FINANCE AND ADMINISTRATION COMMITTEE – September 19th, 2011

New Infrastructure - Renewal Contribution Policy

Recommendation

The Commissioner of Finance and City Treasurer, and the Director of Budgeting and Financial Planning recommend:

1. That the funding philosophy and its associated infrastructure contribution policies outlined in the body of this report be approved and implemented as part of the 2012 and future budget processes.

2. That the necessary by-laws be created and/or updated to reflect policies presented in this report.

Sustainability

The future condition and state of municipal infrastructure is an important factor in assessing a community's overall quality of life and economic health. The City of Vaughan continues to grow at an unparalleled pace, adding new facilities, parks, and transportation networks on an annual basis. Initially, these items are funded primarily by the development industry, with future renewal costs becoming the responsibility of the City. As Vaughan ages, infrastructure renewal requirements will accumulate at a pace similar to which they were constructed. Consequently, it is vital to enhance Vaughan's current plan for this eventuality and further develop funding policies to protect and sustain the foundation of our community.

Economic Impact

The City of Vaughan has over a billion dollars in infrastructure, excluding land and water/wastewater infrastructure, which will require eventual replacement to sustain the community's overall quality of life and the economic health for future generations. To date, Vaughan has implemented a number of prudent policies to assist in this regard, but further effort in this area is required. Contained within this report is a funding philosophy for the ultimate renewal of new infrastructure coming on board and focuses on the following principles:

1) Annual contributions based on lifecycle replacement principals;
2) Annual inflationary adjustments to contributions to keep pace with future values.

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Estimates associated with specific asset categories are provided within this report, but the overall additional economic impact associated with the above philosophy is estimated in the range of an additional $706k each year over the foreseeable future. These figures are subject to change and largely dependent on development charge background study and capital budget review. It should be noted, this economic impact does not address the existing infrastructure funding gap and is a funding requirement beyond currently established existing infrastructure policies (i.e. existing infrastructure policy contributions, roads program debentures, etc). However, implementing the recommended policies will safeguard against a widening funding gap, resulting from new growth based infrastructure coming on board.

Estimated 5 Year Incremental Financial Impact of the Recommendation

	2012	2013	2014	2015	2016
Estimated Contribtuions:					
Parks Equipment	$ 76,185	$ 205,897	$ 350,578	$ 680,400	$ 887,867
Fleet Vehicle and Equipment	$ 65,964	$ 85,589	$ 105,605	$ 126,022	$ 146,848
Building and Facilities	$ 13,616	$ 28,074	$ 30,169	$ 44,959	$ 47,538
Fire Vehicle and Equipment	$ 56,653	$ 56,653	$ 56,653	$ 160,861	$ 160,861
Streetscapes	$ 323,328	$ 612,578	$ 757,498	$ 932,292	$1,170,841
Heritage	TBD	TBD	TBD	TBD	TBD
New Policy Contributions	**$ 535,746**	**$ 988,791**	**$1,300,503**	**$1,944,535**	**$2,413,955**
Existing: Inflationary Adj. for Future Costs	$ 215,183	$ 434,670	$ 658,546	$ 886,900	$1,119,821
Total Contributions	**$ 750,929**	**$ 1,423,461**	**$1,959,049**	**$2,831,435**	**$3,533,776**
Total Incremental Difference	**$ 750,929**	**$ 672,531**	**$ 535,588**	**$ 872,386**	**$ 702,342**
Average	**$ 706,755**				

The above is in addition to existing infrastructure policies. Below is a chart illustrating the incremental impacts associated with existing policies:

Estimated 5 Year Incremental Impact of Existing Policies

	2012	2013	2014	2015	2016
Building & Facilities - 2% contribution	680,785	709,320	76,667	709,320	83,976
LTD - Roads Program	1,110,039	1,110,039	1,110,039	1,110,039	1,110,039
Total Incremental Contributions	**1,790,825**	**1,819,359**	**1,186,706**	**1,819,359**	**1,194,016**
Average	**1,562,053**				

*Subject to capital timing changes

Communications Plan

Once approved, departments will be informed of the adjustments through the operating budget instructions. In addition, the appropriate by-laws will be created and/or updated to reflect the policies presented within this report.

Purpose

The purpose of this report is to recommend additional infrastructure funding policies on a go forward basis for *new municipal infrastructure* to ensure the funding for their eventual replacement is secure, safeguarding the foundation of our community and municipal services. In addition, the report is to recommend that an inflationary component on existing reserve contributions be adopted to allow these reserves to keep pace with future market values.

