita)		Quantity (per capita)	Quality (per capita)			
Transportation Services	Roads	\$16,260.50	0.0470	km of roadways	345,968 per lane km	878,067		
	Depots and Domes	\$635.40	4.6955	ft² of building area	135 per ft²	34,312		
	Roads and Related Vehicles	\$450.13	0.0066	No. of vehicles and equipment	68,202 per vehicle	24,307		
	<b>Total</b>	<b>\$17,346.03</b>				<b>936,686</b>	<b>109,115</b>	<b>827,571</b>
Fire Protection Services	Fire Facilities	\$964.26	6.7431	ft² of building area	143 per ft²	52,070		
	Fire Vehicles	\$1,905.60	0.0076	No. of vehicles	250,737 per vehicle	102,902		
	Fire Small Equipment and Gear	\$54.77	0.0258	No. of equipment and gear	2,123 per Firefighter	2,958		
	<b>Total</b>	<b>\$2,924.63</b>				<b>157,930</b>	<b>78,299</b>	<b>79,631</b>
Ferries	Ferries	\$608.63	0.0062	No. of items	98,166 per vehicle	32,866	-	32,866
Parks and Recreation Services	Parkland Amenities	\$52.35	0.0029	No. of parkland amenities	18,052 per amenity	2,827		
	Parkland Trails	\$55.58	0.8173	Linear Metres of Paths and Trails	68 per lin m.	3,001		
	Parks Vehicles and Equipment	\$6.11	0.0009	No. of vehicles and equipment	6,789 per vehicle	330		
	<b>Total</b>	<b>\$114.04</b>				<b>6,158</b>	<b>-</b>	<b>6,158</b>
Library Services	Library Facilities	\$129.45	0.8516	ft² of building area	152 per ft²	6,990	-	6,990

**APPENDIX B - LEVEL OF SERVICE CEILING**

Township of Frontenac Islands -Wolfe Island

**SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997**

Service Category	Sub-Component	10 Year Average Service Standard				Maximum Ceiling LOS	Utilized	Remaining	
		Cost (per capita)		Quantity (per capita)	Quality (per capita)				
Transportation Services	Roads	\$24,932.70	0.0877	km of roadways/number of item	284,295	per lane km	3,615,242		
	Depots and Domes	\$625.38	4.6977	ft² of building area	133	per ft²	90,680		
	Roads and Related Vehicles	\$574.98	0.0063	No. of vehicles and equipment	91,267	per vehicle	83,372		
	<b>Total</b>	<b>\$26,133.06</b>					<b>3,789,294</b>	<b>498,376</b>	<b>3,290,918</b>
Fire Protection Services	Fire Facilities	\$274.22	3.5613	ft² of building area	77	per ft²	39,762		
	Fire Vehicles	\$658.02	0.0030	No. of vehicles	219,340	per vehicle	95,413		
	Fire Small Equipment and Gear	\$4.74	0.0013	No. of equipment and gear	3,646	per Firefighter	687		
	<b>Total</b>	<b>936.98</b>					<b>135,862</b>	<b>-</b>	<b>135,862</b>
Ferries	Ferries	\$183.00	0.0028	No. of itmes	65,357	per vehicle	26,535	-	26,535
Parks and Recreation Services	Parkland Amenities	\$322.80	0.0038	No. of parkland amenities	84,947	per amenity	46,806		
	Parks Vehicles and Equipment	\$14.70	0.0012	No. of vehicles and equipment	12,250	per vehicle	2,132		
	Indoor Recreation Facilities	\$415.29	1.4390	ft² of building area	289	per ft²	60,217		
	<b>Total</b>	<b>752.79</b>					<b>109,155</b>	<b>52,215</b>	<b>56,940</b>
Library	Library Facilities	\$212.97	0.7195	ft² of building area	296	per ft²	30,881	-	30,881

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Fire Facilities  
Unit Measure: ft² of building area

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
40 Baseline Road	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	\$ 126	\$ 143
<b>Total</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>	<b>5,400</b>		

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	7.0588	6.9858	6.8966	6.8354	6.7332	6.6749	6.6015	6.5854	6.5455	6.5139

10 Year Average	2007-2016
Quantity Standard	6.7431
Quality Standard	\$143
Service Standard	\$964

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$964
Eligible Amount	\$52,070

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Fire Vehicles  
Unit Measure: No. of vehicles

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
1991 Ford Tanker- Ford L-8000	1	1	1	1	1	1	1	1	1	1	\$ 325,000
1989 Chevrolet Astrovan	1	1	1	1	1	1	1	1	1	1	\$ 35,000
1987 Ford L8000 Tanker	1	1	1	1	1	1	1	1	1	1	\$ 325,000
1997 Freightliner Pumper	1	1	1	1	1	1	1	1	1	1	\$ 375,000
2007 Kawasaki Mule ATV							1	1	1	1	\$ 12,500
1993 Chevrolet Van Rescue Unit				1	1	1	1	1	1	1	\$ 125,000
1975 Ford C90	1	1	1	1	1	1	1	1	1	1	\$ 375,000
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

10 Year Average	2007-2016
Quantity Standard	0.0076
Quality Standard	\$250,737
Service Standard	\$1,906

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$1,906
Eligible Amount	\$102,902

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/item)
Turn out Gear	20	20	20	20	20	20	20	20	20	20	\$ 2,000
Air Compressor				1	1	1	1	1	1	1	\$ 5,600
<b>Total</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

10 Year Average	2007-2016
Quantity Standard	0.0258
Quality Standard	\$2,123
Service Standard	\$55

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$55
Eligible Amount	\$2,958

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Roads  
Unit Measure: km of roadways

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/km)
Low Class Bit.-surface treated	28	28	28	28	32	37	37	37	37	37	\$ 371,700
Gravel, Stone, Other Loosetop	5	5	5	5	5	5	5	5	5	5	\$ 176,500
<b>Total</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>37</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	<b>42</b>	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05

10 Year Average	2007-2016
Quantity Standard	0.0470
Quality Standard	\$345,968
Service Standard	\$16,261

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$16,261
Eligible Amount	\$878,067



**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Works Depot	2,548	2,548	2,548	2,548	2,548	2,548	2,548	2,548	2,548	2,548	\$ 134	\$ 152
Fuel Centre	92	92	92	92	92	92	92	92	92	92	\$ 134	\$ 152
Salt/Sand Storage, 50 Base Line Rd	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	\$ 84	\$ 96
<b>Total</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>	<b>3,760</b>		

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	4.9154	4.8645	4.8024	4.7598	4.6886	4.6480	4.5969	4.5857	4.5579	4.5359

10 Year Average	2007-2016
Quantity Standard	4.6955
Quality Standard	\$135
Service Standard	\$635

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$635
Eligible Amount	\$34,312

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Roads and Related Vehicles  
Unit Measure: No. of vehicles and equipment

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2015 Value (\$/Vehicle)	2016 Value (\$/Vehicle)
1968 Champion Grader	1	1	1	1	1	1	1	1	1	1	\$ 56,264	\$ 56,800
Misc. Tools and Equipment	1	1	1	1	1	1	1	1	1	1	\$ 13,520	\$ 13,700
Snow Plowing Equipment	1	1	1	1	1	1	1	1	1	1	\$ 15,548	\$ 15,700
Pough Truck	1	1	1	1	1	1	1	1	1	1	\$ 13,900	\$ 14,000
2008 Case BackHoe 4WD - AFIH000005			1	1	1	1	1	1	1	1	\$ 96,100	\$ 97,100
1987 Ford L-8000 Dump/Plow	1	1	1	1	1	1	1	1	1	1	\$ 188,500	\$ 190,400
<b>Total</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>		

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

10 Year Average		2007-2016
Quantity Standard		0.0066
Quality Standard		\$68,202
Service Standard		\$450

DC Amount (before deductions)		10 Year
Forecast Population		54
\$ per Capita		\$450
Eligible Amount		\$24,307

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Ferries  
Unit Measure: No. of items

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
Ferry Waiting Room, 2991 Howe Island Rd	1	1	1	1	1	1	1	1	1	1	\$ 23,200
Ferry Workshop, 2991 Howe Island Rd	1	1	1	1	1	1	1	1	1	1	\$ 4,200
Foot Ferry - AFIH000009	1	1	1	1	1	1	1	1	1	1	\$ 226,000
Ferry Ramps - AFIH000010	1	1	1	1	1	1	1	1	1	1	\$ 190,900
Foot Ferry House - AFIH000008	1	1	1	1	1	1	1	1	1	1	\$ 43,100
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

10 Year Average	2007-2016
Quantity Standard	0.0062
Quality Standard	\$98,166
Service Standard	\$609

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$609
Eligible Amount	\$32,866

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/item)
Ballpark Floodlights	1	1	1	1	1	1	1	1	1	1	\$ 27,100
Playground Equipment	1	1	1	1	1	1	1	1	1	1	\$ 10,800
Boat Ramp								1	1	1	\$ 13,800
<b>Total</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average	2007-2016
Quantity Standard	0.0029
Quality Standard	\$18,052
Service Standard	\$52

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$52
Eligible Amount	\$2,827

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/ Lin. Metre)
Howe Island Trail Project							734	2,000	2,000	2,000	\$ 68
<b>Total</b>	-	-	-	-	-	-	734	2,000	2,000	2,000	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	-	-	-	-	-	-	0.90	2.44	2.42	2.41

10 Year Average	2007-2016
Quantity Standard	0.8173
Quality Standard	\$68
Service Standard	\$56

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$56
Eligible Amount	\$3,001

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Parks Vehicles and Equipment

Unit Measure: No. of vehicles and equipment

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
Garden Tractor	1	1	1	1	1	1	1				\$ 6,900
<b>Total</b>	1	1	1	1	1	1	1	-	-	-	

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-

10 Year Average	2007-2016
Quantity Standard	0.0009
Quality Standard	\$6,789
Service Standard	\$6

DC Amount (before deductions)	10 Year
Forecast Population	54
\$ per Capita	\$6
Eligible Amount	\$330

**Township of Frontenac Islands - Howe Island  
Service Standard Calculation Sheet**

Service: Library Facilities  
Unit Measure: ft<sup>2</sup> of building area

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft <sup>2</sup> )	Value/ft <sup>2</sup> with land, site works, etc.
Library	682	682	682	682	682	682	682	682	682	682	\$ 134	\$ 152
Total	682	682	682	682	682	682	682	682	682	682		

Population	765	773	783	790	802	809	818	820	825	829
Per Capita Standard	0.8915	0.8823	0.8710	0.8633	0.8504	0.8430	0.8337	0.8317	0.8267	0.8227

10 Year Average		2007-2016
Quantity Standard		0.8516
Quality Standard		\$152
Service Standard		\$129

DC Amount (before deductions)		10 Year
Forecast Population		54
\$ per Capita		\$129
Eligible Amount		\$6,990

**Township of Frontenac Islands - Wolfe Island  
Service Standard Calculation Sheet**

Service: Fire Facilities  
Unit Measure: ft² of building area

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Equipment Storage/Pump House	425	425	425	425	425	425	425	425	425	425	\$ 67	\$ 77
Fire Hall/Ambulance Station (50%)	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	\$ 67	\$ 77
<b>Total</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>	<b>7,425</b>		

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	3.6413	3.6324	3.6147	3.6059	3.5816	3.5541	3.5188	3.5071	3.4874	3.4694

10 Year Average	2007-2016
Quantity Standard	3.5613
Quality Standard	\$77
Service Standard	\$274

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$274
Eligible Amount	\$39,762



**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Fire Vehicles  
Unit Measure: No. of vehicles

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
1954 Antique Fire Truck	1	1	1	1	1	1	1	1	1	1	\$ 130,700
1990 Ford Tanker					1	1	1	1	1	1	\$ 325,000
1992 GMC Van		1	1	1	1	1	1	1	1	1	\$ 35,000
1990 Ford Fire Truck F800		1	1	1	1	1	1	1	1	1	\$ 20,700
1977 American LaFrance Pumper			1	1	1	1	1	1	1	1	\$ 375,000
2014 Kenworth Pumper	1	1	1	1	1	1	1	1	1	1	\$ 375,000
1973 Pierre Thibault Pumper	1	1	1	1	1	1	1	1	1	1	\$ 325,000
<b>Total</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average	2007-2016
Quantity Standard	0.0030
Quality Standard	\$219,340
Service Standard	\$658

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$658
Eligible Amount	\$95,413

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/item)
1943 Bickle Seagrave Trailer Pump	1	1	1	1	1	1	1	1	1	1	\$ 2,300
1500 lb Crysler Water Pumping Unit	1	1	1	1	1	1	1	1	1	1	\$ 2,300
Air Compressor System				1	1	1	1	1	1	1	\$ 7,600
<b>Total</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average	2007-2016
Quantity Standard	0.0013
Quality Standard	\$3,646
Service Standard	\$5

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$5
Eligible Amount	\$687

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Roads  
Unit Measure: km of roadways/number of items

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/km)
<b>Roads</b>											
Low Class Bit.-surface treated	72	72	72	72	72	100	108	108	108	108	\$ 371,700
Gravel, Stone, Other Loosetop	88	88	88	88	88	88	88	88	88	88	\$ 176,500
Earth	0	0	0	0	0	0	0	0	0	0	\$ 16,300
Int. Class Bit.-Mulch	1	1	1	1	1	1	1	1	1	1	\$ 322,800
High Class Bit.-asphalt	2	2	2	2	2	2	2	2	2	2	\$ 1,266,600
											\$ -
<b>Culverts (Item)</b>											
											\$ -
Culvert-4th Line	1	1	1	1	1	1	1	1	1	1	\$ 262,200
Culvert-Road 95				1	1	1	1	1	1	1	\$ 241,700
Culvert-18th Line	1	1	1	1	1	1	1	1	1	1	\$ 103,700
<b>Total</b>	<b>165</b>	<b>165</b>	<b>165</b>	<b>166</b>	<b>166</b>	<b>194</b>	<b>202</b>	<b>202</b>	<b>202</b>	<b>202</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.08	0.08	0.08	0.08	0.08	0.09	0.10	0.10	0.10	0.09

10 Year Average	2007-2016
Quantity Standard	0.0877
Quality Standard	\$284,295
Service Standard	\$24,933

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$24,933
Eligible Amount	\$3,615,242

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Depots and Domes

Unit Measure: ft² of building area

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Equipment Depot #1	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	\$ 120	\$ 136
Flammable Storage	33	33	33	33	33	33	33	33	33	33	\$ 120	\$ 136
Salt Shed	504	504	504	504	504	504	504	504	504	504	\$ 120	\$ 136
Sand Dome	1,836	1,836	1,836	1,836	1,836	1,836	1,836	1,836	1,836	1,836	\$ 120	\$ 136
Equipment Depot	3,410	3,410	3,410	3,410	3,410	3,410	3,410	3,410	3,410	3,410	\$ 112	\$ 128
Fuel Centre	110	110	110	110	110	110	110	110	110	110	\$ 112	\$ 128
<b>Total</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>	<b>9,794</b>		

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	4.8033	4.7915	4.7682	4.7566	4.7245	4.6883	4.6416	4.6263	4.6002	4.5766

10 Year Average	2007-2016
Quantity Standard	4.6977
Quality Standard	\$133
Service Standard	\$625

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$625
Eligible Amount	\$90,680

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Roads and Related Vehicles  
Unit Measure: No. of vehicles and equipment

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
1985 Case Tractor	1	1	1	1	1	1	1	1	1	1	\$ 25,700
1988 Komatsu Rubber Tired Loader	1	1	1	1	1	1	1	1	1	1	\$ 160,100
1989 Case etended Hoe 580K/Backhoe	1	1	1	1	1	1	1	1	1	1	\$ 38,500
2003 Volvo G740B Grader	1	1	1	1	1	1	1	1	1	1	\$ 274,600
Miscellaneous Tools and Equipment	1	1	1	1	1	1	1	1	1	1	\$ 13,700
Snow Plowing Equipment	1	1	1	1	1	1	1	1	1	1	\$ 15,700
2008 International Tandem Plow/Sander			1	1	1	1	1	1	1	1	\$ 211,500
2006 Ford Truck	1	1	1	1	1	1	1	1	1	1	\$ 46,300
2012 Ford F550							1	1	1	1	\$ 54,000
2015 International Plow Truck									1	1	\$ 211,900
2012 Wood Chipper - AFIW000256							1	1	1	1	\$ 19,200
Plow Equipment - AFIW000025	1	1	1	1	1	1	1	1	1	1	\$ 100,600
1991 Ford LT 8000	1	1	1	1	1	1					\$ 175,700
Stone Retriever	1	1	1	1	1	1	1	1	1	1	\$ 16,600
2000 Sterling Dump/Plow/Sander	1	1	1	1	1	1	1	1	1	1	\$ 149,900
Propane Heaters				1	1	1	1	1	1	1	\$ 17,100
<b>Total</b>	<b>11</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>15</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

10 Year Average	2007-2016
Quantity Standard	0.0063
Quality Standard	\$91,267
Service Standard	\$575

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$575
Eligible Amount	\$83,372

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Ferries  
 Unit Measure: No. of itmes  
**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
Ferry Waiting Building, 1120 9 Mile Point Rd	1	1	1	1	1	1	1	1	1	1	\$ 11,100
Ferry Waiting Room, 6 Taggart Lane	1	1	1	1	1	1	1	1	1	1	\$ 16,600
Fuel Centre, 6 Taggart Lane	1	1	1	1	1	1	1	1	1	1	\$ 6,900
Simcoe Ferry - AFIW000043	1	1	1	1	1	1	1	1	1	1	\$ 277,500
Ferry Dock - AFIW000046			1	1	1	1	1	1	1	1	\$ 74,300
Zodiac Liferaft	1	1	1	1	1	1	1	1	1	1	\$ 10,300
<b>Total</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average	2007-2016
Quantity Standard	0.0028
Quality Standard	\$65,357
Service Standard	\$183

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$183
Eligible Amount	\$26,535

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/item)
Outdoor Ice Rink					1	1	1	1	1	1	\$ 572,500
Recreation Floodlighting Equipment, \	1	1	1	1	1	1	1	1	1	1	\$ 184,200
Bleachers, Victoria St.	1	1	1	1	1	1	1	1	1	1	\$ 34,600
Recreational Fencing, Victoria St.	1	1	1	1	1	1	1	1	1	1	\$ 35,700
Refrigeration unit for Outdoor Rink							1	1	1	1	\$ 9,400
Gate-House - BSB	1	1	1	1	1	1	1	1	1	1	\$ 6,900
Comfort Station - BSB	1	1	1	1	1	1	1	1	1	1	\$ 9,700
Playground Equipment	1	1	1	1	1	1	1	1	1	1	\$ 18,700
Baseball Diamonds	1	1	1	1	1	1	1	1	1	1	\$ 40,000
<b>Total</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average	2007-2016
Quantity Standard	0.0038
Quality Standard	\$84,947
Service Standard	\$323

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$323
Eligible Amount	\$46,806

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Value (\$/Vehicle)
Tractor Mounted Zamboni Ice Resurfacing	1	1	1	1	1	1	1	1	1	1	\$ 7,400
Zamboni							1	1	1	1	\$ 22,800
2006 Kawasaki Mule BSB	1	1	1	1	1	1	1	1	1	1	\$ 14,300
<b>Total</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10 Year Average		2007-2016
Quantity Standard		0.0012
Quality Standard		\$12,250
Service Standard		\$15

DC Amount (before deductions)		10 Year
Forecast Population		145
\$ per Capita		\$15
Eligible Amount		\$2,132



**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

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

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Community Hall, 52 Division St	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	\$ 358	\$ 399
Communit Centre, Victoria St	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	\$ 108	\$ 123
<b>Total</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>		

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	1.4713	1.4677	1.4606	1.4570	1.4472	1.4361	1.4218	1.4171	1.4091	1.4019

10 Year Average	2007-2016
Quantity Standard	1.4390
Quality Standard	\$289
Service Standard	\$415

DC Amount (before deductions)	10 Year
Forecast Population	145
\$ per Capita	\$415
Eligible Amount	\$60,217

**Township of Frontenac Islands -Wolfe Island  
Service Standard Calculation Sheet**

Service: Library Facilities  
Unit Measure: ft² of building area

**Quantity Measure**

Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 Bld'g Value (\$/ft²)	Value/ft² with land, site works, etc.
Library, 10 Highway 95 South	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	\$ 266	\$ 296
<b>Total</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>		

Population	2,039	2,044	2,054	2,059	2,073	2,089	2,110	2,117	2,129	2,140
Per Capita Standard	0.7357	0.7339	0.7303	0.7285	0.7236	0.7180	0.7109	0.7085	0.7046	0.7009

10 Year Average		2007-2016
Quantity Standard		0.7195
Quality Standard		\$296
Service Standard		\$213

DC Amount (before deductions)		10 Year
Forecast Population		145
\$ per Capita		\$213
Eligible Amount		\$30,881

## **Appendix C – Long-Term Capital and Operating Cost Examination**

## Appendix C – Long-Term Capital and Operating Cost Examination

As a requirement of the Development Charges Act, 1997 under subsection 10(2)(c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the development charge. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost savings attributable to economies of scale or cost sharing where applicable, and prorate the cost on a per unit basis (i.e. square foot of building space, per vehicle, etc.). This was undertaken through a review of the Township's 2014 Financial Information Return.