Please note: the policies contained within this report do not address any existing infrastructure replacement funding shortfalls, which will be the subject of a separate future report.

Background

Vaughan History

The City of Vaughan has a long standing history as it relates to financial planning and developing fiscally prudent policies. Over the past decade, the Finance Department has advised Council of future challenges and issues facing the City through various reports and studies. A prevailing theme throughout the years has repeatedly been the need to address the funding component for infrastructure renewal. The challenge of funding the significantly growing costs of infrastructure renewal is a paramount concern for most municipalities across Canada and stems from new construction being primarily funded by the development industry, leaving the municipalities across Canada to fund future replacement costs from the municipality's limited tax base. In addition to Vaughan implementing its own policies, this challenge has generated a lot of public sector interest and activity, including Provincial and Federal infrastructure stimulus funding, Federal gas tax funding, and most recently mandatory financial statement reporting changes intended to highlight municipal infrastructure useful value and funding shortfalls. As a result of the above, Vaughan is in a very strong financial position and ahead of most municipalities as it relates to reserve balances and cash position, but more effort and assistance is required to address this challenge.

Current Situation

On April 5, 2011, staff brought forward to Council a report to provide information on the annual amortization expense, approximately $37 million excluding water/waste water figures which are budgeted and reported separately. This figure represents the annual utilized portion of the City's assets based on their life cycles. Currently, the annual contribution to fund the replacement of City Infrastructure is approximately $20 million, including debenture payments. Ideally, contributions should equal or exceed amortization figures, spreading the cost over time and building reserves balances for the eventual replacement of assets; otherwise the City will be faced with significant funding challenges at the time of replacement. The above $17 million difference is substantial and reflects the magnitude of the challenge facing most municipalities. It should be noted, the above funding gap is understated, as it is based on historical cost values and does not incorporate the compounding affects of inflation on future replacement costs. Staff continues to work on this challenge and plan to bring forward more discussion on this topic later this year as part of the Financial Master Plan.

However, the City continues to grow at an unparalleled pace, adding new facilities, parks, and transportation networks on an annual basis. Preliminary estimates based on the development charge background study and various master plans indicate that over $425 million in new infrastructure will be added over the next 20 yrs in addition to what is assumed by the City through the subdivision development process. *Recognizing the above illustrated challenge, it is necessary to continue to build on existing replacement funding policies for new infrastructure to prevent the current funding shortfall from growing as a result of infrastructure additions.* The danger of not doing so could create a situation where the funding shortfall will continue to slowly build until a point in the future where a wave of facility, park, fire and other replacement projects come on board without available funding. This picture threatens the community's overall quality of life and the economic health for future generations.

Funding Philosophy for New Infrastructure

1) When new infrastructure is approved, an annual contribution based on lifecycle replacement principals is added to the operating budget for replacement purposes.

2) That an inflationary adjustment be added annually to existing contributions based on historical costs to ensure contributions keep pace with future values.

Infrastructure Categories

Detailed below is a brief overview of the current infrastructure categories, existing funding policies, recommendations, and implications as a result of the above funding philosophy.

Parks Infrastructure

For the most part, the funding for park infrastructure renewal, excluding land, has remained flat at $275,000 for many years despite the annual additions of millions of dollars of new infrastructure. This figure is used to fund the replacement of play structures, play fields, courts, water parks, paths, etc. and is substantially lower than the $3 million annual amortization reported for this category.

Based on the 2008 Development Charge Background Study and the Active Together Master Plan, it is anticipated that the City will be adding over $13.5 million in new park infrastructure between 2012 – 2017, $40 million by 2031.To avoid increasing the current funding gap it is essential that this funding contribution be increased as new park infrastructure is approved. *It is recommended that the existing Parks Infrastructure Reserve by-law be amended to reflect an annual contribution for new infrastructure based on estimated future values and determined by appropriate life cycles in the year of project approval.* The following chart summarizes the projected annual budget adjustments for the period 2012 -2016 associated with adopting the recommended funding philosophy.