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

<b>Asset</b>	<b>Lifecycle Cost: Average Useful Life (Years)</b>	<b>Lifecycle Cost: Factor</b>
Facilities, Buildings	40	0.01656
Roads and Related	20	0.04116
Rolling Stock and Equipment	10	0.09133
Fire Vehicles	15	0.05783
Infrastructure	80	0.00516
Parks Related	30	0.02465

Table C-1 depicts the annual operating impact resulting from the proposed gross capital projects at the time they are all in place. It is important to note that, while municipal program expenditures will increase with growth in population, the costs associated with the new infrastructure (i.e. facilities) would be delayed until the time these works are in place.

**Table C-1**  
**Operating and Capital Expenditure Impacts for Future Capital Expenditures**

SERVICE	NET GROWTH RELATED EXPENDITURES	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Transportation Services	405,798	16,703	304,468	321,171
2. Fire Protection Services	89,800	4,456	32,233	36,689
3. Ferries				
4. Parks and Recreation Services	104,900	2,586	8,268	10,853
5. Library Services				
6. Administration Studies	79,851			

## **Appendix C.2 – Asset Management Plan**

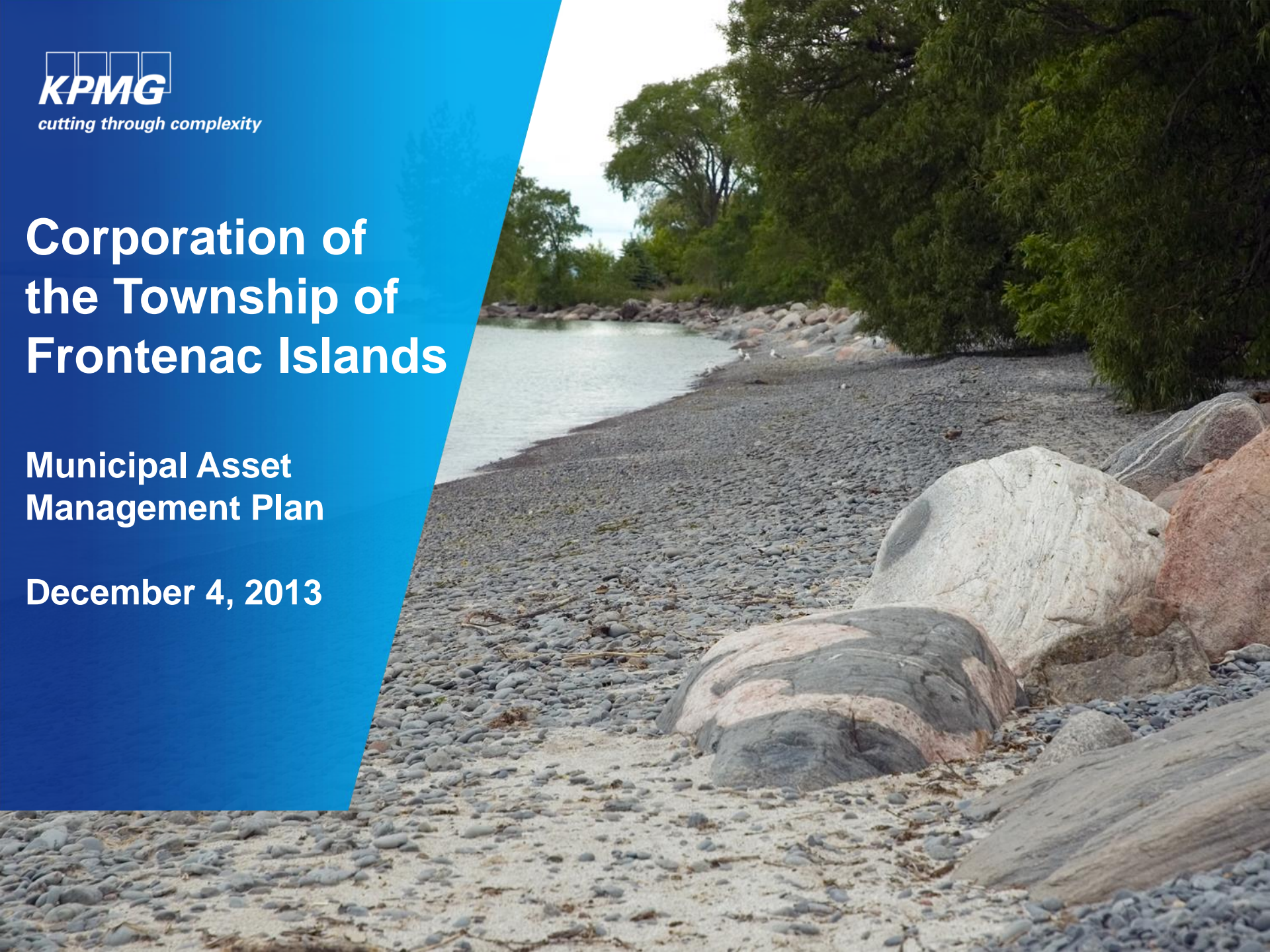


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# Corporation of the Township of Frontenac Islands

## Municipal Asset Management Plan

December 4, 2013





# Asset Management Planning for the Township of Frontenac Islands

## Table of Contents

### The contacts in connection with this report are:

**Gord Burns, Interim-CAO**  
Township of Frontenac Islands

P O Box 130

Wolfe Island, On K0H 2Y0

gburns@kos.net

### **Carol Dwyer, Treasurer**

Township of Frontenac Islands

P O Box 130

Wolfe Island, On K0H 2Y0

cdwyre@kos.net

### **Vicki Leahey, CGA**

Senior Manager

*KPMG LLP*

Tel: 613.541.7349

[vleakey@kpmg.ca](mailto:vleakey@kpmg.ca)

David Anderson

4 Roads Management  
Services Inc.

Kitchener, Ontario N2P 2K7

Tel: 519 505 5065

Dave.anderson@4roads.ca

- I. Introduction
- II. State of Local Infrastructure
- III. Desired Levels of Service
- IV. Asset Management Strategy
- V. Financing Strategy
- VI. Asset Management Plan Cross Reference



The development of an asset management plan has been identified as a pre-requisite for the receipt of funding from the Province of Ontario (the 'Province') under the Municipal Infrastructure Investment Initiative ('MIII') and as such, represents an important first step in obtaining financing for necessary infrastructure investments. That said, planning for capital reinvestment is essential with or without the incentive provided under MIII, particularly given that a number of municipalities are now approach end-of-useful-life for significant components of their infrastructure.

## Current state of infrastructure

Infrastructure represents a major investment on the part of the Township of Frontenac Islands (the 'Township'), with the estimated replacement cost of its assets – roads, buildings, land improvements, vehicles, equipment and ferries – amounting to just under \$55 million, or ~ \$32,000 per resident. In addition to the cost of replacing its assets the Township is also required to repair and rehabilitate its infrastructure over its entire useful life.

While the amounts of the Township's reconstruction and replacement costs are significant, the real pressure from the perspective of its infrastructure comes from its current condition. A condition assessment was conducted as part of the asset management planning process by an external consultant in 2013 and indicated the current system adequacy measure is 77.7% meaning that 22.3% of the road system is deficient and in the NOW time period, the ongoing aging and deterioration of its assets means that the Township should invest \$20.8 million over the next ten years to address its anticipated infrastructure needs which does not include costs for annual maintenance and life cycle costs of these assets. The engineer's report concluded that the estimated total cost of recommended improvements is \$88,473,635, however, there is an estimated \$40,183,154 of improvements required for roads with less than 50 vehicles per day and are not included in the forecast of costs in this asset management plan. It has been noted that roads with substandard widths and geometry should be reviewed for additional signage and a traffic counting program and/or study should be undertaken to establish defensible traffic counts for the road sections.

### Asset management strategies

As required under MIII, this report identifies the required asset management strategies for the Township based on the types of infrastructure maintained as well as its current condition. As noted earlier, the Township would be required to spend an average of \$2 million per year over the next ten years in order to address the current issues identified with its infrastructure. While this would allow the Township to meet its immediate infrastructure investment needs, it does not allow for ongoing maintenance, rehabilitation and replacement of its other assets, the cost of which amounts to an additional \$1.4 million, bringing the Township's total infrastructure financing requirement to \$3.4 million per year. In comparison, the Municipality is budgeted to make \$582,500 in capital expenditures during 2013. Clearly, it is unable to address the full spectrum of its infrastructure needs, resulting in ongoing annual infrastructure deficits.

### Financing strategy

While the Municipality is unable to unilaterally address its infrastructure-related financial requirement, it recognizes the need to begin to address the challenge. As part of its financing strategy, the Municipality is proposing the following measures intended to increase funding for capital requirements:

- expenditures permanently protecting the current level of capital so as to provide a consistent stream of funding into the future;
- Considering a five year capital levy that would see the total levy increase by 2% each year, with the new revenue allocated to capital purposes (i.e. not for operations). The capital levy would add approximately \$26,000 per year to existing capital funding (\$126,000 in total over the next five years), representing a 26% increase in capital spending.
- Exploring the use of debt as a means of funding infrastructure requirements, including the adoption of a program whereby a fixed percentage of capital expenditures are financed through debt;
- Continuing to pursue grant programs provided by senior levels of government.

### The issue of affordability

When considering the Townships ability to fund its capital requirements and its entitlement for grants, there needs to be a recognition of the limited ability of the Township to finance its capital needs due to issues surrounding affordability. In addition to the affordability considerations developed by the Province under the revised OMPF model, it is also important to remember that:

- The Township's population has grown at a slower rate as other communities and the Province as a whole. While the Province's total population increased by 19.5% between 1996 and 2011, the Township's population grew by 12.2% over the same period. In the absence of major population growth, fewer people are required to fund the infrastructure requirement, increasing the overall cost to the individual taxpayer as per slide 43.
- The Township's residents have a higher degree of reliance on pension income (i.e. fixed income) as opposed to other communities. Overall, 24% of total reported personal income in the Township is derived from pensions, as opposed to the Provincial average of 14%. The greater reliance on fixed-income pension reduces the ability of the Municipality to raise funds through taxation and user fees due to concerns over affordability as per slide 44.

### About this plan

The Municipality's asset management plan has been developed based on the guidance provided by the Province in *Building Together – Guide for Municipal Asset Management Plans*, which has been tailored to reflect the small size of the Municipality and the nature of its operations and infrastructure. Preparation of the plan involved Municipal staff as well as external financial and engineering advisors paid for through the MIII. *In completing the asset management plan for the Municipality:*

- Accepted industry best practices were used for the development of the plan components, including the condition assessments, identification of life cycle requirements and estimated costs;
- The asset management plan was reviewed by Municipal council prior to adoption;
- The asset management plan was compared to the requirements under MIII to ensure compliance; and
- Expressions of interest submitted to date have been based on the priorities identified in the asset management plan.

We would like to acknowledge the cooperation of Municipal council and staff in the preparation of this report.



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**Asset Management Planning  
for the Township of Frontenac Islands**

# **Chapter I Introduction**

## Asset management planning defined

Asset management planning is the process of making the best possible decisions regarding the acquisition, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective of an asset management plan is to maximize benefits, manage risk and provide satisfactory levels of service to the public in a sustainable manner. In order to be effective, an asset management plan needs to be based on a thorough understanding of the characteristics and condition of infrastructure assets, as well as the service levels expected from them. Recognizing that funding for infrastructure acquisition and maintenance is often limited, a key element of an asset management plan is the setting of strategic priorities to optimize decision-making as to when and how to proceed with investments. The ultimate success or failure of an asset management plan is dependent on the associated financing strategy, which will identify and secure the funds necessary for asset management activities and allow the Township to move from planning to execution.

## The purpose of the asset management

The asset management plan outlines the Township's planned approach for the acquisition and maintenance of its infrastructure, which in turn allows the Township to meet its stated mission and mandate by supporting the delivery of services to its residents. In achieving this objective, the asset management plan:

- Provides elected officials, Township staff, funding agencies, community stakeholders and residents with an indication of the Municipality's investment in infrastructure and its current condition;
- Outlines the total financial requirement associated with the management of this infrastructure investment, based on recommended asset management practices that encompass the total life cycle of the assets;
- Prioritizes the Township's infrastructure needs, recognizing that the scope of the financial requirement is beyond the capabilities of the Municipality and that some form of prioritization is required; and
- Presents a financial strategy that outlines how the Township intends to meet its infrastructure requirements.

It is important to recognize that the asset management plan is just that – a plan. The asset management plan (which has been prepared for the purposes of meeting the requirements of the Municipal Infrastructure Investment Initiative) does not represent a formal, multi-year budget for the Township. The approval of operating and capital budgets is undertaken as part of the Township's overall annual budget process. Accordingly, the financial performance and priorities outlined in the asset management plan are subject to change based on future decisions of Council with respect to operating and capital costs, taxation levels and changes to regulatory requirements or the condition of the Township's infrastructure.

KPMG discussed with Township's engineer the amounts projected for capital spending in a 10 year plan based on those assets identified in the accounting data with the end of their useful life within the next 10 years. From these discussions it was determined to use the priority projects identified by the engineer's report dated November 11, 2013 will be incorporated in this 10 year projection. KPMG incorporated data into worksheets and discussed the 10 year priority needs with the Township's management team.

## Scope of the Asset Management Plan

The asset management plan encompasses the following components of the Township's infrastructure:

Transportation Infrastructure	Other Infrastructure
<ul style="list-style-type: none"> <li>Roads</li> </ul>	<ul style="list-style-type: none"> <li>Vehicles / Moveable Equipment and Ferries</li> <li>Buildings and Land Improvements</li> </ul>

For the purposes of developing the asset management plan, a 10-year planning horizon was considered, although the analysis includes a discussion of required activities over the entire life cycle of the Township's infrastructure. It is expected that the Township will update its asset management plan every four years or earlier in the event of a major change in circumstances, which could include:

- New funding programs for infrastructure
- Unforeseen failure of a significant infrastructure component
- Regulatory changes that have a significant impact on infrastructure requirements
- Changes to the Township's economic or demographic profile (positive or negative), which would impact on the nature and service level of its infrastructure

Workstep	Report Section
1. Information concerning the Municipality's tangible capital assets was reviewed and summarized to provide a preliminary inventory of assets, acquisition year, remaining useful life and historical cost.	Page 13 – 18
2. A condition assessment of the Municipality's infrastructure was developed based on a review of current commissioned assessments, the age and estimated remaining useful life of the infrastructure and engineering inspections of certain components.	Page 19 – 20
3. Asset management strategies for each component of the Municipality's infrastructure were developed to provide an indication as to the recommended course of action for infrastructure procurement, maintenance and replacement/rehabilitation over the estimated useful life of the infrastructure component. As part of the development of the asset management strategies, cost estimates were prepared for the recommended activities.	Page 25 – 29
4. Based on the asset management strategies (which provide an indication as to the cost of the recommended activities) and the current condition assessment (which provides an indication as to the timing of the recommended activities), an unencumbered financial projection was developed that outlined the overall cost of recommended asset management strategies assuming that the Municipality was to undertake all of the recommended activities when required (i.e. assuming sufficient funds were available for all required infrastructure maintenance and replacement). Consistent with the provisions of MIII, no grants were considered in the preparation of the unencumbered financial projection.	Page 30 – 33
5. Recognizing that the overall financial requirement associated with the recommended asset management strategies is unaffordable for the Municipality, the required asset management activities were prioritized based on the potential risk of failure (determined by the condition assessment), the potential impact on residents and other stakeholders and other considerations.	Page 35 – 40
6. A set of financial projections was developed based on the resources available to the Municipality to support its asset management activities, including funding from taxation and user fees. Consistent with the provisions of MIII, no grants were considered in the preparation of the financial projections.	Page 41-42

The development of the asset management involved input from the following parties:

- Council and staff of the Municipality
- KPMG LLP, financial advisors to the Municipality
- 4 Roads Management Services Inc.



The asset management plan outlined in this report represents a forecast of the Township’s infrastructure-related activities under a series of assumptions that are documented within the plan. The asset management plan does not represent a formal, multi-year budget for infrastructure acquisition and maintenance activities but rather a long-term strategy intended to guide future decisions of the Township and its elected officials and staff, recognizing that the approval of operating and capital budgets is undertaken as part of the Township’s overall annual budgeting process.

In order to evaluate and improve the asset management plan, the Township plans to undertake the following actions:

Action Item	Frequency
1. Updating of infrastructure priorities based on: <ul style="list-style-type: none"> <li>• Ongoing condition assessments (e.g. bi-annual bridge inspections)</li> <li>• Visual inspection by municipal personnel</li> <li>• Identified failures or unanticipated deterioration of infrastructure components</li> <li>• Analysis of performance indicators</li> </ul>	Annually
2. Adjustment of asset management plan for changes in financial resources, including new or discontinued grant programs, changes to capital component of municipal levy, etc.	Every four years
3. Comparison of actual service level indicators to planned service level indicators and identification of significant variances (positive or negative)	Annually
4. Updating of infrastructure data maintained in Municipal Data Works	Annually upon completion of the Township’s financial statement audit

This report is based on information and documentation that was made available to KPMG at the date of this report. KPMG has not audited nor otherwise attempted to independently verify the information provided unless otherwise indicated. Should additional information be provided to KPMG after the issuance of this report, KPMG reserves the right (but will be under no obligation) to review this information and adjust its comments accordingly.

Pursuant to the terms of our engagement, it is understood and agreed that all decisions in connection with the implementation of advice and recommendations as provided by KPMG during the course of this engagement shall be the responsibility of, and made by, the Township of Frontenac Islands. KPMG has not and will not perform management functions or make management decisions for the Township of Frontenac Islands.

This report includes or makes reference to future oriented financial information. Readers are cautioned that since these financial projections are based on assumptions regarding future events, actual results will vary from the information presented even if the hypotheses occur, and the variations may be material.

Comments in this report are not intended, nor should they be interpreted to be, legal advice or opinion.

KPMG has no present or contemplated interest in the Municipality of Township of Frontenac Islands nor are we an insider or associate of the Township of Frontenac Islands or its management team. KPMG does currently provide external audit services to the Township. Our fees for this engagement are not contingent upon our findings or any other event. Accordingly, we believe we are independent of the Township of Frontenac Islands and are acting objectively.



*cutting through complexity*

Asset Management Planning  
for the Township of Frontenac Islands

## Chapter II State of Local Infrastructure

# State of Local Infrastructure

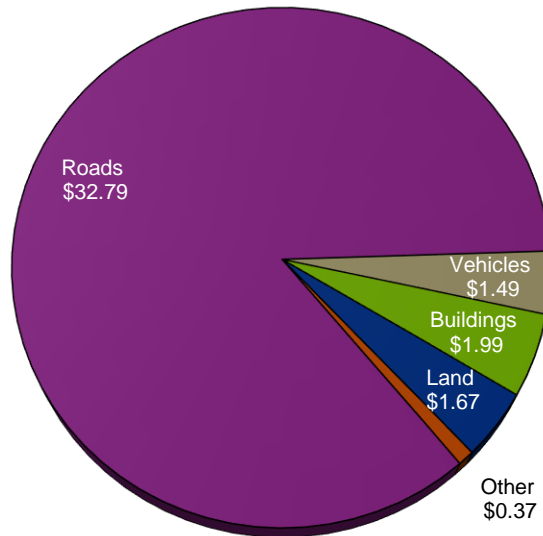
## Overview of the Township's Infrastructure

At December 31, 2012, the Township reported a total investment of \$38.31 million in tangible capital assets ('TCA') at historical cost. This equates to an average investment of \$29,067 per household, or \$22,106 per resident.

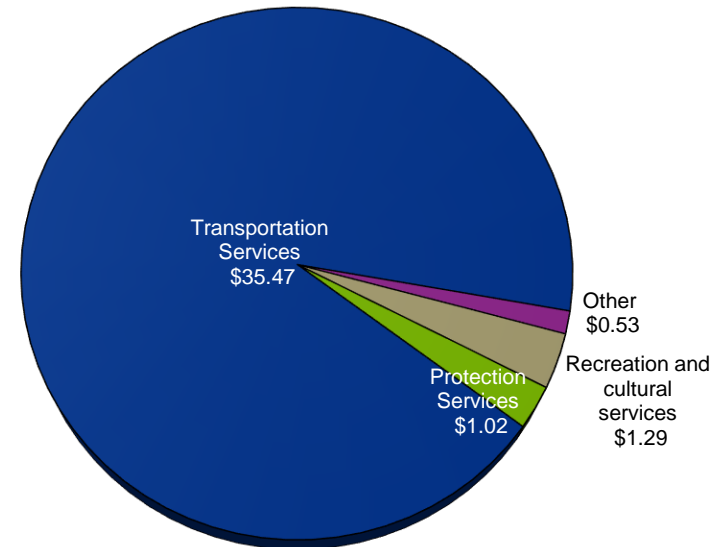
With a historical cost of \$32.79 million, roads represent the single largest type of infrastructure and account for 85% of the Township's total infrastructure (at historical cost).

From a functional perspective, being the use and level of service being provided, the Township's road network represent the largest components of its infrastructure (\$35.47 million), accounting for a combined total of 92% of the overall historical cost of the Township's infrastructure.