Annual 5 Year Impact of new Parks Reserve Contribution

Aquisition Year	Estimated New Infrastructure (Replacement Value)	Estimated Annual Contribution	2012	2013	2014	2015	2016
2012	2,047,122	76,185	76,185	76,185	76,185	76,185	76,185
2013	3,485,418	129,712	-	129,712	129,712	129,712	129,712
2014	3,887,618	144,680	-	-	144,680	144,680	144,680
2015	8,862,453	329,822	-	-	-	329,822	329,822
2016	5,574,716	207,467	-	-	-	-	207,467
		Total Budget Adjustment	76,185	205,897	350,578	680,400	887,867
		Annual Incremental Contribution	**76,185**	**129,712**	**144,680**	**329,822**	**207,467**

*Based on future replacement costs with a 2% inflation factor.

Current Reserve Position for Existing Parks Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based	Deficit	Reserve % of Target
Parks Infrastructure	490,826	13,227,312	12,736,486	3.7%

Fleet Infrastructure

Funding for renewal of the City's fleet and equipment was initially established through a flat corporate contribution and any annual machine time surplus after fleet operating and maintenance costs. In 2005, the $975k corporate contribution was discontinued in favour of other funding initiatives and machine time contributions have provided variable contributions to fund replacement after maintenance and operational requirements. As a result, the Fleet Management Reserve will be substantially depleted in the near future and requires a stable funding source to fund the replacement of new City vehicles and equipment.

The 2008 Development Charge Background Study estimates that from 2012 - 2017, approximately $3.3 million in new fleet and related equipment will be added. To avoid increasing the current funding gap it is essential that this corporate fleet replacement funding be increased in tandem with the approval of new fleet and equipment.

It is recommended that the existing Fleet Infrastructure Reserve by-law be amended to reflect an annual contribution for new infrastructure based on estimated future values and determined by appropriate life cycles in the year of project approval.

The following chart summarizes the annual budget adjustments for the period 2012 -2016 associated with adopting the recommended funding philosophy:

Annual 5 Year Impact of Corporate Fleet Reserve Contributions

Aquisition Year	Estimated New Infrastructure (Replacement Value)	Estimated Annual Contribution	2012	2013	2014	2015	2016
2012	756,208	65,964	65,964	65,964	65,964	65,964	65,964
2013	224,969	19,624	-	19,624	19,624	19,624	19,624
2014	229,468	20,017	-	-	20,017	20,017	20,017
2015	234,058	20,417	-	-	-	20,417	20,417
2016	238,739	20,825	-	-	-	-	20,825
			65,964	85,589	105,605	126,022	146,848
Annual Incremental Contribution			**65,964**	**19,624**	**20,017**	**20,417**	**20,825**

*Based on future replacement costs with a 2% inflation factor.

Current Reserve Balance on Existing Fleet Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based	Deficit	Reserve % of Target
Vehicle Replacement	1,678,476	5,123,303	3,444,827	32.8%

Fire Vehicles and Equipment

Funding for Fire vehicles and equipment has remained flat at $1.1m for many years despite the annual additions of millions of dollars of new infrastructure. This figure is used to fund the replacement of fire engines and vehicles, and other equipment. Reserve funding is consistent with the $1.1 annual amortization reported for this group.

Based on the 2008 Development Charge Background Study and the Master Fire Plan, it is anticipated that the City will be adding over $3.5 million for vehicles and equipment from 2012 - 2017 to its current $16 million inventory. To avoid increasing the current funding gap it is essential that this funding contribution be increased as new Fire infrastructure is approved.

It is recommended that the existing Fire Reserve by-law be amended to reflect an annual contribution for new fire vehicles and equipment be based on estimated future values and determined by appropriate life cycles in the year of project approval.
The following chart summarizes the annual budget adjustments for the period 2012 -2016 associated with adopting the recommended funding philosophy:

Annual 5 Year Impact of new Fire Reserve Contributions

Aquisition Year	Estimated New Infrastructure (Replacement Value)	Estimated Annual Contribution	2012	2013	2014	2015	2016
2012	649,459	56,653	56,653	56,653	56,653	56,653	56,653
2015	1,194,633	104,208	-	-	-	104,208	104,208
			56,653	56,653	56,653	160,861	160,861
Annual Incremental Contribution			**56,653**	**-**	**-**	**104,208**	**-**

*Based on future replacement costs with a 2% inflation factor.

Current Reserve Position on Existing Fire Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based	Deficit	Reserve % of Target
Fire Equipment Replacement	2,567,339	2,651,046	83,707	96.8%

Entrance & Streetscape Features

An emerging trend in community development over the past decade has been to add hard surface streetscapes and entrance way features. Based on the 2008 Development Charge Background Study, it is anticipated that the City will be adding over $33.5 million in streetscapes from 2012 – 2017, a significant portion which is funded from other than development charges, most likely taxation. In addition, developers are incorporating entrance way features into subdivisions which will eventually require replacement. The above items are costly and accumulating at a rapid pace. Currently, policies relating to the replacement timing and associated funding for streetscapes and entrance way features have not been developed. In addition to seriously evaluating where streetscape and entrance features are appropriate, a replacement policy is required.