*Tangible capital assets by type (historical cost, in millions)*



*Tangible capital assets by use (historical cost, in millions)*

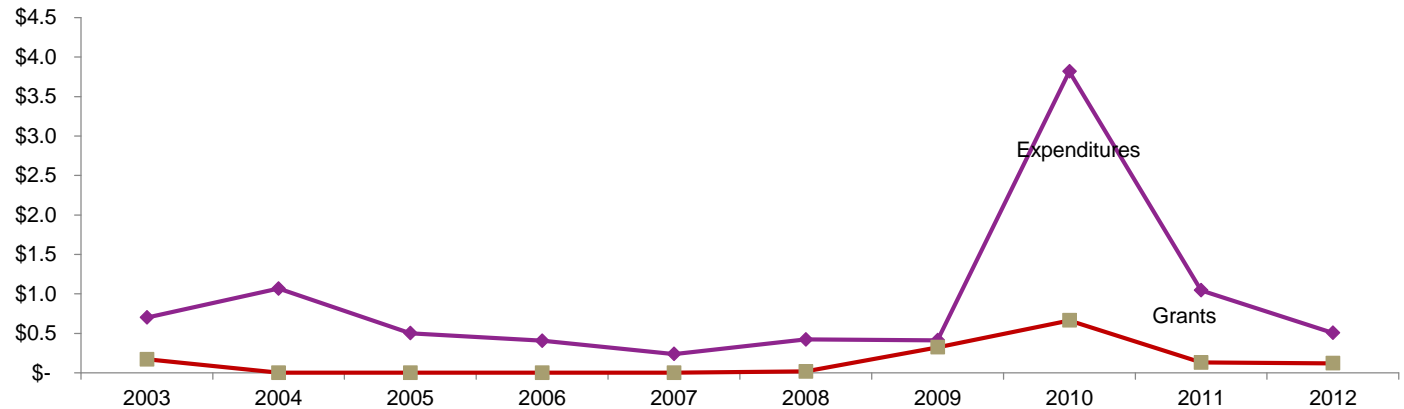


## State of Local Infrastructure

# Overview of the Township's Infrastructure

Over the last 10 years, the Township's investment in its infrastructure has totaled just over 9 million, with Federal and Provincial capital grants amounting to approximately \$1.4 million over the same period. As noted below, the Township's investment in infrastructure has traditionally been closely tied to grant revenues, recognizing that in recent years investments have tended to be higher than grants as a result of the Municipality's investment in transportation infrastructure.

### Capital expenditures and grants (in millions)



Since 2003, road infrastructure has represented the largest area of investment for the Municipality, amounting to \$19.2 mil or 77% of total capital spending

### Capital expenditures by program

(in thousands of dollars)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
General government	4	82	5	0	0	1	35	0	24	0	151
Protection Services	38	7	33	322	207	0	19	19	0	0	645
Transportation Services	529	843	258	0	27	331	84	3,710*	762*	445	6,988
Environmental Services	4	0	189	0	0	0	0	82	15	0	291
Recreation	127	137	15	85	3	90	275	9	243	60	1,042
<b>Total</b>	<b>700</b>	<b>1,068</b>	<b>501</b>	<b>407</b>	<b>237</b>	<b>422</b>	<b>413</b>	<b>3,819</b>	<b>1,044</b>	<b>505</b>	<b>9,116</b>

\* Road additions and repairs were significantly higher in these years from the wind farm installation.

## State of Local Infrastructure

# Overview of the Township's Infrastructure

In order to fund its capital investments, the Township has relied on a combination of grants, contributions from reserves and reserve funds and taxation and user fee revenues, with grants accounting for 15% of capital expenditures over the last ten years.

### *Capital expenditures and funding*

(in thousands of dollars)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Total capital expenditures	700	1,068	501	407	237	422	413	3,819	1,044	505	9,116
Grants received	171	0	0	0	0	0	267	1,213 *	16	0	1,667
Gas Tax	0	0	0	0	0	16	55	0	114	120	305
Local financing requirement	529	1,068	501	407	237	406	91	2,606	914	385	7,144
Long-term debt issued	0	0	0	0	0	0	0	0	0	0	0
Taxation, user fee and reserve funding	529	1,068	501	407	237	406	91	2,606	914	385	7,144

\* \$550,000 was received in funding related to the road reconstruction and repairs costs incurred in the year related to the wind farm. This amount was recorded as other revenues in the year.

For asset management purposes, the historical cost of the Township's infrastructure is arguably of limited value in that it reflects the cost at the date that the infrastructure investment was incurred, as opposed to what it would cost the Township to replace the infrastructure at the present time. While the use of replacement value is a more meaningful measure of the financial requirement associated with the Township's infrastructure (and is a required component for asset management plans under MIII), it is also of limited value in that it only considers the replacement cost at the end of the infrastructure's useful life and does not contemplate:

- The fact that certain components of the Township's infrastructure, such as roads, will not be fully replaced at the end of useful life but rather will be reconstructed; and
- Asset management activities that are required (by best practice) to be incurred prior to the end of the useful life of the Township's infrastructure.

Accordingly, for the purposes of the Township's asset management plan, we have provided the following for each component of the Township's infrastructure:

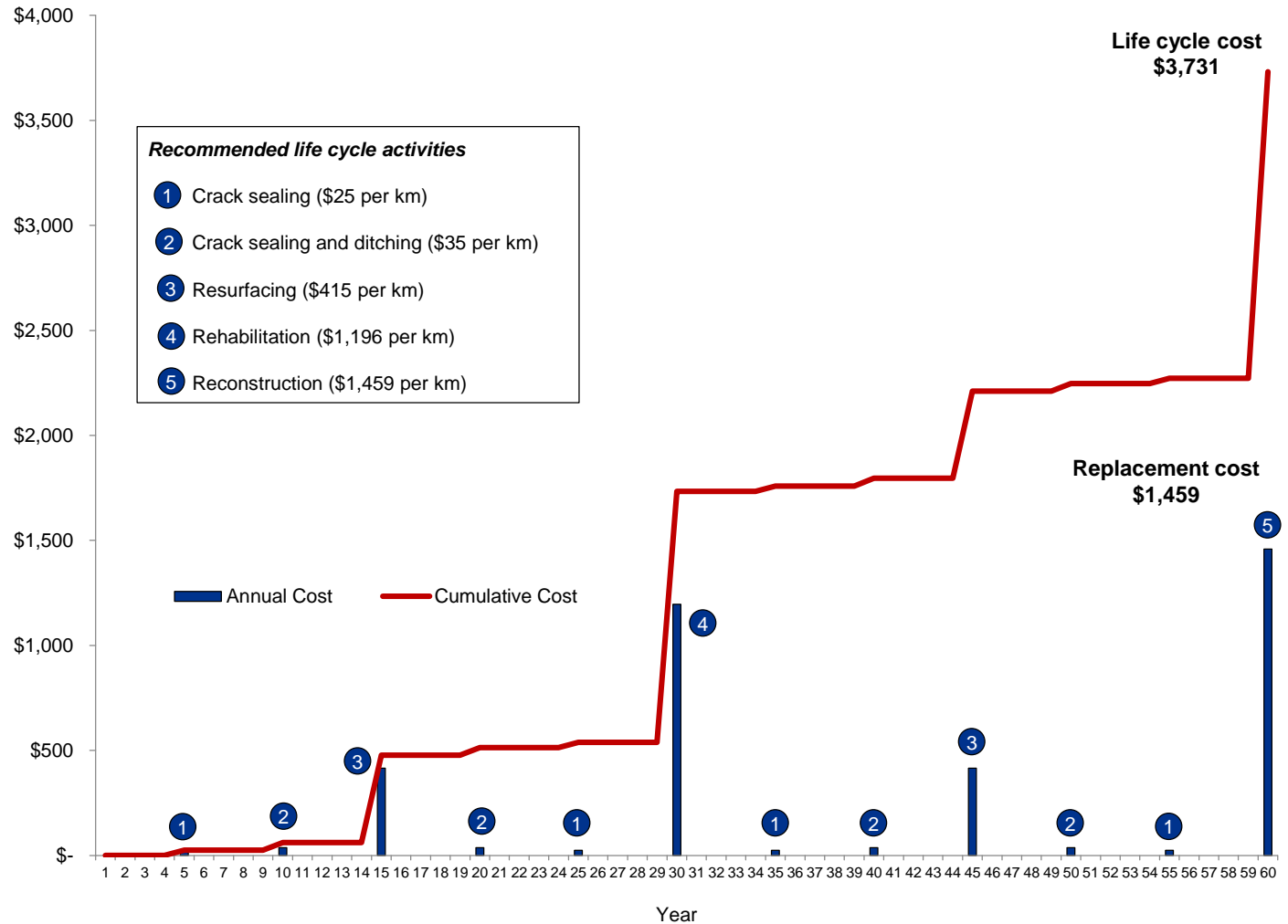
- **Historical cost**, based on the Township's TCA data as reported in its 2012 financial information return
- **Replacement cost**, based on future cost estimates prepared by the Township's engineering advisors. For the purposes of the asset management plan, replacement cost is defined as follows:
  - Roads – road reconstruction costs at the end of useful life, including necessary curbs and sidewalks
  - Vehicles / Moveable Equipment / Ferries and Ramps – estimated replacement cost
  - Buildings / Land Improvements – estimated reconstruction cost
- **Life cycle costs**, based on cost estimates prepared by the Township's engineering advisors. Life cycle costs encompass the cost of all recommended maintenance activities associated with a component of the Township's infrastructure prior to the end of useful life. The nature of life cycle costs will vary depending on the type of infrastructure in question, with certain assets requiring little life cycle activities prior to the end of useful life while others require regularly scheduled maintenance activities. For the purpose of the Township's asset management plan, life cycle costs have been provided for roads infrastructure (roads and sidewalks). Based on the assumptions in the engineering report dated November 11, 2013, the preservation budget does not include replacement costs as these costs should they be incurred will prevent total replacement of the road infrastructure asset.

We have included on the following page an example of the life cycle requirements associated with one type of road, including the difference between replacement cost and life cycle cost.

# State of Local Infrastructure

## Historical, Replacement and Life Cycle Cost

Example of a Life cycle costing profile – paved rural collector road (7.0m lane) (in thousands)





In order to assess the condition of the Municipality's infrastructure, which in turn determines the timing for asset management activities, different approaches were adopted depending on the type of infrastructure:

- **Roads** – condition assessments for roads (paved, surface treated and gravel) were determined based on a *Physical Condition Rating* that ranked the Municipality's road network on a scale of 0 to 100 based on factors such as structural cracking, non-structural cracking, rutting and roughness.
- **Building and Land Improvements** – condition assessments for buildings and land improvements were based on the estimated remaining useful life of the facility.
- **Vehicles / Moveable Equipment and Ferries and Ramps** – condition assessments for the Municipality's fleet, moveable equipment, ferries and ferry infrastructure were determined based on the estimated remaining useful life of the individual asset.

In order to determine the allocation of the Municipality's infrastructure by condition category (good, fair, poor), the following benchmarks were utilized.

### Condition assessment benchmarks

Infrastructure components	Basis of Assessment	Good	Fair	Poor
Roads	Physical Condition Index	76 to 100	56 to 75	Less than 55
Buildings / Land Improvements	Remaining useful life	Greater than 10%	5% to 10%	Less than 5%
Vehicles / Moveable Equipment / Ferry and Ramps	Remaining useful life	Greater than 50%	10% to 50%	Less than 10%

The financial plan for the Township's road network considers a ten year planning period (2013 to 2022) and establishes as its starting point the Township's 2012 budget (capital). Recognizing the significance of future infrastructure investment requirements, the financial plan considers this scenario:

- Assumes that the Township will adopt a sustainable capital asset management plan for roads whereby capital contributions will increase over a 10-year period until such time as the level of capital funding is sufficient to provide for sustainable reinvestment in road infrastructure.

The following assumptions have been considered:

- Operating costs and projected capital funding level for roads have been increased by 1.3% for 2013, 1.5% for 2014, 2015 and 2016 and 2.2% thereafter, which reflects the assumed rate of inflation.
- Excluding inflationary increases, no adjustments (positive or negative) have been made to winter maintenance costs to reflect changing climatic conditions. To the extent that surpluses or deficits are experienced, it is assumed that the Township will utilize its reserves to compensate for the budgetary variances.
- No changes in the method of allocating administrative costs or internal recoveries have been considered in the financial plan.

On a go-forward basis, the following policies will govern the updating and verification of the condition assessment:

- Condition assessments for the entire road system network should be continually reviewed every four years.
- Condition assessments for facilities should be assessed through an engineering/architectural inspection of the facilities every five years
- Condition assessments for other assets will be based on the percentage of remaining useful life in the absence of a third-party assessment of the assets. On an annual basis, the Township will review the useful lives and condition assessment criteria (good, fair, poor based on percentage of remaining life) and will adjust the asset management plan accordingly

# Overview of the Municipal Road System

## Roads Categories

For the purposes of managing its road network, the Township has categorized municipal roads into three groups – rural, semi-urban and urban – based on traffic volumes, terrain, physical conditions and adjacent land, with rural roads representing the majority of all roads in the Township. In addition, the Township’s road network is also classified by type of construction, with surface treated roads representing 51% of all roads infrastructure in the Township (based on total lane kilometres<sup>1</sup>).

Category	Characteristics	Lane kilometres			
		Asphalt	Surface Treatment	Gravel	Total
Urban	<ul style="list-style-type: none"> <li>Roads with curb and gutter and storm sewer drainage</li> </ul>	0.99	-	-	0.99
Semi-urban	<ul style="list-style-type: none"> <li>Roads in built up areas without curb and gutter</li> </ul>	0.4	2.85	0.27	3.52
Rural	<ul style="list-style-type: none"> <li>Roads with ditch and culvert drainage and side built up curbs</li> </ul>	0.19	89.45	91.58	181.22
<b>Total</b>		<b>1.58</b>	<b>92.30</b>	<b>91.85</b>	<b>185.73</b>
<b>Percentage of total</b>		<b>1%</b>	<b>50%</b>	<b>49%</b>	<b>100%</b>

<sup>1</sup> A lane kilometre refers to one kilometre of single lane roadway.



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## Chapter III Desired Levels of Service

The Township's asset management strategy is intended to maintain its infrastructure at a certain capacity and in doing so, allow it to meet its overall objectives with respect to service levels for its residents. Highlighted below are the key performance measures and service level targets for the major components of the Municipality's infrastructure, as well as an assessment of its current performance and the anticipated date for achieving the service level target.

Infrastructure Component	Performance Measure	Targeted Performance	Current Performance	Achievement Date
Roads	Compliance with Ontario Regulation 239/02 – Minimum Maintenance Standards for Municipal Highways	Full compliance	Unknown *	TBD
Vehicles/equipment	Operability	90%	>90%	2014
Facilities	Availability (percentage of planned operating hours)	100%	100%	2013
	Compliance with Accessibility for Ontarians with Disability Act and Integrated Accessibility Standards	Full compliance	In transition	As per legislation

It is anticipated that the Township will monitor and report on its performance annually.

\* Per review of the engineering report for the road network dated November 11, 2013, there is no mention of compliance with the Ontario Regulation 239/02 and is beyond the scope of the report. The capital asset management plan will not be able to comment on this performance measure.

From time to time, new legislation or regulations will be enacted that change minimum performance requirements for municipal infrastructure and by extension the performance measures outlined in the Township's asset management plan. At the present time, two major items of legislation and regulation have been identified as having the potential to impact on the Township's desired service levels and asset management plan:

- The *Accessibility for Ontarians with Disability Act* and the accompanying *Integration Accessibility Standards* may require the Township to alter components of its infrastructure to ensure accessibility for individuals with disabilities. The timeframe for compliance with the Act depends on both the nature of the requirement and the size of the township, with smaller communities generally provided with an extended period for compliance as compared to the Province or larger townships.
- The Province of Ontario has recently enacted revisions to *Ontario Regulation 239/02 – Minimum Maintenance Standards for Municipal Highways*. While the majority of these changes deal with winter maintenance activities (which are not included in the scope of the asset management plan), revisions have been made to inspection requirements for certain components of a municipal road network, which will impact on the Township's asset management activities in the future.

On an annual basis, the Township will evaluate the impact of enacted legislation or regulation on its desired levels of service and will adjust its performance measures accordingly.



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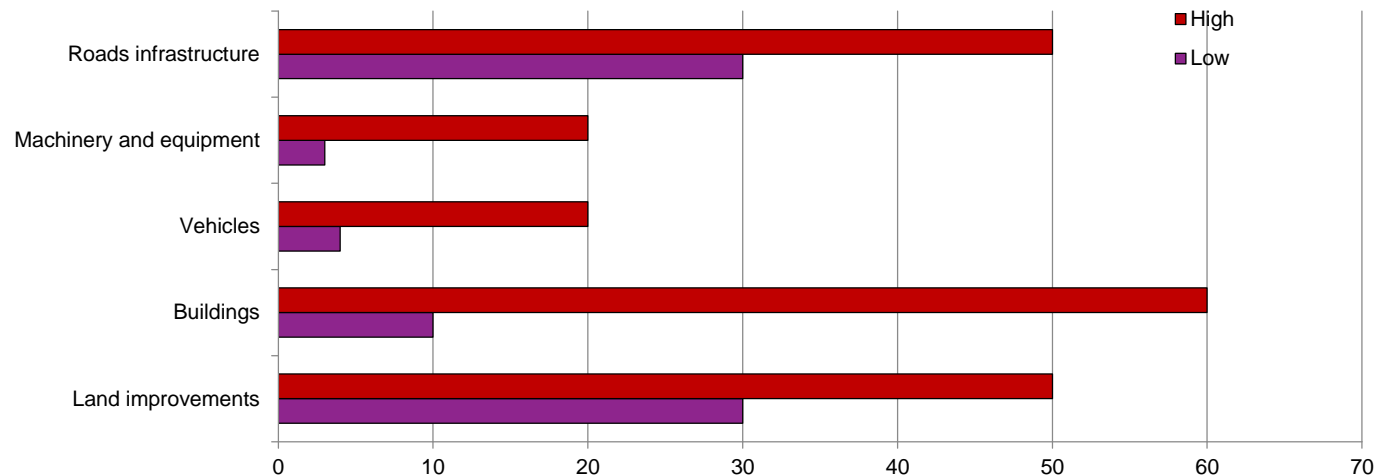
# Chapter IV Asset Management Strategy

Useful lives for the category of assets will vary, ie road surface vs road base, half ton trucks vs tandem axel etc.

For each significant component of the Township’s infrastructure, asset management strategies have been developed that outline:

1. The expected life cycle period for each asset, which defines the period that the Township will be required to maintain its infrastructure and secure the necessary financing for maintenance and replacement activities. As noted below, there is considerable variability in the estimated life cycle periods of the Township’s infrastructure.

*Life cycles for municipal infrastructure (in years)*



2. The extent to which asset management activities can be integrated with other assets, most commonly the integration of above ground infrastructure (roads and sidewalks). The integration of different infrastructure components is a critical element of the Township’s asset management plan given the staggering of the end of useful life for major assets.
3. Criteria and strategies for the replacement and rehabilitation of the assets.
4. Consequences of not undertaking the necessary asset management activities, particularly the impact on useful lives and overall costs.

Asset management strategies for each component are presented on the following pages.



<b>Anticipated asset life cycle</b>	The life cycle of newly constructed pavement systems are dependent on several factors including the pavement design, material and construction quality, traffic volume, traffic loading, and environmental conditions. The service life can be approximated by the category of road: 12 years for high-class bituminous roads and 7 years for low-class bituminous roads and surface treatments.
<b>Integration opportunities</b>	Various other elements may be considered as integrated with paved roads such as elements including traffic signals, street lighting, and sidewalks.
<b>Rehabilitation and replacement criteria</b>	To assess paved roads the Physical Condition Index (PCI) is used. PCI is a numerical index between 0 and 100 and is based on a visual survey conducted, where 100 represents a new pavement in excellent condition and 0 an impassible pavement. If the PCI ranks at 80 to 90, crack sealing and rehabilitation measures should be considered, if PCI ranges from 36 to 79, resurfacing should be considered. In the case that the PCI falls below 35, reconstruction is a more effective option.
<b>Rehabilitation and replacement strategies</b>	<p>Several different rehabilitation strategies can be implemented. The selection of the strategy is dependent on the following criteria: PCI index, road classification (arterial, collector, local), urban or rural, ditched or curbed, benefit/cost ratio. These strategies include as noted in Table A.1L Road Improvement Types of the engineering report:</p> <ul style="list-style-type: none"> <li>• Total reconstruction of pavement with 50mm to 100mm of hot mix asphalt (HMA)</li> <li>• Basic resurface pavement with 50mm to 100mm of HMA (R1 and R2)</li> <li>• Major resurface pavement with 100mm of HMA (RM)</li> <li>• Pulverize with underlying granular and surface with 50mm to 100mm of HMA (PR1 and PR2)</li> <li>• Routing and crack sealing pavements</li> </ul>
<b>Life cycle consequences</b>	Failure to fund timely pavement rehabilitation will result in a reduction in the pavement PCI. Pavement PCI's below 55 result in exponential increases in pavement rehabilitation costs. It also increases significantly road maintenance costs. Pavements identified by a PCI below 35 typically reflect decreases in level of service and increasing associated degrees of risk and liability.
<b>Integrated asset priorities</b>	The schedule of pavement rehabilitation is often planned in conjunction with other elements requiring replacement, however given that the Township's integration opportunities are extremely limited, this is not a priority.

<p><b><i>Anticipated asset life cycle</i></b></p>	<p>The life cycle of newly placed gravel road systems are dependent on several factors including the material and construction quality, design, traffic volume, traffic loading, and environmental conditions. The service life can be approximated by the category of road: 40 years for earth with open ditch and 50 years for gravel with open ditch. Sufficient maintenance provided during the service life will help preserve conditions using such strategies as machine grading, ditching and brushing, and granular top up.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>Various other elements may be considered as integrated with gravel roads. These include ditching and drainage system requirements.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>To assess gravel roads the Physical Condition Index (PCI) is used. PCI is a numerical index between 0 and 100 and is based on an engineering survey conducted, where 100 represents a newly constructed road in excellent condition and 0 an impassible roadway. If the PCI ranges from 35 to 85, rehabilitation should be considered. In the case that the PCI falls below 35, reconstruction is a more effective option.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>Several different rehabilitation strategies can be implemented. The selection of the strategy is dependent on the following criteria: PCI index, road classification (collector, local), urban or rural, benefit/cost ratio. In a rehabilitation scenario, the top 75 to 150 mm of gravel type “A” would be replaced. In the case of total reconstruction the work would include the replacement of the granular road base and the granular surface.</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>The effects of gravel road rehabilitation that is insufficiently funded are reflected in the PCI index which as a result will typically fall below 35. The poor quality of the roadway will be reflected in rising reconstruction and maintenance costs. Roads which are identified by a PCI of 35 or lower typically show signs of a poor level of service increasing the associated degrees of risk and liability.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>The schedule of road rehabilitation is often planned in conjunction with other elements, however since the Township’s integration opportunities are extremely limited, that planning is not necessarily required.</p>

<p><b><i>Anticipated asset life cycle.</i></b></p>	<p>The Life Cycle ranges for buildings typically range from 30 to 50 years while the land improvements typically have a life cycle ranging between 20 years and 30 years. These values hold true under the assumption that the elements are properly maintained throughout their service lives.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>Assets are appraised separately. The projects however are assembled by asset to make use of the “economics of scale” principle. Special attention is given to ensure that the disruption of asset operations is minimized over its service life.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>To assess facilities and land improvements the remaining useful life is used. The remaining useful life of the asset will identify individual assets that are approaching the end of their useful life which may be indications that additional rehabilitation and replacement costs will be incurred in the near future.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>The replacement schedule will be dictated by the actual asset conditions at the time and the stage in its life cycle. Replacement may also be undertaken to meet any changes in safety, industry or technological specifications and standards. The facilities and land improvements must also be maintained to meet the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) and upgrade ingress/egress points as necessary. Critical components which should be given special attention with annual inspections include facility roof and HVAC systems. Any scheduled improvements should take into consideration the institution of economical energy efficient systems and equipment.</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>Degradation of the building and land improvements and its components are noticed, as well as increases in operational costs due to inefficiencies, health and safety concerns, and depreciation of Administration assets.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>The schedule of replacement is dependent on the facility’s and land improvement’s stage in its life cycle, the actual condition at the time, and the convenience of performing the replacement without disturbing the operations.</p>

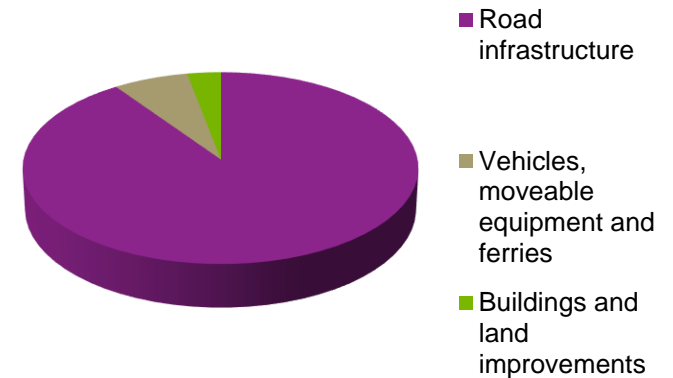
<b>Anticipated asset life cycle.</b>	Service life is dependent on the type of vehicle or moveable equipment and service area. The expected life cycle of cars and pickup trucks is 5-10 years, 10 years for duty trucks and tractors, 10 years for ice resurfaces, 15 years for front loaders, backhoes and graders, 20-25 years for fire vehicles and heavy duty trucks, 30 years for ferries and 50 years for ferry docks and ramps .
<b>Integration opportunities</b>	Integrated with operation adjustments, modifications in service levels, meeting environmental regulations, technological upgrades and financial plans.
<b>Rehabilitation and replacement criteria</b>	Replacement of fleet, moveable equipment and will be dictated by the results of lifecycle cost analysis considering the following variables: repairs, insurance, fuel, depreciation, and downtime costs. In the case of ferries, ferry docks and boat ramps, the Ministry of Transportation can make additional recommendations on rehabilitation and replacement costs for the ferries and ferry docks/ramps.
<b>Rehabilitation and replacement strategies</b>	In the case that vehicular , equipment, ferry , ferry docks and boat ramp repairs exceed 40% of replacement costs, replacement is the optimal strategy. Other strategies include leasing opportunities, refurbishing, seasonal rentals, or tendering services to a third party.
<b>Life cycle consequences</b>	Vehicles , moveable equipment, ferries and docks/ramps that are not maintained, or as the asset reaches the end of the service lives the efficiency of the asset decreases, seeing an increase in costs. In the event of service interruption, work force costs are increased due to extended work schedules and overall loss of production.
<b>Integrated asset priorities</b>	Not applicable.

For asset management planning purposes, the financial requirement associated with the Municipality's infrastructure requirements can be divided into two categories:

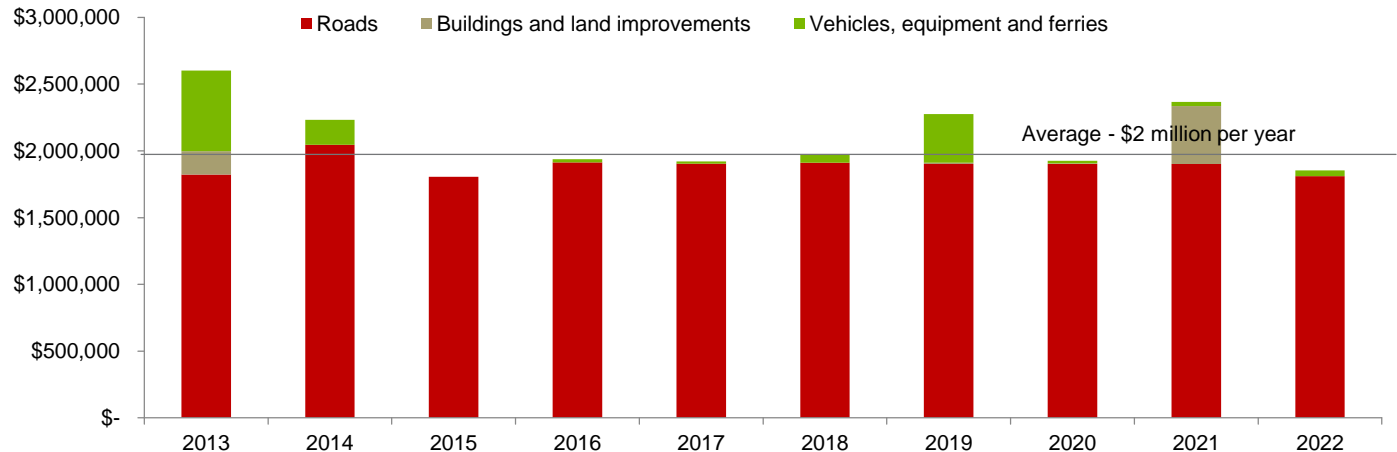
- Immediate infrastructure investment needs. Based on the results of the condition assessment, an indication as to the types of asset management activities required over the next ten years, and their associated costs, has been developed. Overall, it is estimated that the Municipality would need to invest \$20,898,654 in its infrastructure, the majority of which (\$18,919,995 or 90%) relates to the Municipal road network.

On average, the Municipality's immediate infrastructure investment needs amount to approximately \$2.0 million per year.

*Immediate infrastructure needs (in millions)*



*Projected future infrastructure investment requirements by year*



Details of the total replacement costs for each asset component can be found in the infrastructure profiles in **Appendix D to Appendix J.**

- Sustainable life cycle requirements.** In addition to its immediate needs, the Municipality will also be required to fund the cost associated with all of its life cycle activities over the useful life of its infrastructure. As the Municipality has traditionally relied on grants to fund a major portion of its infrastructure, its historical levels of capital investment have fluctuated significantly. However, if the Municipality chose to fund its life cycle requirements evenly over the life of its assets, it would establish a regular and sustainable stream of funding for ongoing capital asset management that would be equal to either:
  - The total life cycle cost of the road infrastructure, based on the composition of the road system has been provided by the engineer to develop annual capital and maintenance programs for roads. This approach is appropriate for linear assets that have significant life cycle requirements throughout their useful life.
  - The total replacement cost of the other assets are divided by their average useful life, which is appropriate for assets with fewer life cycle requirements and where straight replacement of the asset is the more likely scenario.

Based on this approach, we have calculated the average annual contribution required to ensure a sustainable stream of funding for the Municipality's assets to be in the order of \$1.4million.

*Estimated sustainable life cycle requirement*

Asset Component	Basis of Determination	Total Replacement Costs	Estimated Useful Life	Annual Requirement Based on Average Estimated Useful Life or life cycle costs
Roads	Lifecycle	\$48,290,482	-	\$1,185,600
Buildings and Land Improvements	Replacement	\$ 4,024,620	30 - 50 years	\$100,616
Ferry and Ferry Docks	Replacement	\$814,403	30 - 50 years	\$20,360
Vehicles and Moveable Equipment	Replacement	\$1,946,797	5 - 25 years	\$129,786
<b>Total</b>		<b>\$55,076,302</b>		<b>\$1,436,362</b>

The overall infrastructure financing requirement for the Municipality, assuming that all life cycle activities are undertaken at the recommended intervals and that the Municipality funds overall life cycle and replacement costs evenly over the assets lives, is calculated to be in the order of \$3,526,227, as follows:

- Immediate infrastructure investment needs, as per page 30 \$2,089,865
- Sustainable replacement requirements, as per page 31 \$ 1,436,362

In comparison, the Municipality's total revenues in 2013 are budgeted to be \$2,414,743, which supports \$582,500 in capital expenditures. Given the magnitude of the estimated infrastructure financing requirement, it is evident that ***the Municipality is unable to fully meet its ongoing infrastructure requirements without significant levels of support from senior levels of government*** on an ongoing (i.e. annual) basis. As such, the Municipality will be required to prioritize its capital investments and the application of its available funds.

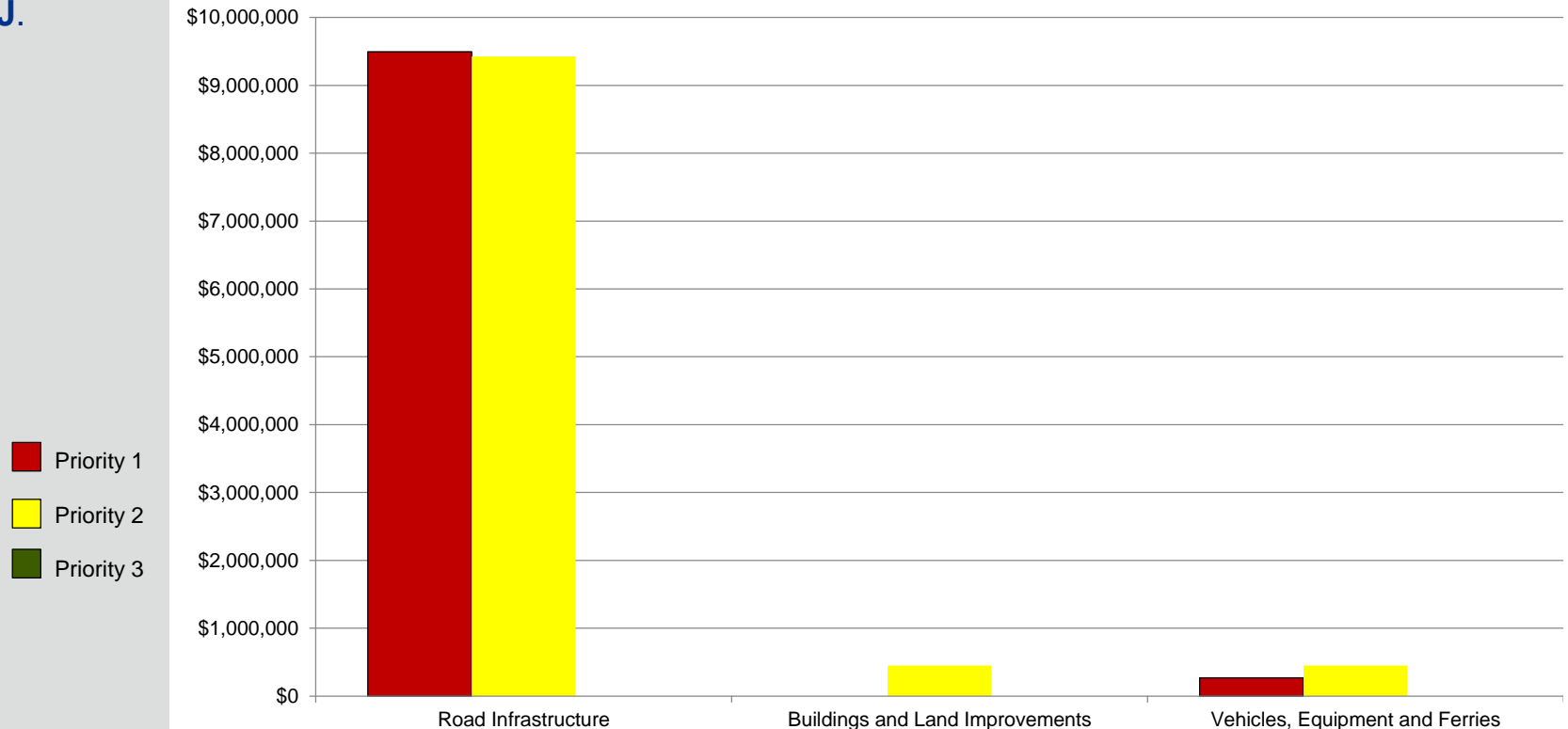
For asset management purposes, the investment requirements associated with the Municipality's infrastructure are divided into three main categories, as follows:

Category	Description
<b>Priority 1</b>	<ul style="list-style-type: none"> <li>Assets with an investment requirement within the next five years, based on condition or useful life</li> <li>Co-located assets that may not require investment within the next five years but should be replaced as part of the integrated project.</li> <li>Assets that may qualify for specific grants, even if an immediate investment requirement has not been identified within the next five years</li> <li>Infrastructure investments required as a result of changing legislation, public health or safety concerns or strategic purposes (e.g. economic development)</li> </ul>
<b>Priority 2</b>	<ul style="list-style-type: none"> <li>Assets with an investment requirement within the next six to ten years</li> <li>Assets that would otherwise be classed as Priority 1 but are considered to have reduced importance due to low utilization by the community (e.g. roads with low traffic volumes), compensating strategies in the event of failure (e.g. detours, reduced speed limits or load limits or limited impacts on public health or safety in the event of a failure)</li> </ul>
<b>Priority 3</b>	<ul style="list-style-type: none"> <li>Assets with no investment requirements identified within the next ten years</li> <li>Assets to be discontinued or abandoned</li> <li>Assets that would otherwise be classified as Priority 1 or 2 but are considered to have reduced importance</li> </ul>

As part of its ongoing asset management activities, the Municipality will review its prioritization criteria and asset rankings and, if considered necessary, make appropriate revisions.

A detailed summary of infrastructure priorities by individual assets is included in **Appendix D to Appendix J.**

Based on these criteria, the total infrastructure investment requirement for Priority 1 infrastructure (excluding sustainable life cycle requirements) is \$ , with Priority 2 infrastructure investment requirements amounting to \$ . As noted below, the most pressing infrastructure requirements for the Municipality are in the areas of bridges (100% Priority 1), fleet (69% Priority 1 or 2), roads (100% Priority 1 or 2) and buildings (55% Priority 1 or 2).







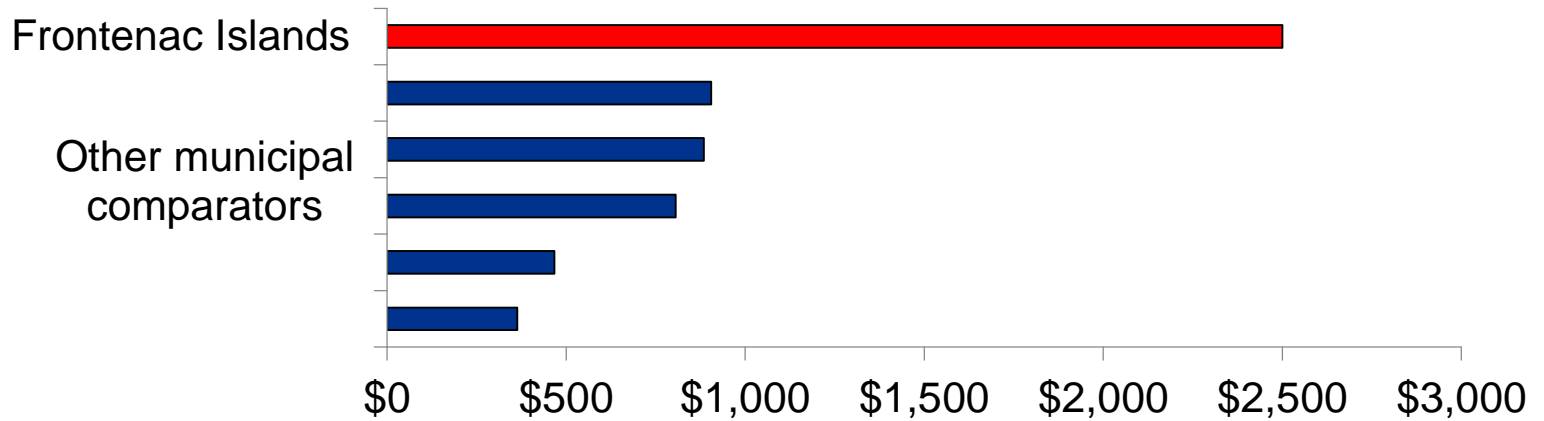
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**Asset Management Planning  
for the Township of Frontenac Islands**

# **Chapter V Financing Strategy**

# Financial Perspectives on the Township of Frontenac Islands

## *Reserves and Reserve Funds per Household (2011)*



Reserves / Household:  
 $\$729,630 / 1,287 = \$566 / \text{Household}$

Reserve Funds / Household:  
 $\$1,834,326 / 1,287 = \$1,425 / \text{Household}$

Reserves & Reserve Funds / Household:  
 $\$2,564,000 / 1,287 = \$1,992 / \text{Household}$

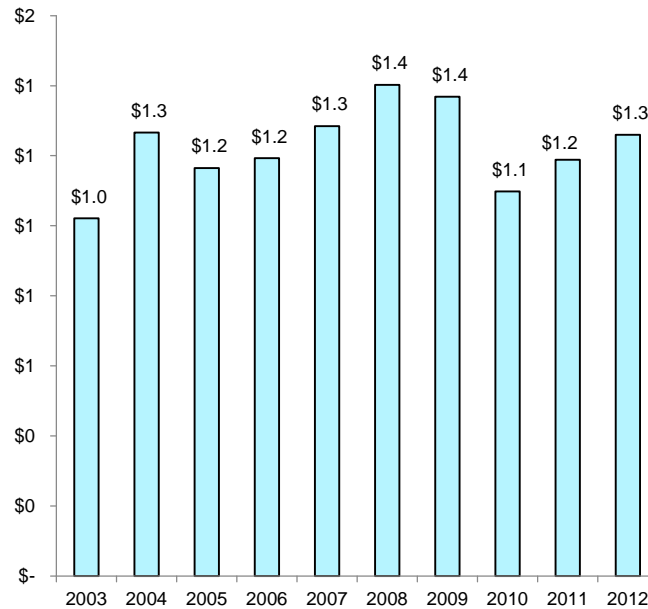
## Overview of the Township's Financial Performance

The Township's 2012 budget reflects a total municipal levy of \$ 4.3 million<sup>1</sup> which, when combined with \$3.6 million in other revenues, will fund a total of \$9.5 million in expenditures; operating costs (\$7.9 million), capital costs (\$1.6 million) and contributions to reserves (\$0.7 million)

Since 2003, the Township's municipal levy has increased by an average of \$262,000, or 2.7% per year. While the Consumer Price Index increased on average 1.9% annually since 2002.

It is important to note, however, that the annual increases in the Township's municipal levy have fluctuated significantly from year to year, with several large annual increases experienced during 2009 (9.46%) and 2012(10.91%). The leading practice for tax policy is levy increases that are steady and predictable over a five to ten year period – a policy that the Township has not been able to achieve.

Total municipal levy – 2003 to 2012 (millions of dollars)<sup>2</sup>



Annual change in municipal levy – 2003 to 2012<sup>2</sup>



<sup>1</sup> For the purposes of our report, municipal levy includes payments-in-lieu but excludes supplementary taxes, write-offs and rebates.

<sup>2</sup> Source – Municipal Financial Information Returns (Schedule 10), Township of Frontenac Islands 2012 Budget and internal financial information provided by management.

### Financial projections for each of the scenarios of projected future capital requirements are discussed.

The development of the Municipality's financing strategy for its asset management plan reflects the guidance outlined by the Province of Ontario in *Building Together – Guide for Municipal Asset Management Plans*. Specifically, the development of the financing strategy (and in particular the extent of the Municipality's financing shortfall) is based on the following parameters:

- Presents annual revenues and expenditures for the planning period (10 years), as well as comparative information;
- Does not consider grants from senior governments to be a confirmed source of revenue unless an agreement has been executed. Accordingly, only Federal Gas Tax and the Municipality's allocation for capacity funding under the Municipal Infrastructure Investment Initiative have been included in the projections; and
- Identifies the potential funding shortfall and how it will be managed.