It is recommended that the following policies be adopted:

- *That an Infrastructure Reserve be created for the purpose of funding streetscape and entrance way feature replacement*
- *An annual contribution for new additions be based on estimated future values and determined by appropriate life cycles in the year of project approval*.

The following chart summarizes the annual budget adjustments for the period 2012 -2016 associated with adopting the recommended funding philosophy:

Annual 5 Year Impact of new Streetscapes Reserve Contributions

Aquisition Year	Estimated New Infrastructure (Replacement Value)	Estimated Amortization	2012	2013	2014	2015	2016
2012	11,788,315	323,328	323,328	323,328	323,328	323,328	323,328
2013	10,545,820	289,249		289,249	289,249	289,249	289,249
2014	5,283,675	144,920			144,920	144,920	144,920
2015	6,372,868	174,794				174,794	174,794
2016	8,697,340	238,550					238,550
			323,328	**612,578**	**757,498**	**932,292**	**1,170,841**
Annual Incremental Contribution			**323,328**	**289,249**	**144,920**	**174,794**	**238,550**

*Based on future replacement costs with a 2% inflation factor.

Current Reserve Position on Existing Streetscape Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based ☆	Deficit	Reserve % of Target
Streetscapes Reserve	None	4,426,190	4,426,190	n/a

☆2010 Accumulated Amortization

Heritage facilities

Funding for heritage infrastructure renewal has remained constant over the years at $200,000. This figure is used to fund the replacement of heritage facility components, retrofitting and safety requirements. Historically, heritage facilities are added on an as needed basis and are typically a result of public interest. It is therefore difficult to provide an estimate of future additions. However, it would be prudent to increase this contribution as new heritage facilities are added.

It is recommended that the existing Heritage Infrastructure Reserve by-law be amended to reflect the following:

- *an annual contribution for new additions based on building & facility department estimates on replacement requirements over the assets life be added to the operating budget.*
- *That the corporate heritage contribution be increased annually by an appropriate inflationary adjustment to account for future costs escalations.*

Current Reserve Position on Existing Heritage Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based	Deficit	Reserve % of Target
Heritage Fund	396,695	1,018,400	621,705	39.0%

Existing Infrastructure Contribution Adjustments for Future Costs

As recognized in the beginning of this report, the funding gap is understated, as it's based on historical values and does not incorporate the compounding affects of inflation on future replacement costs. There is minor assistance generated from interest earned on reserve balances, but not substantial enough to cover future values. *To help minimize the implications associated with this variable, it is recommended that currently established contributions be increased annually based on Statistics Canada information to ensure contributions keep pace with anticipated future replacement costs.*

This additional funding will not take care of the infrastructure replacement backlog, but it will work to assist in minimizing the increase in this backlog due to rising material costs. The issue of the outstanding infrastructure backlog is to be addressed separately.

The following chart summarizes the annual budget adjustments for the period 2012 -2016 associated with the above recommendation.

Reserve	Contribution	2012	2013	2014	2015	2016
Building and Facilities Infrastructure	2,084,000	41,680	42,514	43,364	44,231	45,116
Roads Infrastructure	475,000	9,500	9,690	9,884	10,081	10,283
Parks Infrastructure	275,000	5,500	5,610	5,722	5,837	5,953
Fire Reserve Contribution	1,096,150	21,923	22,361	22,809	23,265	23,730
Heritage	200,000	4,000	4,080	4,162	4,245	4,330
Capital from Taxation	6,629,000	132,580	135,232	137,936	140,695	143,509
Annual Incremental Contribution		**215,183**	**219,487**	**223,876**	**228,354**	**232,921**

*Based on a 2% inflation factor.

Existing Policies

Building and Facilities

Funding for the renewal of the City's new buildings and facilities is based on the established policy of applying a 2% value on the approved building and facility project budget, excluding land costs. This represents a lifecycle of approximately 50 years, which is relatively standard in the industry.