In developing the financial strategy, three alternative scenarios were considered:

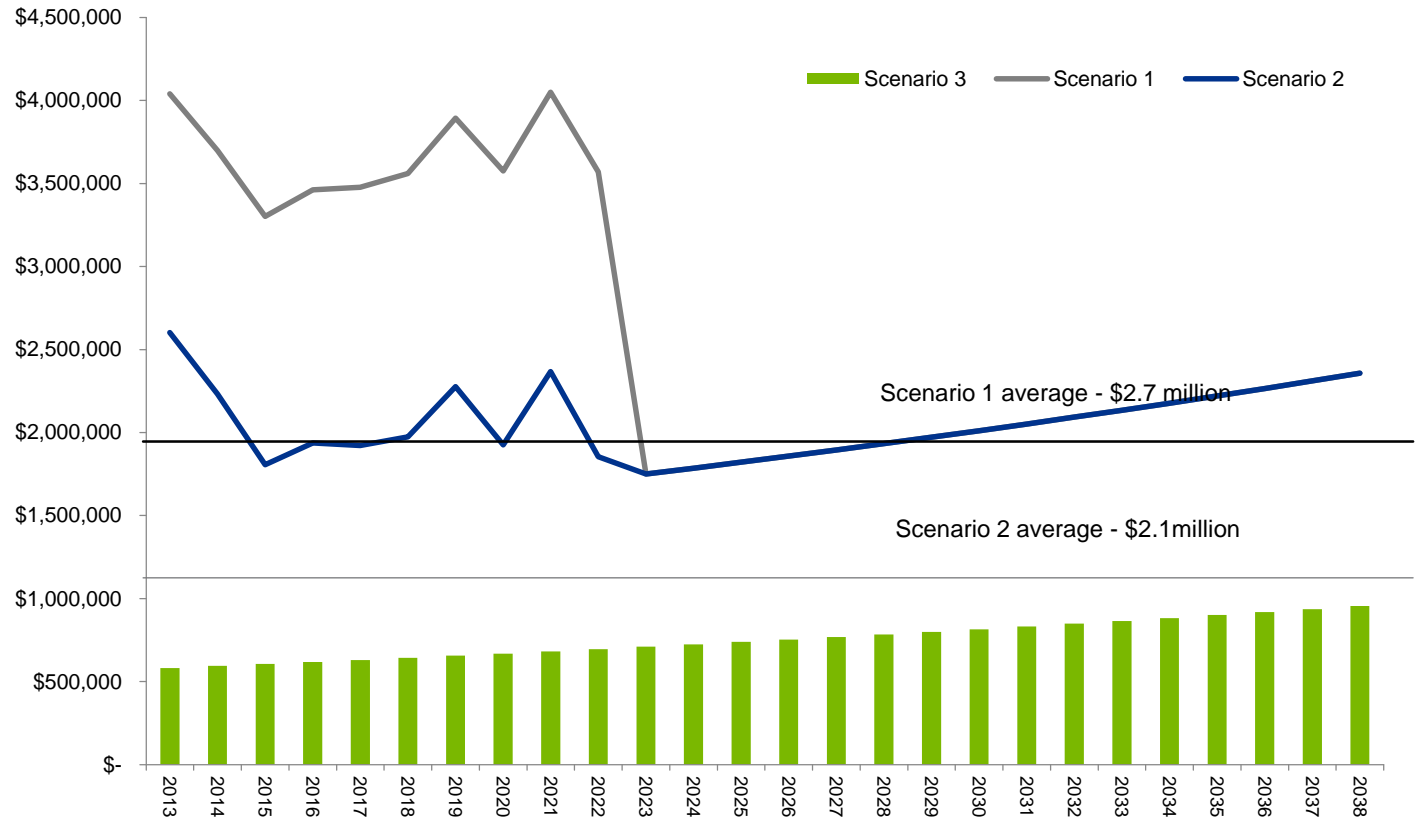
- **Scenario 1** – Representing the base case scenario, this scenario reflects the assumption that all identified asset management requirements (immediate and long-term contributions) will be incurred by the Municipality. This represents the worst case scenario as it involves the highest level of capital financing requirement and ultimately is not practical due to the increase in municipal revenues necessary to support the required level of capital investment.
- **Scenario 2** – Under this scenario, the Municipality's capital expenditures are projected to be as follows:
  - During the first 10 years of the projection period, the Municipality will make capital investments based on the identified priority infrastructure investment requirements (i.e. \$2,089,865 per year).
  - During the remainder of the projection period, the Municipality will make capital investments equal to the amount of the sustainable life cycle contribution requirements (i.e. \$2,175,723 inflated at 2% per year).
- **Scenario 3** – Under this scenario, it is assumed that the Municipality will continue to make capital investments based on the amount of funding budgeted in 2013 for capital expenditures (i.e. \$582,500 inflated at 2% per year).

Financial projections for each of the scenarios are contained in the following appendices:

- Appendix K – Scenario 1
- Appendix L – Scenario 2
- Appendix M – Scenario 3

Financial projections developed in support of the asset management plan demonstrate both the magnitude and immediacy of the Municipality's identified capital requirements, with the required level of capital expenditures under Scenarios 1 and 2 significantly higher than the current level. At the same time, the average residential taxes per household is expected to increase accordingly if taxpayers are solely responsible for funding the capital requirements.

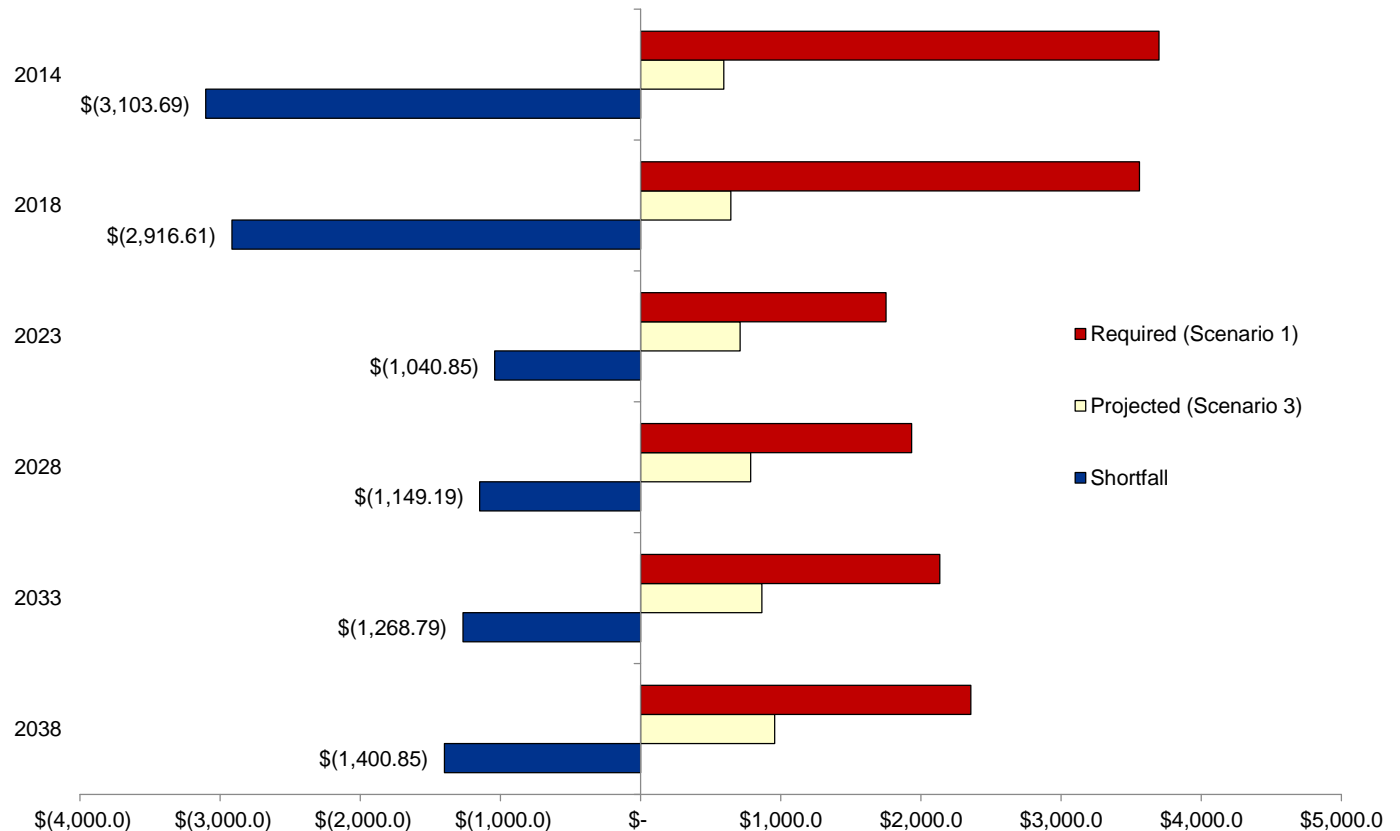
*Projected capital expenditures (in thousands)*



This slide compares the first scenario whereby immediate capital needs and future replacement needs are calculated together for the first 10 years and compared to the balance of current capital funding levels increased by annual inflation to determine the capital shortfall.

At the current level of capital expenditures, the Municipality is expected to experience a growing infrastructure deficit as its existing investments are insufficient to maintain its infrastructure in its present state, let alone address immediate and short-term infrastructure requirements. As noted below, the Municipality's current average annual funding shortfall is estimated to be approximately \$1.9 mil per year, with a major shortfall expected in 2014 when a significant portion of the Municipality's road network is slated for work.

Calculated annual infrastructure funding shortfalls (in thousands)



A suggested five year capital financing policy is included as **Appendix O**.

In order to address the current and future shortfalls in capital funding, the Municipality has identified the following potential courses of action:

- 1. Five year capital levy.** In order to address the immediate and short-term infrastructure requirements, the Municipality is contemplating the introduction of a five year capital levy that would see the total municipal levy increase by 2% per year in order to fund capital expenditures. The proceeds from this capital levy would either be expended during the year, used to finance debt servicing costs for infrastructure related borrowings or placed in a reserve fund until such time as the funds are required (the Municipality adopts a similar approach for Federal Gas Tax, which is sometimes 'banked' until sufficient funds are accumulated to finance capital projects). As noted below, the introduction of a five year capital levy is expected to provide an additional \$131,124 for capital purposes, representing a 26% increase in capital expenditures over the next five years.

*Impact of five year, 2% capital levy on taxation and capital spending*

Year	Municipal Levy			Capital Expenditures		
	Prior Year's Levy	Capital Levy Increase	Current Year's Levy	Prior Year's Expenditures	New Funding	Current Year's Expenditures
2013	\$ 1,259,826	\$ 25,197	\$ 1,285,023	\$ 504,613	\$ 25,197	\$ 529,810
2014	\$ 1,285,023	\$ 25,700	\$ 1,310,723	\$ 529,810	\$ 25,700	\$ 555,510
2015	\$ 1,310,723	\$ 26,214	\$ 1,336,937	\$ 555,510	\$ 26,214	\$ 581,724
2016	\$ 1,336,937	\$ 26,739	\$ 1,363,676	\$ 581,724	\$ 26,739	\$ 608,463
2017	\$ 1,363,676	\$ 27,274	\$ 1,390,950	\$ 608,463	\$ 27,274	\$ 635,737
Average annual increase in municipal levy			2.0%	Increase in capital expenditures		26%

The adoption and annual renewal of a capital levy is subject to the Municipality's annual budget process. In order to assist with establishing the levy, we have included a suggested capital financing policy as Appendix N.

A suggested borrowing policy is included as **Appendix N**.

**2. Use of borrowing for infrastructure investments.** Historically, the Township has not relied on borrowings as a means of funding infrastructure investments. On an ongoing basis, the Municipality will consider the use of debt for additional infrastructure investments, conditionally upon the following:

- The infrastructure investment will provide a stream of non-taxation revenues that can be used to fund some or all of the associated debt servicing costs; and/or
- The Township requires debt financing to fund its portion of infrastructure projects that are cost shared with senior government; and/or
- The infrastructure investment is unavoidable as a result of regulatory changes or concerns over public health and safety and cannot be funded through other means; and
- The associated debt servicing costs would not jeopardize the Township's financial sustainability or result in the Township exceeding its annual debt repayment limit.

The use of debt financing is particularly helpful in addressing immediate capital investment requirements as it allows the Township to spread the cost of projects over the term of the loan. For example, the amount of capital expenditures that could potentially be financed through the Township's proposed capital levy could amount to as much as \$2,024,815, recognizing that future capital expenditures would be limited as the financing is directed towards debt servicing, not infrastructure investments.

### *Potential debt financed through five year capital levy*

Year	Capital Levy	10 Year Loan (3.09%)	20 Year Loan (3.90%)	25 Year Loan (4.11%)
2013	\$ 25,197	\$ 213,948	\$ 345,481	\$ 389,085
2014	\$ 25,700	\$ 218,227	\$ 352,391	\$ 396,867
2015	\$ 26,214	\$ 222,591	\$ 359,439	\$ 404,804
2016	\$ 26,739	\$ 227,043	\$ 366,627	\$ 412,900
2017	\$ 27,274	\$ 231,584	\$ 373,960	\$ 421,158
<b>Total</b>	<b>\$ 131,124</b>	<b>\$ 1,113,392</b>	<b>\$ 1,797,898</b>	<b>\$ 2,024,815</b>

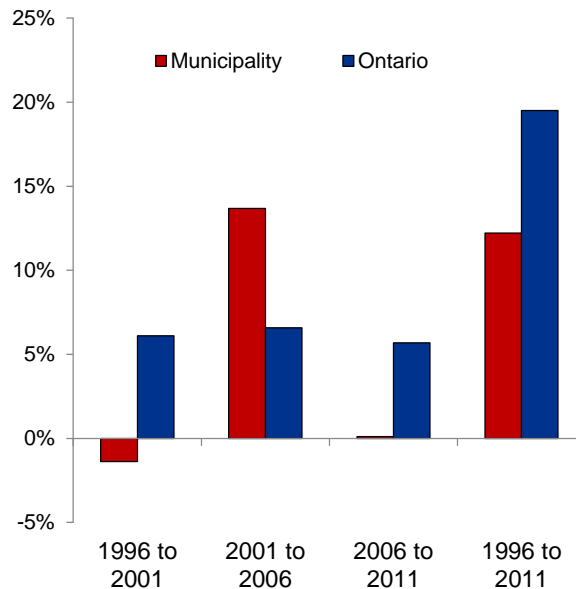


Despite the ability of the Township to increase the level of financing for infrastructure investments and other asset management activities, the magnitude of the financial requirement associated with its infrastructure precludes the Township from addressing its needs without some form of grants. In the absence of capital grants, the Township will be required to defer capital expenditures until such time as sufficient funding is available.

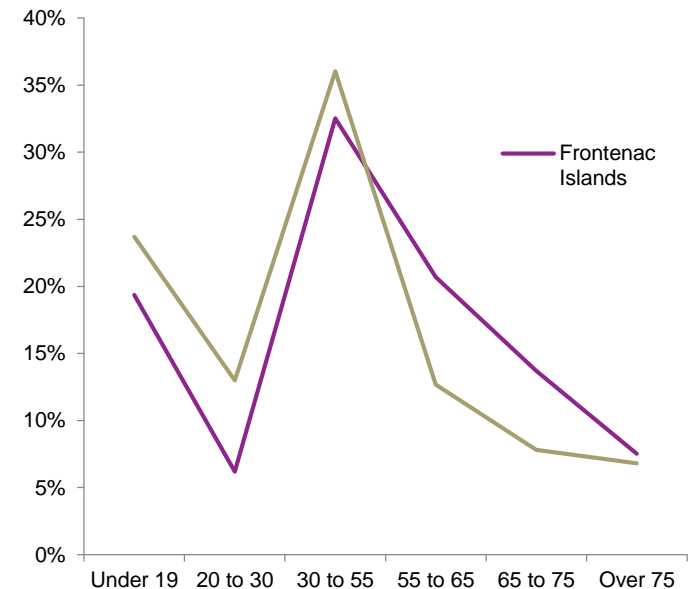
While it is expected that most, if not all, Ontario municipalities will be challenged to meet their financial requirements associated with infrastructure, the Province should give particular attention to the Township's limited ability to fund capital investments in comparison to other municipalities, based on the following:

- From 1996 to 2011, **the Township's total population has increased by 12.2%**, compared to a 19.5% increase in the Province's population over the same period.
- At the same time, **the Township's population has aged faster than the Provincial average**, with the median age of the Municipality's residents amounting to 50.5 years compared to the Provincial median age of 42.5 years.

Population changes – 1996 to 2011 (source: Statistics Canada)

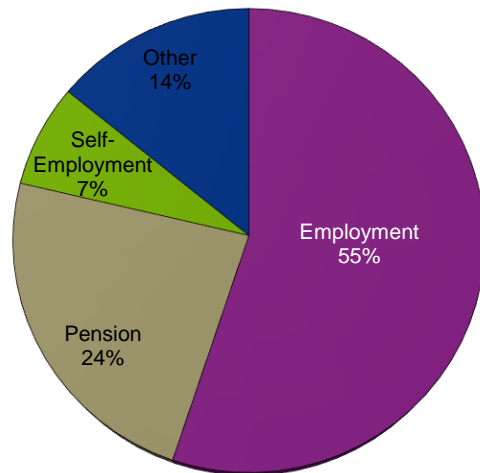


Population distribution by age group (2011) source: Stats Can

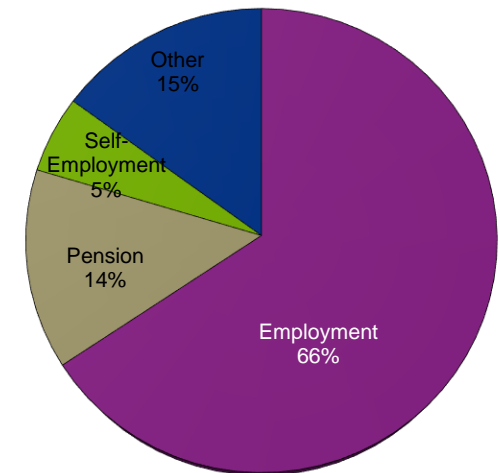


- Residents of the Township are more reliant on pension incomes** than the remainder of the Province, limiting their ability to afford ongoing property tax increases. Additionally, the percentage of personal income generated from employment has decreased from 58% in 2002 to 55% in 2009, while pension incomes have risen from 21% of total incomes to 24%.

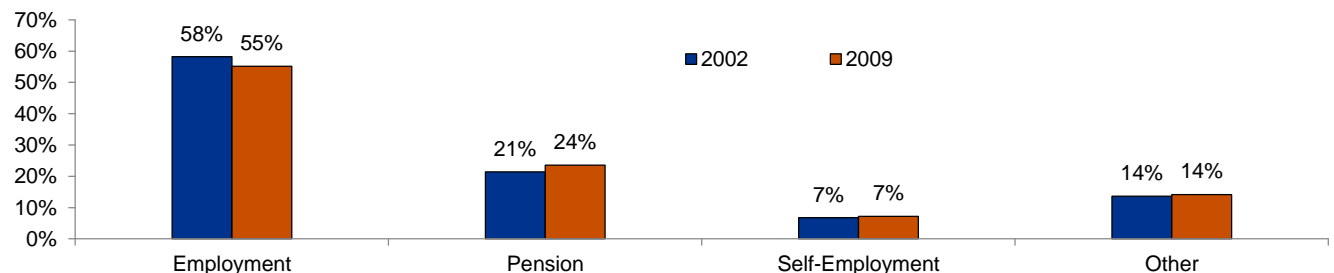
*Reported personal income by source – Township residents (2009) from CRA Locality Statistics*



*Reported personal income by source – Provincial residents (2009)*



*Reported personal income by source – Municipality residents (2002 vs. 2009) from CRA Locality Stats*



In addition to the challenges posed by the changing nature of its demographics, the Township is facing additional financial pressures from an operational perspective, including:

- The continuing impacts of inflation, including wage settlements and higher benefit costs, which increase the Township's operating expenditures
- Announced reductions in government funding programs, including planned reductions in OMPF funding and decreases in Federal Gas Tax funding

In light of its affordability constraints, the Township recognizes and appreciates the importance of programs such as the Municipal Infrastructure Investment Initiative and the Small, Rural and Northern Municipal Infrastructure Fund. That said, the current approach to allocating funding to municipalities is extremely problematic from a planning perspective:

- Unlike Federal Gas Tax, which is provided to municipalities as a recurring stream of known funding, the current Provincial infrastructure programs are based on applications with no guarantee of funding success. Accordingly, municipalities are unable to 'bank' Provincial infrastructure funding to finance larger capital projects, use proceeds as a source of funding for borrowing costs incurred in connection with infrastructure investments, or plan beyond the current funding submissions.
- The requirement for municipalities to apply for funding through the completion of expressions of interest can be a challenge, particularly for smaller municipalities with limited resources. In a number of instances, smaller municipalities are required to divert staff from other priorities or incur costs for outside consultants in order to complete the required expressions of interest, with no certainty that they will actually obtain funding.

As a means of maximizing the effectiveness of its capital financing programs, the Township requests that the Province consider the following:

- Replacing the current competitive, application based funding process with a committed stream of funding to eligible municipalities, thereby supporting long-term planning for infrastructure needs;
- Review the basis for allocating funding to communities, with increased emphasis placed on smaller communities that are challenged to meet their infrastructure needs due to limited assessment growth, higher than average population decreases and lower than average non-residential assessment, all of which pose challenges from an affordability perspective.



*cutting through complexity*

**Asset Management Planning  
for the Township of Frontenac Islands**

**Chapter VI  
Asset Management Plan  
Cross Reference**

In this section of the report, the Municipality's asset management plan has been cross-referenced to the requirements outlined in *Building Together – Guide for Municipal Asset Management Plans* as a means of demonstrating that the Municipality has met the Province's expectations for asset management plans submitted under the Municipal Infrastructure Investment Initiative.

Required Section	Content	Location in Asset Management Plan
<b>Executive summary</b>		Page 2 to 5
<b>Introduction</b>	<ul style="list-style-type: none"> <li>explains how the goals of the municipality are dependent on Infrastructure</li> <li>clarifies the relationship of the asset management plan to municipal planning and financial documents</li> <li>describes to the public the purpose of the asset management plan</li> <li>states which infrastructure assets are included in the plan. Best practice is to develop a plan that covers all infrastructure assets for which the municipality is responsible. At a minimum, plans should cover roads, bridges, water and wastewater systems, and social housing</li> <li>identifies how many years the asset management plan covers and when it will be updated. At a minimum, plans must cover 10 years and be updated regularly. Best practice is for plans to cover the entire lifecycle of assets</li> <li>describes how the asset management plan was developed — who was involved, what resources were used, any limitations, etc.</li> <li>identifies how the plan will be evaluated and improved through clearly defined actions. Best practice is for actions to be short-term (less than three years) and include a timetable for implementation</li> </ul>	Page 7 to 11
<b>State of local infrastructure</b>	<ul style="list-style-type: none"> <li>asset types (e.g. urban arterial road, rural arterial road, watermains) and quantity/extent (e.g. length in kilometres for linear assets).</li> <li>financial accounting valuation and replacement cost valuation.</li> <li>asset age distribution and asset age as a proportion of expected useful life.</li> <li>asset condition (e.g. proportion of assets in "good," "fair" and "poor" condition). Asset condition must be assessed according to standard engineering practices. For bridge structures, condition is based on an analysis of bridge inspection reports.</li> <li>discusses how and when information regarding the characteristics, value, and condition of assets will be updated.</li> </ul>	Page 13 to 20

Required Section	Content	Location in Asset Management Plan
<b><i>Desired level of service</i></b>	<ul style="list-style-type: none"> <li>• defines levels of service through performance measures, targets and timeframes to achieve the targets if they are not already being achieved.</li> <li>• discusses any external trends or issues that may affect expected levels of service or the municipality's ability to meet them</li> <li>• shows current performance relative to the targets set out</li> </ul>	Page 22 to 23
<b><i>Asset management strategy</i></b>	<ul style="list-style-type: none"> <li>• non-infrastructure solutions – actions or policies that can lower costs or extend asset life (e.g., better integrated infrastructure planning and land use planning, demand management, insurance, process optimization, managed failures, etc.)</li> <li>• maintenance activities – including regularly scheduled inspection and maintenance, or more significant repair and activities associated with unexpected events</li> <li>• renewal/rehabilitation activities – significant repairs designed to extend the life of the asset. For example, the lining of iron watermain can defer the need for replacement</li> <li>• replacement activities – activities that are expected to occur once an asset has reached the end of its useful life and renewal/ rehabilitation is no longer an option</li> <li>• disposal activities – the activities associated with disposing of an asset once it has reached the end of its useful life, or is otherwise no longer needed by the municipality</li> <li>• expansion activities (if necessary) – planned activities required to extend services to previously unserved areas - or expand services to meet growth demands</li> <li>• discusses procurement methods</li> <li>• includes an overview of the risks associated with the strategy and any actions that will be taken in response.</li> </ul>	Page 25 to 33
<b><i>Financial strategy</i></b>	<ul style="list-style-type: none"> <li>• shows yearly expenditure forecasts broken down by:               <ul style="list-style-type: none"> <li>• Non-infrastructure solutions</li> <li>• Maintenance activities</li> <li>• Renewal/rehabilitation activities</li> <li>• Replacement activities</li> <li>• Disposal activities</li> <li>• Expansion activities (if necessary)</li> </ul> </li> <li>• provides actual expenditures for these categories for comparison purposes.</li> <li>• gives a breakdown of yearly revenues by confirmed source</li> <li>• discusses key assumptions and alternative scenarios where appropriate.</li> <li>• identifies any funding shortfall relative to financial requirements that cannot be eliminated and discuss the impact of the shortfall and how the impact will be managed.</li> </ul>	Page 35 to 44



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**Asset Management Planning  
for the Township of Frontenac Islands**

# **Chapter VII Appendices**

**Asset Management Planning  
for the Township of Frontenac Islands**

**Appendix A –  
Summary of Capital  
Deficit**



**The Corporation of the Township of Frontenac Islands**  
**Appendix A - Summary of Capital Deficit 10-Year Projection - All Asset Classes**

	Immediate	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Road Infrastructure	\$ -	\$ 1,822,245	\$ 2,046,185	\$ 1,807,045	\$ 1,914,061	\$ 1,905,168	\$ 1,910,643	\$ 1,901,773	\$ 1,901,545	\$ 1,900,904	\$ 1,810,426	\$ 18,919,995
Building and Land Improvements	\$ 175,330	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,066	\$ 5,365	\$ 434,932	\$ -	\$ 624,693
Vehicles, Moveable Equipment and Ferries	\$ 559,043	\$ 52,304	\$ 186,567	\$ -	\$ 23,917	\$ 16,801	\$ 63,238	\$ 364,704	\$ 18,890	\$ 31,124	\$ 43,378	\$ 1,353,966
<b>Total 10 Year Requirement</b>	<b>\$ 728,373</b>	<b>\$ 1,874,549</b>	<b>\$ 2,232,752</b>	<b>\$ 1,807,045</b>	<b>\$ 1,937,978</b>	<b>\$ 1,921,969</b>	<b>\$ 1,973,881</b>	<b>\$ 2,275,542</b>	<b>\$ 1,925,800</b>	<b>\$ 2,366,960</b>	<b>\$ 1,853,804</b>	<b>\$ 20,898,654</b>
<b>Budgeted capital spending</b>												
Road capital spending	\$ -	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 3,300,000
General government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fire	\$ -	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 80,000
Parks and recreation	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000
Road Department	\$ -	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 600,000
Ferry	\$ -	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 300,000
<b>Total budgeted capital spending</b>	<b>\$ -</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 448,000</b>	<b>\$ 4,480,000</b>
<b>Deficit / (Surplus)</b>	<b>\$ 728,373</b>	<b>\$ 1,426,549</b>	<b>\$ 1,784,752</b>	<b>\$ 1,359,045</b>	<b>\$ 1,489,978</b>	<b>\$ 1,473,969</b>	<b>\$ 1,525,881</b>	<b>\$ 1,827,542</b>	<b>\$ 1,477,800</b>	<b>\$ 1,918,960</b>	<b>\$ 1,405,804</b>	<b>\$ 16,418,654</b>

**Observations:**

Average annual capital spending in the next 10 years	\$ 2,089,865
Average annual capital financing	\$ 448,000
Annual shortfall	\$ 1,641,865



**Asset Management Planning  
for the Township of Frontenac Islands**

**Appendix B –  
Summary of Capital  
Deficit – Road  
Infrastructure System**

The Corporation of the Township of Frontenac Islands  
 Appendix B - Summary of Capital Deficit - 10-Year Projection - Road Infrastructure System

From Table 9.4: Performance Model - Annual Program by Cost - Preservation Budget

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Road	\$ 1,822,245	\$ 1,861,256	\$ 1,807,045	\$ 1,914,061	\$ 1,905,168	\$ 1,910,643	\$ 1,892,891	\$ 1,901,545	\$ 1,900,904	\$ 1,810,426	\$ 18,726,184
Sidewalks	\$ -	\$ 184,929	\$ -	\$ -	\$ -	\$ -	\$ 8,882	\$ -	\$ -	\$ -	\$ 193,811
<b>Total Road Infrastructure</b>	<b>\$ 1,822,245</b>	<b>\$ 2,046,185</b>	<b>\$ 1,807,045</b>	<b>\$ 1,914,061</b>	<b>\$ 1,905,168</b>	<b>\$ 1,910,643</b>	<b>\$ 1,901,773</b>	<b>\$ 1,901,545</b>	<b>\$ 1,900,904</b>	<b>\$ 1,810,426</b>	<b>\$ 18,919,995</b>

Budgeted capital spending		2012											
Road capital spending	\$ 331,033	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 330,000	\$ 3,300,000
Deficit / (Surplus)		<b>\$ 1,492,245</b>	<b>\$ 1,716,185</b>	<b>\$ 1,477,045</b>	<b>\$ 1,584,061</b>	<b>\$ 1,575,168</b>	<b>\$ 1,580,643</b>	<b>\$ 1,571,773</b>	<b>\$ 1,571,545</b>	<b>\$ 1,570,904</b>	<b>\$ 1,480,426</b>	<b>\$ 15,619,995</b>	

**Observations:**

Average annual capital spending in the next 10 years	\$ 1,891,999
Average annual capital financing	\$ 330,000
Annual shortfall	\$ 1,561,999
Annual capital levy increase	



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix C – Summary of Capital Deficit – Non-Road Infrastructure**



Township of Frontenac Islands  
 Appendix C - Summary of Capital Deficit - 10-Year Capital Asset Projection - Non-Road Infrastructure

	Immediate	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
<b>Asset Class</b>												
Building	\$ 127,963	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,365	\$ 417,284	\$ -	\$ 550,612
Land Improvements	\$ 47,366	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,066	\$ -	\$ 17,648	\$ -	\$ 74,080
<b>Total</b>	<b>\$ 175,330</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 9,066</b>	<b>\$ 5,365</b>	<b>\$ 434,932</b>	<b>\$ -</b>	<b>\$ 624,693</b>
Vehicles	\$ 528,073	\$ -	\$ 111,629	\$ -	\$ 23,917	\$ 8,017	\$ 2,218	\$ 364,704	\$ -	\$ 11,799	\$ 16,560	\$ 1,066,917
Moveable Equipment	\$ 24,970	\$ 52,304	\$ 74,938	\$ -	\$ -	\$ 8,784	\$ 61,020	\$ -	\$ 18,890	\$ 19,325	\$ 26,818	\$ 287,049
Ferry and Ferry Docks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 553,043</b>	<b>\$ 52,304</b>	<b>\$ 186,567</b>	<b>\$ -</b>	<b>\$ 23,917</b>	<b>\$ 16,801</b>	<b>\$ 63,238</b>	<b>\$ 364,704</b>	<b>\$ 18,890</b>	<b>\$ 31,124</b>	<b>\$ 43,378</b>	<b>\$ 1,353,966</b>
<b>Total non-road infrastructure costs</b>	<b>\$ 728,373</b>	<b>\$ 52,304</b>	<b>\$ 186,567</b>	<b>\$ -</b>	<b>\$ 23,917</b>	<b>\$ 16,801</b>	<b>\$ 63,238</b>	<b>\$ 373,770</b>	<b>\$ 24,255</b>	<b>\$ 466,056</b>	<b>\$ 43,378</b>	<b>\$ 1,978,659</b>
<b>Budgeted capital spending</b>												
	2012											
General government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fire	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 80,000
Parks and recreation	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000
Road Department	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 600,000
Ferry	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 300,000
<b>Total budgeted capital spending</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 118,000</b>	<b>\$ 1,180,000</b>
<b>Deficit / (Surplus)</b>	<b>-\$</b>	<b>65,696</b>	<b>\$ 68,567</b>	<b>-\$ 118,000</b>	<b>-\$ 94,083</b>	<b>-\$ 101,199</b>	<b>-\$ 54,762</b>	<b>\$ 255,770</b>	<b>-\$ 93,745</b>	<b>\$ 348,056</b>	<b>-\$ 74,622</b>	<b>\$ 798,659</b>

**Observations:**

Average annual capital spending in the next 10 years	\$ 179,878
Average annual capital financing	\$ 118,000
Annual shortfall	\$ 61,878
Annual capital levy increase	

Budgeted figures at the bottom were extracted from the detailed 2012 approved budget and used to forecast the future spending the Township will undertake.

All costs for each of the asset groups above are taken from the 10 year spreadsheets for that class.



**Asset Management Planning  
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**Appendix D – 4 Roads  
Management Services  
Inc. State of  
Infrastructure – Roads  
Report**

Please refer to the “Township of Frontenac Islands - State of the Infrastructure for Roads” report prepared by *4 Roads Management Services Inc.*



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix E – Infrastructure Profile - Sidewalk**



TOWNSHIP OF FRONTENAC ISLANDS									
APPENDIX E - SIDEWALK REPLACEMENT PROJECTIONS									
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost
AFIW000027	Sidewalks-1994	NRBCPI	\$ 102,006	1/1/1994	20	240	1/1/2014	1.8129252	\$ 184,929
							<b>Total 2014</b>		<b>\$ 184,929</b>
AFIW000028	Sidewalks-1999	NRBCPI	\$ 5,458	1/1/1999	20	240	1/1/2019	1.6272551	\$ 8,882
							<b>Total 2019</b>		<b>\$ 8,882</b>
AFIW000029	Sidewalks-2004	NRBCPI	\$ 39,747	1/1/2004	20	240	1/1/2024	1.3361440	\$ 53,108
							<b>Total 2024</b>		<b>\$ 53,108</b>
	<b>TOTAL INITIAL COSTS</b>		<b>\$ 147,211</b>				<b>TOTAL REPLACEMENT COSTS</b>		<b>\$ 246,919</b>



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix F – Infrastructure Profile - Buildings**

TOWNSHIP OF FRONTENAC ISLANDS									
APPENDIX F - BUILDING REPLACEMENT PROJECTIONS									
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost
AFIW000032	Fire Pump House	NRBCPI	8,560	1/1/1958	30	360	1/1/1988	2.5589442	\$ 21,906
AFIW000015	Township Garage	NRBCPI	35,075	1/1/1970	30	360	1/1/2000	2.2684990	\$ 79,568
AFIW000001	Municipal Offices	NRBCPI	5,603	1/1/1959	50	600	1/1/2009	4.7279538	\$ 26,490
							<b>Total Immediate</b>		<b>\$ 127,963</b>
AFIW000045	Fuel Storage	NRBCPI	2,995	1/1/1990	30	360	1/1/2020	1.7913229	\$ 5,365
							<b>Total 2020</b>		<b>\$ 5,365</b>
AFIH000003	Municipal Garage	NRBCPI	143,339	10/1/1991	30	360	10/1/2021	1.8606791	\$ 266,708
AFIH000004	Salt & Sand Storage	NRBCPI	80,926	10/1/1991	30	360	10/1/2021	1.8606791	\$ 150,576
							<b>Total 2021</b>		<b>\$ 417,284</b>
AFIW000007	Gate House-BSB	NRBCPI	4,176	8/4/2003	20	240	8/4/2023	1.4227129	\$ 5,941
AFIW000008	Comfort Station-BSB	NRBCPI	5,846	8/4/2003	20	240	8/4/2023	1.4227129	\$ 8,317
AFIW000005	Community Hall	NRBCPI	80,661	1/1/1976	50	600	1/1/2026	2.9151657	\$ 235,139
AFIW000031	Fire & Ambulance Garage	NRBCPI	276,764	7/1/1996	30	360	7/1/2026	1.7274602	\$ 478,098
AFIW000014	Salt Storage Shed	NRBCPI	30,216	1/1/1998	30	360	1/1/2028	1.6566827	\$ 50,059
AFIW000218	WJ Community Centre	NRBCPI	24,928	1/1/1978	50	600	1/1/2028	2.7437529	\$ 68,396
AFIW000012	Municipal Garage	NRBCPI	252,559	8/1/1998	30	360	8/1/2028	1.6566827	\$ 418,410
AFIW000006	Tourist Office	NRBCPI	7,052	1/1/1979	50	600	1/1/2029	2.6618641	\$ 18,771
AFIW000042	Ferry House (Simcoe Side)	NRBCPI	6,035	4/22/2002	30	360	4/22/2032	1.4657500	\$ 8,846
AFIW000044	Ferry House (Wolfe Side)	NRBCPI	9,128	4/22/2002	30	360	4/22/2032	1.4657500	\$ 13,380
AFIW000013	Sand Dome	NRBCPI	158,621	1/1/1998	37	444	1/1/2035	1.6566827	\$ 262,785
AFIH000011	Fire Hall / Garage	NRBCPI	524,007	10/1/2007	30	360	10/1/2037	1.0712589	\$ 561,348
AFIH000001	Municipal Office	NRBCPI	60,042	10/1/1991	50	600	10/1/2041	1.8606791	\$ 111,718
AFIW000004	Library	NRBCPI	214,657	8/1/1994	50	600	8/1/2044	1.8129252	\$ 389,158
AFIH000002	Library	NRBCPI	28,580	9/30/1994	50	600	9/30/2044	1.8129252	\$ 51,813
AFIH000008	Foot Ferry House	NRBCPI	30,093	8/1/2005	50	600	8/1/2055	1.2646678	\$ 38,058
							<b>Total Thereafter</b>		<b>\$ 2,720,236</b>
	<b>TOTAL INITIAL COST</b>		<b>1,989,862</b>				<b>TOTAL REPLACEMENT COST</b>		<b>\$ 3,270,848</b>



**Asset Management Planning  
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# **Appendix G – Infrastructure Profile – Land Improvements**

TOWNSHIP OF FRONTENAC ISLANDS									
APPENDIX G - LAND IMPROVEMENT REPLACEMENT PROJECTIONS									
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost
AFIW000030	Fencing	NRBCPI	\$ 15,310	7/28/1989	20	240	7/28/2009	1.7859164	\$ 27,343
AFIW000220	Fencing- Victoria Park	NRBCPI	\$ 10,761	9/23/1991	20	240	9/23/2011	1.8606791	\$ 20,024
							<b>Total Immediate</b>		<b>\$ 47,366</b>
AFIW000229	Refrigeration Unit for outdoor ice rink	NRBCPI	\$ 9,066	12/31/2012	7	84	12/31/2019	1.0000000	\$ 9,066
							<b>Total 2019</b>		<b>\$ 9,066</b>
AFIW000221	Floodlighting- Victoria Park	NRBCPI	\$ 9,485	9/23/1991	30	360	9/23/2021	1.8606791	\$ 17,648
							<b>Total 2021</b>		<b>\$ 17,648</b>
AFIH000018	Ballpark Floodlights	NRBCPI	\$ 13,051	11/1/1993	30	360	11/1/2023	1.8501104	\$ 24,146
							<b>Total 2023</b>		<b>\$ 24,146</b>
AFIW000226	Outdoor Ice Rink	NRBCPI	\$ 518,026	12/14/2009	20	240	12/14/2029	1.0320366	\$ 534,622
AFIW000227	Outdoor Ice Rink	NRBCPI	\$ 37,792	5/4/2012	20	240	5/4/2032	1.0000000	\$ 37,792
AFIW000010	BSB - Parking area	NRBCPI	\$ 14,562	8/15/2003	30	360	8/15/2033	1.4227129	\$ 20,717
AFIW000011	BSB - Beach development	NRBCPI	\$ 43,870	9/17/2003	30	360	9/17/2033	1.4227129	\$ 62,415
							<b>Total Thereafter</b>		<b>\$ 655,546</b>
	<b>TOTAL INITIAL COST</b>		<b>\$ 671,923</b>				<b>TOTAL REPLACEMENT COSTS</b>		<b>\$ 753,772</b>



**Asset Management Planning  
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# **Appendix H – Infrastructure Profile – Vehicles**



TOWNSHIP OF FRONTENAC ISLANDS												
APPENDIX H - VEHICLE REPLACEMENT PROJECTIONS												
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost			
AFIW000035	1954 GMC 450 La France Fire Engine	CPI	\$ 18,389	1/1/1971	20	240	1/1/1991	3.9617225	\$	72,854		
AFIH000015	1989 Chevrolet Astro Van	CPI	\$ 6,771	10/15/1993	6	72	10/15/1999	1.0852804	\$	7,349		
AFIW000026	1985 Case Tractor	CPI	\$ 12,786	1/1/1985	15	180	1/1/2000	1.5142857	\$	19,361		
AFIH000006	1987 Ford L-8000 Dump/Plow	CPI	\$ 91,352	8/6/1987	15	180	8/6/2002	1.4598540	\$	133,360		
AFIH000007	1966 Champion Road Grader	CPI	\$ 20,000	6/7/1988	15	180	6/7/2003	1.4438202	\$	28,876		
AFIW000017	1988 Komatsu Rubber Tired Loader	CPI	\$ 76,043	7/1/1990	15	180	7/1/2005	1.3647959	\$	103,783		
AFIW000022	1991 Ford LT8000	CPI	\$ 109,675	2/4/2003	5	60	2/4/2008	1.1099222	\$	121,731		
AFIW000019	2006 Ford F150	CPI	\$ 34,166	10/1/2005	6	72	10/1/2011	1.1205607	\$	38,285		
AFIW000039	1992 GMC Safari	CPI	\$ 2,300	6/4/2007	5	60	6/4/2012	1.0753363	\$	2,473		
									<b>Total Immediate</b>	<b>\$ 528,073</b>		
AFIW000020	White Ford Sterling Dump Truck	CPI	\$ 83,133	7/12/1999	15	180	7/12/2014	1.3427767	\$	111,629		
									<b>Total 2014</b>	<b>\$ 111,629</b>		
AFIW000009	2006 Kawasaki Mule-BSB	CPI	\$ 11,340	5/1/2006	10	120	5/1/2016	1.1895840	\$	13,490		
AFIH000020	Garden Tractor	CPI	\$ 5,400	5/1/2006	10	120	5/1/2016	1.1895840	\$	6,424		
AFIW000036	1965 Ford 800	CPI	\$ 2,742	10/7/1996	20	240	10/7/2016	1.4598832	\$	4,004		
									<b>Total 2016</b>	<b>\$ 23,917</b>		
AFIW000041	Zodiac Liferaft	CPI	\$ 5,475	4/15/1997	20	240	4/15/2017	1.4643727	\$	8,017		
									<b>Total 2017</b>	<b>\$ 8,017</b>		
AFIW000040	1987 GMC 6000 Bluebird	CPI	\$ 1,500	9/30/1998	20	240	9/30/2018	1.4789362	\$	2,218		
									<b>Total 2018</b>	<b>\$ 2,218</b>		
AFIW000016	Volvo Road Grader	CPI	\$ 239,328	5/1/2004	15	180	5/1/2019	1.3154481	\$	314,824		
AFIH000012	1987 Ford L-8000	CPI	\$ 24,748	5/1/1999	20	240	5/1/2019	1.4825340	\$	36,689		
AFIW000024	Stone Retriever	CPI	\$ 8,208	5/1/1994	25	300	5/1/2019	1.6070876	\$	13,191		
									<b>Total 2019</b>	<b>\$ 364,704</b>		
AFIW000037	1973 Pierre Thibault	CPI	\$ 8,053	12/1/2001	20	240	12/1/2021	1.4651493	\$	11,799		
									<b>Total 2021</b>	<b>\$ 11,799</b>		
AFIH000013	1975 Ford C90	CPI	\$ 11,330	6/3/2002	20	240	6/3/2022	1.4615743	\$	16,560		
									<b>Total 2022</b>	<b>\$ 16,560</b>		
AFIW000023	2008 International 7600	CPI	\$ 195,097	1/29/2008	15	180	1/29/2023	1.3065783	\$	254,909		
AFIH000005	2008 Case Back-Hoe 4wd	CPI	\$ 89,532	5/15/2008	15	180	5/15/2023	1.3065783	\$	116,981		
AFIH000044	Rescue Unit	CPI	\$ 7,200	4/2/2009	15	180	4/2/2024	1.3292150	\$	9,570		
AFIH000014	1991 Ford L-8000	CPI	\$ 23,416	6/25/2005	20	240	6/25/2025	1.4495648	\$	33,943		
AFIW000025	2012 Ford F550	CPI	\$ 52,192	4/25/2012	15	180	4/25/2027	1.3458683	\$	70,243		
AFIW000034	1990 Ford F800	CPI	\$ 10,000	10/1/2007	20	240	10/1/2027	1.4472611	\$	14,473		
AFIW000038	1977 American LaFrance	CPI	\$ 2,679	7/25/2008	20	240	7/25/2028	1.4425680	\$	3,865		
AFIW000028	1990 FORD F800	CPI	\$ 18,765	5/4/2010	20	240	5/4/2030	1.4699290	\$	27,583		
									<b>Total Thereafter</b>	<b>\$ 531,567</b>		
<b>TOTAL INITIAL COSTS</b>			<b>\$ 1,171,621</b>								<b>TOTAL REPLACEMENT COSTS</b>	<b>\$ 1,598,485</b>



**Asset Management Planning  
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# **Appendix I – Infrastructure Profile – Moveable Equipment**



TOWNSHIP OF FRONTENAC ISLANDS									
APPENDIX I - MOVEABLE EQUIPMENT REPLACEMENT PROJECTIONS									
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost
AFIW000003	Computer Equipment- PC	CPI	\$ 8,105	3/1/2006	3	36	3/1/2009	1.0485793	\$ 8,499
AFIW000002	Computer Equipment-Server	CPI	\$ 8,692	3/1/2006	5	60	3/1/2011	1.0989918	\$ 9,552
AFIW000219	Ice Resurfacer	CPI	\$ 5,130	12/11/1996	15	180	12/11/2011	1.3487064	\$ 6,919
							<b>Total Immediate</b>		<b>\$ 24,970</b>
AFI0000001	Great Plains Financial Software	CPI	\$ 48,798	10/1/2008	5	60	10/1/2013	1.0718493	\$ 52,304
							<b>Total 2013</b>		<b>\$ 52,304</b>
AFIW000025	Plow Equipment	CPI	\$ 55,808	7/12/1999	15	180	7/12/2014	1.3427767	\$ 74,938
							<b>Total 2014</b>		<b>\$ 74,938</b>
AFIH000017	Playground Equipment	CPI	\$ 5,999	11/12/1997	20	240	11/12/2017	1.4643727	\$ 8,784
							<b>Total 2017</b>		<b>\$ 8,784</b>
AFIH000016	Breathing Apparatus	CPI	\$ 26,122	2/4/2003	15	180	2/4/2018	1.3134910	\$ 34,311
AFIW000254	GENERATOR	CPI	\$ 11,206	3/22/2011	7	84	3/22/2018	1.1261624	\$ 12,619
AFIH000052	GENERATOR	CPI	\$ 12,511	3/31/2011	7	84	3/31/2018	1.1261624	\$ 14,090
							<b>Total 2018</b>		<b>\$ 61,020</b>
AFIH000048	Outdoor All Weather LED Sign	CPI	\$ 15,665	12/31/2010	10	120	12/31/2020	1.2058537	\$ 18,890
							<b>Total 2020</b>		<b>\$ 18,890</b>
AFIW000222	Playground Equipment	CPI	\$ 14,714	7/1/2006	15	180	7/1/2021	1.3133969	\$ 19,325
							<b>Total 2021</b>		<b>\$ 19,325</b>
AFIW000255	Zamboni	CPI	\$ 22,000	5/1/2012	10	120	5/1/2022	1.2189944	\$ 26,818
							<b>Total 2022</b>		<b>\$ 26,818</b>
AFIH000045	Air Compressor	CPI	\$ 5,000	5/14/2009	15	180	5/14/2024	1.3292150	\$ 6,646
AFIW000224	Propane Heaters	CPI	\$ 15,490	5/28/2009	15	180	5/28/2024	1.3292150	\$ 20,590
AFIW000225	Air Compressor System	CPI	\$ 6,876	9/17/2009	15	180	9/17/2024	1.3292150	\$ 9,140
AFIW000256	2012 Wood Chipper - 12" Diesel	CPI	\$ 18,491	4/18/2012	15	180	4/18/2027	1.3458683	\$ 24,887
							<b>Total Thereafter</b>		<b>\$ 61,263</b>
	<b>TOTAL INITIAL COSTS</b>		<b>\$ 280,608</b>						
							<b>TOTAL REPLACEMENT COSTS</b>		<b>\$ 348,312</b>



**Asset Management Planning  
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# **Appendix J – Infrastructure Profile – Ferries and Ferry Docks**

TOWNSHIP OF FRONTENAC ISLANDS									
APPENDIX J - FERRIES AND FERRY DOCKS REPLACEMENT PROJECTIONS									
Item	Description	Category	Initial Cost	Year Purchased	Estimated Life(Years)	Estimated Life (Months)	Estimated Year End	Multiplier	Estimated Replacement Cost
AFIW000043	Simcoe Ferry	CPI	\$ 176,301	4/30/2002	30	360	4/30/2032	1.8172839	\$ 320,389
AFIH000009	Foot Ferry	CPI	\$ 140,565	11/30/2003	30	360	11/30/2033	1.8031417	\$ 253,459
AFIH000010	Ferry Ramps	NRBCPI	\$ 87,066	1/1/1993	50	600	1/1/2043	1.8501104	\$ 161,081
AFIH000019	Boat Ramp	NRBCPI	\$ 8,626	4/1/2001	50	600	4/1/2051	1.4929972	\$ 12,879
AFIW000046	Ferry Dock	NRBCPI	\$ 68,537	12/9/2008	50	600	12/9/2058	0.9716606	\$ 66,595
							<b>Total Thereafter</b>		<b>\$ 814,403</b>
	<b>TOTAL INITIAL COSTS</b>		<b>\$ 481,095</b>				<b>TOTAL REPLACEMENT COSTS</b>		<b>\$ 814,403</b>



**Asset Management Planning  
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# **Appendix K – Scenario 1**



Scenario 1= Immediate capital requirements + Sustainable capital investment  
for all 25 years.

	Immediate Capital Requirements *	Sustainable Capital Requirements **	Total Scenario 1 Requirements
2013	\$ 2,602,922	\$ 1,436,362	\$ 4,039,284
2014	\$ 2,232,752	\$ 1,465,089	\$ 3,697,841
2015	\$ 1,807,045	\$ 1,494,391	\$ 3,301,436
2016	\$ 1,937,978	\$ 1,524,279	\$ 3,462,257
2017	\$ 1,921,969	\$ 1,554,764	\$ 3,476,733
2018	\$ 1,973,881	\$ 1,585,860	\$ 3,559,741
2019	\$ 2,275,542	\$ 1,617,577	\$ 3,893,119
2020	\$ 1,925,800	\$ 1,649,928	\$ 3,575,728
2021	\$ 2,366,960	\$ 1,682,927	\$ 4,049,887
2022	\$ 1,853,804	\$ 1,716,586	\$ 3,570,390
2023	\$ -	\$ 1,750,917	\$ 1,750,917
2024	\$ -	\$ 1,785,936	\$ 1,785,936
2025	\$ -	\$ 1,821,654	\$ 1,821,654
2026	\$ -	\$ 1,858,087	\$ 1,858,087
2027	\$ -	\$ 1,895,249	\$ 1,895,249
2028	\$ -	\$ 1,933,154	\$ 1,933,154
2029	\$ -	\$ 1,971,817	\$ 1,971,817
2030	\$ -	\$ 2,011,254	\$ 2,011,254
2031	\$ -	\$ 2,051,479	\$ 2,051,479
2032	\$ -	\$ 2,092,508	\$ 2,092,508
2033	\$ -	\$ 2,134,358	\$ 2,134,358
2034	\$ -	\$ 2,177,046	\$ 2,177,046
2035	\$ -	\$ 2,220,586	\$ 2,220,586
2036	\$ -	\$ 2,264,998	\$ 2,264,998
2037	\$ -	\$ 2,310,298	\$ 2,310,298
2038	\$ -	\$ 2,356,504	\$ 2,356,504
<b>TOTAL</b>	<b>\$ 20,898,653</b>	<b>\$ 48,363,609</b>	<b>\$ 69,262,262</b>

\* From Appendix E - Summary of Capital Deficit

\*\* From Slide 28 - Financial Requirements - Amount is equal to the annual requirement and inflated each year at a rate of 2%.

Average Immediate Capital Spending Requirement = \$ 2,089,865



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**Asset Management Planning  
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## **Appendix L – Scenario 2**



CORPORATION OF THE TOWNSHIP OF FRONTENAC ISLANDS  
APPENDIX L - SCENARIO 2

Scenario 2 = First 10 years, only immediate capital requirements. Thereafter, only sustainable capital investment.

	Immediate Capital Requirements *	Sustainable Capital Requirements	Total Scenario 2 Requirements
2013	\$ 2,602,922	\$ -	\$ 2,602,922
2014	\$ 2,232,752	\$ -	\$ 2,232,752
2015	\$ 1,807,045	\$ -	\$ 1,807,045
2016	\$ 1,937,978	\$ -	\$ 1,937,978
2017	\$ 1,921,969	\$ -	\$ 1,921,969
2018	\$ 1,973,881	\$ -	\$ 1,973,881
2019	\$ 2,275,542	\$ -	\$ 2,275,542
2020	\$ 1,925,800	\$ -	\$ 1,925,800
2021	\$ 2,366,960	\$ -	\$ 2,366,960
2022	\$ 1,853,804	\$ -	\$ 1,853,804
2023	\$ -	\$ 1,750,917	\$ 1,750,917
2024	\$ -	\$ 1,785,936	\$ 1,785,936
2025	\$ -	\$ 1,821,654	\$ 1,821,654
2026	\$ -	\$ 1,858,087	\$ 1,858,087
2027	\$ -	\$ 1,895,249	\$ 1,895,249
2028	\$ -	\$ 1,933,154	\$ 1,933,154
2029	\$ -	\$ 1,971,817	\$ 1,971,817
2030	\$ -	\$ 2,011,254	\$ 2,011,254
2031	\$ -	\$ 2,051,479	\$ 2,051,479
2032	\$ -	\$ 2,092,508	\$ 2,092,508
2033	\$ -	\$ 2,134,358	\$ 2,134,358
2034	\$ -	\$ 2,177,046	\$ 2,177,046
2035	\$ -	\$ 2,220,586	\$ 2,220,586
2036	\$ -	\$ 2,264,998	\$ 2,264,998
2037	\$ -	\$ 2,310,298	\$ 2,310,298
2038	\$ -	\$ 2,356,504	\$ 2,356,504
<b>TOTAL</b>	<b>\$ 20,898,653</b>	<b>\$ 32,635,846</b>	<b>\$ 53,534,499</b>

\* From Appendix E - Summary of Capital Deficit



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix M – Scenario 3**



Scenario 3 = 2013 budgeted capital spending

	<b>Total Scenario 3 Requirements</b>	
<b>2013</b>	\$	582,500 *
<b>2014</b>	\$	594,150
<b>2015</b>	\$	606,033
<b>2016</b>	\$	618,154
<b>2017</b>	\$	630,517
<b>2018</b>	\$	643,127
<b>2019</b>	\$	655,990
<b>2020</b>	\$	669,109
<b>2021</b>	\$	682,492
<b>2022</b>	\$	696,141
<b>2023</b>	\$	710,064
<b>2024</b>	\$	724,266
<b>2025</b>	\$	738,751
<b>2026</b>	\$	753,526
<b>2027</b>	\$	768,596
<b>2028</b>	\$	783,968
<b>2029</b>	\$	799,648
<b>2030</b>	\$	815,641
<b>2031</b>	\$	831,953
<b>2032</b>	\$	848,593
<b>2033</b>	\$	865,564
<b>2034</b>	\$	882,876
<b>2035</b>	\$	900,533
<b>2036</b>	\$	918,544
<b>2037</b>	\$	936,915
<b>2038</b>	\$	955,653
<b>TOTAL</b>	<u>\$</u>	<u>19,613,303</u>
		1307554



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix N – Example Debt Financing Policy**

### PURPOSE

The goal of the Municipality's debt policy shall be to set out the guiding principles for the approval, issuance and administration of any Municipality debt, which shall adhere to all statutory requirements.

### GLOSSARY

**Debt** – Any obligation for the payment of money. The Municipality considers debt to consist of debentures, cash loans from financial institutions, capital leases, debenture financing approved through bylaw for which no debt has yet been issued, debenture financing approved through the capital budget for which no bylaw has yet been established, outstanding financial commitments, loan guarantees and any debt issue by, or on behalf of the Municipality, including mortgages, debentures or demand loans.

**Debt and Financial Obligation Limit** – The maximum amount of annual debt servicing costs that a municipality can undertake or guarantee without seeking the approval of the Ontario Municipal Board. The Debt and Financial Obligation Limit is calculated pursuant to *Ontario Regulation 403/02 – Debt and Financial Obligation Limits*.

**Lease Financial Agreements** – A financial agreement, in accordance with *Ontario Regulation 653/05 – Debt Related Financial Instruments and Financial Agreements*, that a municipality may enter into for the purpose of obtaining long-term financing of a capital undertaking of the municipality.

**Long-term Debt – Any Debt for which the repayment of any portion of the principal is due beyond one year.**

**Material Impact – Under *Ontario Regulation 653/05 – Debt Related Financial Instruments and Financial Agreements*, a Lease Financing Agreement has a material impact on a municipality if the costs or risks associated with the agreement significantly affect the municipality's Debt and Financial Obligation Limit, or would reasonably be expected to have a significant effect on that limit.**

### **POLICY STATEMENTS**

- 1. The Municipality shall only enter into Long-term Debt, including Lease Financing Agreements, where the following conditions are met:**
  - a) The Long-term Debt will be managed in a manner consistent with other long-term planning, financial and management objectives.
  - b) Consideration will be given to the impact on future taxpayers.
  - c) Long-term Debt will be managed in a manner to limit financial risk exposure.
  - d) The timing, type and term of Long-term Debt will be determined with a view of minimizing long-term cost to the extent possible.

- e) The term of Long-term Debt will not exceed the useful life of the particular asset.
- f) The issuance of Long-term Debt will not result in the Municipality exceeding its Debt and Financial Obligation Limit.
- g) A category of Lease Financing Agreements may be relied upon for non-material or operational leases where the agreements will not, in the opinion of the Treasurer as delegated by Council through this policy, result in a Material Impact for the Municipality.

**2. All Debt shall be issued in Canadian dollars.**

**3. It shall be the general practice to issue Debt where the interest rates will be fixed over its term. The Municipality may issue Debt in which the interest rate will vary where, in the opinion of the Treasurer, it is in the Municipality's best interest to allow the rate to float provided such Debt, in addition to any other Debt, does not exceed fifteen percent (15%) of the total outstanding Debt of the Municipality in accordance with *Ontario Regulation 276/02 – Bank Loans*.**

**4. Upon the repayment of Long-term Debt, the amounts previously committed to annual debt servicing shall not be removed from the Municipality's budget but rather will be reallocated towards:**

- a) Debt servicing costs for new Debt issued by the Municipality; and/or
- b) Contributions to reserves for capital purposes.

**6. The awarding of any contract under this Policy, unless otherwise authorized by Council, shall follow the requirements as set out in the Municipality’s procurement policy.**

**Council, in conjunction with staff, shall review the Municipality’s outstanding Debt in conjunction with the annual budget process.**

### **RELEVANT LEGISLATION**

- Municipal Act, 2001
- Ontario Regulation 247/01 – Variable Interest Rate Debentures and Foreign Currency Borrowing
- Ontario Regulation 276/02 – Bank Loans
- Ontario Regulation 278/02 – Construction Financing
- Ontario Regulation 403/02 – Debt and Financial Obligation Limits
- Ontario Regulation 653/05 – Debt Related Financial Instruments and Financial Agreements



**Asset Management Planning  
for the Township of Frontenac Islands**

# **Appendix O – Example Capital Financing Policy**

### **PURPOSE**

The goal of the Municipality’s capital financing policy shall be to set out the guiding principles for the financing of future capital expenditures in a manner that considers the infrastructure investment requirements of the Municipality as well as affordability issues for taxpayers.

### **GLOSSARY**

**Capital Levy** – The amount of money raised through taxation that is transferred to the capital fund or reserves to be used to help pay for the cost of capital projects.

**Debt** – Any obligation for the payment of money. The Municipality considers debt to consist of debentures, cash loans from financial institutions, capital leases, debenture financing approved through bylaw for which no debt has yet been issued, debenture financing approved through the capital budget for which no bylaw has yet been established, outstanding financial commitments, loan guarantees and any debt issue by, or on behalf of the Municipality, including mortgages, debentures or demand loans.

**Long-term Debt** – Any Debt for which the repayment of any portion of the principal is due beyond one year.

**Municipal Levy** – The amount of money raised through taxation by the Municipality for the purposes of funding operating costs as well as the Capital Levy.



### **POLICY STATEMENTS**

- 1. The Municipality shall increase the Municipal Levy by a minimum of 2% per year for each of the next five years (2014 to 2018 inclusive), with the 2% increase being added to the Capital Levy.**
- 2. The increase in the Capital Levy shall only be used for the following purposes:**
  - a) To fund capital expenditures;
  - b) To increase reserve balances in order to finance future capital expenditures; or
  - c) To finance the annual costs associated with Long-term Debt issued in connection with capital projects.
- 3. Subsequent to the five year phase-in period for increases to the Municipal Levy, the Municipality shall increase the Capital Levy by at least the Consumer Price Index, as published by Statistics Canada.**



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## **Appendix D – Proposed Development Charge By-law**

# THE CORPORATION OF THE TOWNSHIP OF FRONTENAC ISLANDS

## BY-LAW NUMBER XX-2016

### A by-law to establish development charges for the Corporation of the Township of Frontenac Islands

**WHEREAS** subsection 2(1) of the *Development Charges Act, 1997 c. 27*, as amended (hereinafter called “the Act”) provides that the council of a municipality may pass by-laws for the imposition of development charges against land for increased capital costs required because of the need for services arising from development in the area to which the by-law applies;

**AND WHEREAS** the Council of the Township of Frontenac Islands (“Township of Frontenac Islands”) has given Notice in accordance with Section 12 of the *Development Charges Act, 1997*, of its intention to pass a by-law under Section 2 of the said Act;

**AND WHEREAS** in accordance with the Act, a report entitled “Township of Frontenac Islands 2016 Development Charges Background Study” dated April 12, 2016 prepared by Watson & Associates Economists Ltd. (the “Background Study”), has been completed;

**AND WHEREAS** in accordance with the Act, the Background Study, has been posted on the Township’s website at least 60 days prior to the passage of this by-law;

**AND WHEREAS** the Council of the Township of Frontenac Islands has considered the Background Study, has considered all written submissions, and has heard all persons who applied to be heard no matter whether in objection to, or in support of, the development charge proposal at public meetings held on May 18, 2016 and May 19, 2016;

**AND WHEREAS** the Council of the Township of Frontenac Islands has determined that a further public meeting is not necessary pursuant to subsection 12(3) of the Act.

**NOW THEREFORE THE COUNCIL OF THE TOWNSHIP OF FRONTENAC ISLANDS ENACTS  
AS FOLLOWS:**

**DEFINITIONS**

1. In this by-law,

- (1) "Accessory building or structure" shall mean a detached building or structure that is not used for human habitation and the use of which is customarily incidental and subordinate to a principal use, building or structure and is located on the same lot therewith;
- (2) "Accessory use" shall mean a use customarily incidental and subordinate to, and exclusively devoted to the principal or main use of the lot, building or structure and located on the same lot as such principal or main use.
- (3) "Act" means the *Development Charges Act*, S.O. 1997, c. 27.
- (4) "Administration Studies" means any and all studies carried out by the Municipality which are with respect to eligible services for which a development charge by-law may be imposed under the *Development Charges Act, 1997*.
- (5) "Apartment dwelling" means any dwelling unit within a building containing three or more dwelling units where the units are connected by an interior corridor.
- (6) "Agricultural use" means the use of land and/or buildings for the cultivation or foraging of crops, livestock or poultry production, raising or training of horses, and orchards, market gardening, maple sugar bushes, tobacco crops or other forms of specialized crop production.
- (7) "Bedroom" means a habitable room larger than seven square metres, including a den, study, or other similar area, but does not include a living room, dining room or kitchen.
- (8) "Board of Education" means a board defined in s.s. 1(1) of the *Education Act*.

- (9) "Bona fide farm operation" means the proposed development is for agricultural use where the yearly income from the agricultural use is substantial and the owner holds a valid Farm Business Registration Number issued by the Ontario Ministry of Agriculture, Food and Rural Affairs. For purposes of determining bona fide farm uses reference may be made to the owner's membership in a legitimate farm organization.
- (10) "Building Code Act" means the *Building Code Act*, 1992, S.O. 1992, c.23.
- (11) "Capital cost" means costs incurred or proposed to be incurred by the Municipality or a local board thereof directly or by others on behalf of, and as authorized by, the Municipality or local board,
- (a) to acquire land or an interest in land, including a leasehold interest;
  - (b) to improve land;
  - (c) to acquire, lease, construct or improve buildings and structures;
  - (d) to acquire, lease, construct or improve facilities including,
    - (i) rolling stock with an estimated useful life of seven years or more,
    - (ii) furniture and equipment, other than computer equipment, and
    - (iii) materials acquired for circulation, reference or information purposes by a library board as defined in the *Public Libraries Act*, R.S.O. 1990, c.P.-44; and
  - (e) to undertake studies in connection with any of the matters referred to in clauses (a) to (d);
  - (f) to complete the development charge background study under Section 10 of the Act;
  - (g) interest on money borrowed to pay for costs in (a) to (d);
- required for provision of services designated in this by-law within or outside the Municipality.
- (12) "Council" means the Council of the Corporation of the Township of Frontenac Islands.

- (13) “Designated area” means the areas described in Section 2 of this by-law, within which development charges are imposed;
- (14) “Development” means any activity or proposed activity in respect of land that requires one or more of the actions referred to in section 7 of this by-law and including the redevelopment of land or the redevelopment, expansion, extension or alteration of a use, building or structure except interior alterations to an existing building or structure which do not change or intensify the use of land.
- (15) “Development charge” means a charge imposed pursuant to this By-law.
- (16) “Duplex dwelling” means a residential building that is divided horizontally into two dwelling units.
- (17) “Dwelling unit” means a suite operated as a housekeeping unit, used or intended to be used as a domicile by 1 or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities, and includes:
- (a) a park model home;
  - (b) a bedroom in a students' or seniors' residence;
  - (c) a building, or portion of a building, used for residential purposes as set out in Subsection 34.
- (18) “Farm building” means that part of a bona fide farm operation encompassing barns, silos and other ancillary development to an agricultural use, but excluding a residential use.
- (19) “Grade” means the average level of finished ground adjoining a building or structure at all exterior walls.
- (20) “Gross floor area” means the total area of all building floors above or below grade measured between the outside surfaces of the exterior walls, or in the case of a mixed use building or structure, between the outside surfaces of exterior walls and the centre line of party walls dividing a non-residential use and a residential use, except for:
- (a) a room or enclosed area within the building or structure above or below

- that is used exclusively for the accommodation of heating, cooling, ventilating, electrical, mechanical or telecommunications equipment that service the building;
- (b) loading facilities above or below grade; and
  - (c) a part of the building or structure below grade that is used for the parking of motor vehicles or for storage or other accessory use;
- (21) "Industrial use" means lands, buildings or structures used or designed or intended for use for manufacturing, processing, fabricating or assembly of raw goods, warehousing or bulk storage of goods, and includes office uses and the sale of commodities to the general public where such uses are accessory to an industrial use, but does not include the sale of commodities to the general public through a warehouse club or an agricultural use.
- (22) "Local Board" means a school board, public utility, commission, transportation commission, public library board, board of park management, local board of health, board of commissioners of police, planning board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the affairs or purposes, including school purposes, of the Municipality or any part or parts thereof.
- (23) "Local services" means those services or facilities which are under the jurisdiction of the Municipality and are related to a plan of subdivision or within the area to which the plan relates, required as a condition of approval under s.51 of the *Planning Act*, or as a condition of approval under s.53 of the *Planning Act*.
- (24) "Mixed use" means a building, structure or development with portions which are to be used for residential development and other portions which are to be used for non-residential development;
- (25) "Multiple dwelling" means all dwellings other than single detached dwellings, semi-detached dwellings, duplex dwellings, apartment dwellings and special care dwelling units;
- (26) "Municipality" means the Corporation of the Township of Frontenac Islands;



- (27) "Non-residential use" means a building or structure used for other than a residential use;
- (28) "Owner" means the owner of land or a person who has made application for an approval for the development of land upon which a development charge is imposed.
- (29) "Place of worship" means that part of a building or structure that is exempt from taxation as a place of worship under the Assessment Act, R. S.O. 1990, Chap. A.31, as amended, or any successor thereof.
- (30) "Planning Act" means the *Planning Act*, R.S.O. 1990, c.P.-13, as amended.
- (31) "Regulation" means any regulation made pursuant to the Act.
- (32) "Residential use" means lands, buildings or structures or portions thereof used, or designed or intended to be used as a home or residence of one or more individuals who reside or dwell there permanently or for a considerable period of time, and includes a single detached dwelling, a semi-detached dwelling, a multiple dwelling, a duplex dwelling, an apartment dwelling, special care dwelling units, and the residential portion of a mixed-use building or structure, but does not include a place of worship, student residence, military barracks, hotel, motel, or bed and breakfast where individuals typically stay for less than one week;
- (33) "Semi-detached dwelling" means a building divided vertically into two dwelling units each of which has a separate entrance and access to grade;
- (34) "Seniors residence" means non-profit corporations having as the principal objects of incorporation as being a service provider, whose services are regulated by the *Long Term Care Act*
- (35) "Services" means services set out in Schedule "A" to this By-law;
- (36) "Single detached dwelling" means a completely detached building containing only one dwelling unit;

- (37) “Temporary Use Building” means a residential building constructed or placed upon lands which is demolished or removed from the lands within the time limit set forth in the temporary use agreement.

### **DESIGNATED AREAS**

2. (1) The designated areas within which development charges are imposed and to which this development charge by-law applies, in accordance with the provisions of this by-law are the areas of Howe Island and Wolfe Island.
- (2) The area of Howe Island referred to in this by-law shall mean all lands within the geographic limits of Howe Island.
- (3) The area of Wolfe Island referred to in this by-law shall mean all lands within the geographic limits of Wolfe Island.

### **CALCULATION OF DEVELOPMENT CHARGES**

3. (1) Subject to the provisions of this by-law, development charges against land shall be imposed, calculated and collected in accordance with the base rates set out in Schedules “B-1” and “B-2”, which relate to the services set out in Schedule “A”.
- (2) The development charge with respect to the use of any land, buildings or structures shall be calculated as follows:
- (a) in the case of residential development or redevelopment, or the residential portion of a mixed-use development or redevelopment, the sum of the product of the number of dwelling units of each type multiplied by the corresponding total amount for such dwelling unit type, as set out in Schedules “B-1” and “B-2”;
- (b) in the case of non-residential development or redevelopment, or the non-residential portion of a mixed-use development or redevelopment, the product of the gross floor area of such development multiplied by the

corresponding total amount for such gross floor area, as set out in Schedules “B-1” and “B-2”;

- (3) Council hereby determines that the development or redevelopment of land, buildings or structures for residential and non-residential uses will require the provision, enlargement or expansion of the services referenced in Schedule “A”.

### **APPLICABLE LANDS**

4. (1) Subject to subsection (2) and Sections 5 and 6, charges payable under Schedules “B-1” and “B-2” of this by-law apply to all lands in the designated areas of the Municipality, whether or not the land or use is exempt from taxation under Section 3 of the *Assessment Act*, R.S.O. 1990, c.A.-31.
- (2) This by-law shall not apply to land that is owned by and used for the purposes of:
- (a) a board of education;
  - (b) any municipality or local board thereof;
  - (c) land owned by and used for the purposes of a health care centre, university or cemetery
  - (d) a place of worship classified as exempt from taxation under Section 3 of the *Assessment Act*;
  - (e) hospitals under the *Public Hospitals Act*;
  - (f) a non-residential farm building;
  - (g) a senior’s residence;
  - (h) development creating or adding an accessory use or structure not exceeding ten square metres of non-residential floor area; and
  - (i) a temporary use building.

### **RULES WITH RESPECT TO EXEMPTIONS FOR INTENSIFICATION OF EXISTING HOUSING**

5. (1) Notwithstanding Section 4 above, no development charge shall be imposed with respect to developments or portions of developments as follows:

- (a) the enlargement of an existing dwelling unit;
  - (b) the creation of one or two additional dwelling units in an existing single detached dwelling where the total gross floor area of the additional unit(s) does not exceed the gross floor area of the existing dwelling unit;
  - (c) the creation of one additional dwelling unit in any other existing residential building provided the gross floor area of the additional unit does not exceed the smallest existing dwelling unit already in the building.
- (2) Notwithstanding subsection 5(1)(b), development charges shall be calculated and collected in accordance with Schedules “B-1” and “B-2” where the total residential gross floor area of the additional one or two dwelling units is greater than the total gross floor area of the existing single detached dwelling unit.
- (3) Notwithstanding subsection 5(1)(c), development charges shall be calculated and collected in accordance with Schedules “B-1” and “B-2” where the additional dwelling unit has a residential gross floor area greater than,
- (a) in the case of semi-detached house or multiple dwelling, the gross floor area of the existing dwelling unit, and
  - (b) in the case of any other residential building, the residential gross floor area of the smallest existing dwelling unit.

#### **RULES WITH RESPECT TO AN “INDUSTRIAL” EXPANSION EXEMPTION**

6. (1) Notwithstanding Section 4, if a development includes the enlargement of the gross floor area of an existing industrial building, the amount of the development charge that is payable is the following:
- (a) if the gross floor area is enlarged by 50 percent or less, the amount of the development charge in respect of the enlargement is zero; or

- (b) if the gross floor area is enlarged by more than 50 percent, development charges are payable on the amount by which the enlargement exceeds 50 percent of the gross floor area before the enlargement.
- (2) For the purpose of this section, the terms “gross floor area” and “existing industrial building” shall have the same meaning as those terms have in O.Reg. 82/98 made under the Act.
- (3) In this section, for greater certainty in applying the exemption herein:
  - (a) the gross floor area of an existing industrial building is enlarged where there is a bona fide physical and functional increase in the size of the existing industrial building.

#### **RULES WITH RESPECT TO TEMPORARY BUILDINGS**

- 7. (1) The Municipality may exempt a temporary building from the charges payable under the by-law where an application for exemption for the proposed temporary building has been approved by the Treasurer of the Municipality subject to the following conditions:
  - (a) That the status of the building as a temporary building or structure is maintained in accordance with the provisions of this by-law;
  - (b) In the event that a temporary building is deemed by the Municipality to no longer be temporary, the development charges shall become immediately payable and shall be calculated in accordance with Schedule “B-1” and Schedule “B-2” of the by-law as of the date that the building is deemed to no longer be temporary.

#### **DEVELOPMENT CHARGES IMPOSED**

- 8. (1) Subject to subsection (2), development charges shall be calculated and collected in accordance with the provisions of this by-law and be imposed on land to be developed for residential and non-residential use, where, the development requires,

- (a) the passing of a zoning by-law or an amendment thereto under Section 34 of the *Planning Act*;
  - (b) the approval of a minor variance under Section 45 of the *Planning Act*;
  - (c) a conveyance of land to which a by-law passed under subsection 50(7) of the *Planning Act* applies;
  - (d) the approval of a plan of subdivision under Section 51 of the *Planning Act*;
  - (e) a consent under Section 53 of the *Planning Act*;
  - (f) the approval of a description under Section 50 of the *Condominium Act*, R.S.O. 1990, c.C.-26; or
  - (g) the issuing of a permit under the *Building Code Act*, in relation to a building or structure.
- (2) Subsection (1) shall not apply in respect to:
- (a) local services installed or paid for by the owner within a plan of subdivision or within the area to which the plan relates, as a condition of approval under Section 51 of the *Planning Act*;
  - (b) local services installed or paid for by the owner as a condition of approval under Section 53 of the *Planning Act*.

### **LOCAL SERVICE INSTALLATION**

8. Nothing in this by-law prevents Council from requiring, as a condition of an agreement under Section 51 or 53 of the *Planning Act*, that the owner, at his or her own expense, shall install or pay for such local services, within the Plan of Subdivision or within the area to which the plan relates, as Council may require.

**MULTIPLE CHARGES**

9. (1) Where two or more of the actions described in subsection 8(1) are required before land to which a development charge applies can be developed, only one development charge shall be calculated and collected in accordance with the provisions of this by-law.
- (2) Notwithstanding subsection (1), if two or more of the actions described in subsection 8(1) occur at different times, and if the subsequent action has the effect of increasing the need for municipal services as set out in Schedule "A", an additional development charge on the additional residential units and non-residential gross floor area shall be calculated and collected in accordance with the provisions of this by-law.

**SERVICES IN LIEU**

10. (1) Council may authorize an owner, through an agreement under Section 38 of the Act, to substitute such part of the development charge applicable to the owner's development as may be specified in the agreement, by the provision at the sole expense of the owner, of services in lieu. Such agreement shall further specify that where the owner provides services in lieu in accordance with the agreement, Council shall give to the owner a credit against the development charge in accordance with the agreement provisions and the provisions of Section 39 of the Act, equal to the reasonable cost to the owner of providing the services in lieu. In no case shall the agreement provide for a credit that exceeds the total development charge payable by an owner to the Municipality in respect of the development to which the agreement relates.
- (2) In any agreement under subsection (1), Council may also give a further credit to the owner equal to the reasonable cost of providing services in addition to, or of a greater size or capacity, than would be required under this by-law.
- (3) The credit provided for in subsection (2) shall not be charged to any development charge reserve fund.

**RULES WITH RESPECT TO REDEVELOPMENT**

11. Despite any other provisions of this By-law, where, as a result of the redevelopment of land, a building or structure existing on the same land within five years prior to the date of payment of development charges in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another principal use on the same land, in order to facilitate the redevelopment, the development charges otherwise payable with respect to such redevelopment shall be reduced by the following amounts:
- (1) In the case of a residential building or structure, or in the case of a mixed use building or structure, the residential uses in the mixed use building or structure, an amount calculated by multiplying the applicable development charge as set out in Schedules "B-1", "B-2", by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
  - (2) In the case of a non-residential building or structure or, in the case of mixed use building or structure, the non-residential uses in the mixed use building or structure, an amount calculated by multiplying the applicable development charges as set out in Schedules "B-1" and "B-2", by the gross floor area that has been or will be demolished or converted to another principal use.
  - (3) Notwithstanding (2) above, for an industrial use the reduction shall be calculated by multiplying the "Non-residential" development charges as set out in Schedules "B-1" and "B-2", by the gross floor area that has been or will be demolished or converted to another principal use.
12. A credit shall not exceed the amount of the development charge that would otherwise be payable, and no existing land use that is exempt under this by-law shall be eligible for a credit within 5 years of the date that an Occupancy Permit was issued for the gross floor area that has been or will be demolished or converted to another principal use.



**TIMING OF CALCULATION AND PAYMENT**

13. (1) Development charges shall be calculated, payable and collected in full in money or by provision of services as may be agreed upon, or by credit granted under the Act, on the date that the first building permit is issued in relation to a building or structure on land to which a development charge applies.
- (2) Where development charges apply to land in relation to which a building permit is required, the building permit shall not be issued until the development charge has been paid in full.
- (3) If development charges are paid and the applicable building permit is cancelled or revoked before construction begins, the development charges will be refunded to the registered owner of the land.
- (4) Council from time to time, and at any time, may enter into agreements providing for all or any part of a development charge to be paid before or after it would otherwise be payable, in accordance with Section 27 of the Act.

**RESERVE FUNDS**

14. (1) Monies received from payment of development charges under this by-law shall be maintained in four separate reserve funds for each of Howe Island and Wolfe Island services as follows: transportation and ferry, fire protection, parks and recreation and library, and administration studies.
- (2) Monies received for the payment of development charges shall be used only in accordance with the provisions of Section 35 of the Act.
- (3) Council directs the Municipal Treasurer to divide the reserve funds created hereunder into separate subaccounts in accordance with the service sub-categories set out in Schedule "A" to which the development charge payments shall be credited in accordance with the amounts shown, plus interest earned thereon.

- (4) Where any development charge, or part thereof, remains unpaid after the due date, the amount unpaid shall be added to the tax roll and shall be collected as taxes.
- (5) Where any unpaid development charges are collected as taxes under subsection (4), the monies so collected shall be credited to the development charge reserve funds referred to in subsection (1).
- (6) The Treasurer of the Municipality shall, in each year commencing in 2017 for the 2016 year, furnish to Council a statement in respect of the reserve funds established hereunder for the prior year, containing the information set out in Section 12 of O.Reg. 82/98.

#### **BY-LAW AMENDMENT OR APPEAL**

15. (1) Where this by-law or any development charge prescribed there under is amended or repealed by order of the Ontario Municipal Board or by resolution of the Municipal Council, the Municipal Treasurer shall calculate forthwith the amount of any overpayment to be refunded as a result of said amendment or repeal.
- (2) Refunds that are required to be paid under subsection (1) shall be paid to the registered owner of the land on the date on which the refund is paid.
- (3) Refunds that are required to be paid under subsection (1) shall be paid with interest to be calculated as follows:
  - (a) interest shall be calculated from the date on which the overpayment was collected to the day on which the refund is paid;
  - (b) the refund shall include the interest owed under this section;
  - (c) interest shall be paid at the Bank of Canada rate in effect on the date of enactment of this by-law.

**BY-LAW INDEXING**

16. The development charges imposed pursuant to this by-law shall be adjusted without amendment to this by-law commencing on the 1<sup>st</sup> day of January, 2017 and annually thereafter on the 1<sup>st</sup> day of January, in accordance with the most recent twelve month change in the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (CANSIM Table 327-0043).

**SEVERABILITY**

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

**HEADINGS FOR REFERENCE ONLY**

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

**BY-LAW REGISTRATION**

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

**BY-LAW ADMINISTRATION**

20. This by-law shall be administered by the Municipal Treasurer.

**SCHEDULES TO THE BY-LAW**

21. The following Schedules to this by-law form an integral part of this by-law:

- Schedule "A" - Designated Municipal Services
- Schedule "B-1" - Schedule of Howe Island Development Charges

Schedule "B-2" - Schedule of Wolfe Island Development Charges

**DATE BY-LAW EFFECTIVE**

22. This By-law shall come into force and effect at 12:01 AM on June 14, 2016.

**DATE BY-LAW EXPIRES**

23. This By-law will expire five years from the date of passage, unless it is repealed at an earlier date.

**SHORT TITLE**

25. This by-law may be cited as the "Township of Frontenac Islands Development Charge By-law, 2016."

Read a first time this 13<sup>th</sup> day of June, 2016.

Read a second time this 13<sup>th</sup> day of June, 2016.

Read a third time and finally passed this 13<sup>th</sup> day of June, 2016.

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**Dennis Doyle**                      **MAYOR**

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**Darlene Plumley**                      **TOWNSHIP CLERK**

**SCHEDULE "A" TO BY-LAW NUMBER XX-2016**

**DESIGNATED MUNICIPAL SERVICES UNDER THIS BY-LAW**

1. Transportation Services
2. Fire Protection Services
3. Ferry Services
4. Parks and Recreation Service
5. Library Service
6. Administration Services

**SCHEDULE “B-1” TO BY-LAW NUMBER XX-2016**

**SCHEDULE OF HOWE ISLAND DEVELOPMENT CHARGES**

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples	(per ft <sup>2</sup> of Gross Floor Area)
<b>Howe Island Services:</b>					
Transportation Services	2,432	1,521	1,052	1,928	-
Fire Protection Services	3,308	2,069	1,431	2,622	-
Ferries	-	-	-	-	-
Parks and Recreation Services	-	-	-	-	-
Library Services	-	-	-	-	-
Administration Studies	260	163	113	206	-
<b>Total Howe Island Services</b>	<b>6,000</b>	<b>3,753</b>	<b>2,596</b>	<b>4,756</b>	<b>-</b>

**SCHEDULE “B-2” TO BY-LAW NUMBER XX-2016**

**SCHEDULE OF WOLFE ISLAND DEVELOPMENT CHARGES**

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom		(per ft <sup>2</sup> of Gross Floor Area)
<b>Wolfe Island Services:</b>					
Transportation Services	5,397	3,376	2,335	4,278	2.50
Fire Protection Services	-	-	-	-	-
Ferries	-	-	-	-	-
Parks and Recreation Services	317	198	137	251	-
Library Services	-	-	-	-	-
Administration Studies	286	179	124	227	-
<b>Total Wolfe Island Services</b>	<b>6,000</b>	<b>3,753</b>	<b>2,596</b>	<b>4,756</b>	<b>2.50</b>