Based on the 2008 Development Charge Background Study and other Master Plans, it is anticipated that the City will be adding over $157 million in new buildings and facilities over the next 10 years. Due to evolving building practices and associated lengthy life cycles, forecasting replacement values is very challenging and for this reason, *it is recommended that the existing Building & Facility Infrastructure Reserve by-law be amended to reflect an appropriate annual inflationary adjustment on the corporate building and facility contribution for new infrastructure to account for future costs escalations.* The following chart summarizes the annual budget adjustments for the period 2012 -2016 associated with new buildings and facilities and adopting the above by-law amendment, which equates to approximately $10K per year:

Annual 5 Year Impact of new Building & Facility Reserve Contributions

Aquisition Year	Asset Addition (Historical Value)	Existing2% Contribution Policy	2012	2013	2014	2015	2016
Existing Policy							
2012	34,039,270	680,785	680,785	680,785	680,785	680,785	680,785
2013	35,466,000	709,320	-	709,320	709,320	709,320	709,320
2014	3,833,360	76,667	-	-	76,667	76,667	76,667
2015	35,466,000	709,320	-	-	-	709,320	709,320
2016	4,198,820	83,976	-				83,976
Existing Policy Contributions			680,785	1,390,105	1,466,773	2,176,093	2,260,069
New Inflationary Component			13,616	28,074	30,169	44,959	47,538
Annual Incremental Contribution			**13,616**	**14,459**	**2,095**	**14,790**	**2,579**

* Based on a 2% inflation factor.

Current Reserve Position on Existing Building & Facility Infrastructure

	Reserve Balance Dec 31, 2010	Reserve Target Lifecycle Based	Deficit	Reserve % of Target
Buildings & Facilities (Post&Pre 98)	12,910,005	14,158,197	1,248,192	91.2%

Roads Program

Funding for the City's roads replacement program is primarily funded through long-term debentures with minor assistance from reserves. Although more costly due to the addition of interest costs, the overall substantial value of this asset and its lengthy life cycle supports the use of long term debt as it smoothes the costs over the asset's life cycle. The continuation of the current policy is recommended for roads only.

Based on the 2008 Development Charge Background Study it is anticipated that the City will be adding over $123m for the period 2012 -2017. In addition to this figure, the City will assume road systems incorporated within future developer subdivisions. It is important to note that underground water and sewer assets are excluded from the above figure as funding is provided through a separate budget and user fee rates. The cost of future replacement of the above mentioned future road items are not anticipated for decades. However, Vaughan is currently faced with the funding requirements to maintain existing road systems in good repair, some dating back a number of decades. As illustrated in the June 21, 2011 report "Pavement Management Program Update", approximately $9 million in long-term debt is required annually for the repair and maintenance of Vaughan's roads network. Approximate debenture payments associated with annual road repair requirements are in the range of $1m per year, based on a 10 year 5% debentures. This incremental annual requirement is anticipated to continue into the foreseeable future.

The following chart summarizes the estimated annual requirements for the period 2012-2016 associated with the current policies and practices.

Aquisition Year	Estimated Debt Issuance	Estimated Annual Repayment	2012	2013	2014	2015	2016
2012	9,000,000	1,110,039	1,110,039	1,110,039	1,110,039	1,110,039	1,110,039
2013	9,000,000	1,110,039	-	1,110,039	1,110,039	1,110,039	1,110,039
2014	9,000,000	1,110,039	-	-	1,110,039	1,110,039	1,110,039
2015	9,000,000	1,110,039	-	-	-	1,110,039	1,110,039
2016	9,000,000	1,110,039	-	-	-	-	1,110,039
Existing Policy Requirements			1,110,039	2,220,078	3,330,118	4,440,157	5,550,196
Annual Incremental Contribution			**1,110,039**	**1,110,039**	**1,110,039**	**1,110,039**	**1,110,039**

Conclusion

Vaughan will continue to experience growth over the next number of years and as a result of that growth, there will be significant new investments in infrastructure funded primarily by development charges. As Vaughan's infrastructure ages, continued investment is required to ensure the City's assets are maintained in a state of good repair. Preliminary estimates based on the development charge background study and various master plans indicate that over $425 million in new infrastructure will be added over the next 20 yrs. Consequently, it is vital to plan for this eventuality and revisit funding policies to ensure the City can protect and sustain the foundation of our community.

As reported in an earlier report, the existing infrastructure replacement funding gap is in excess of $17 million and significantly higher with the compounding affects of inflation on future replacement costs. Given this current situation, it is increasingly important that new infrastructure coming on board does not compound the current infrastructure challenge.

Enclosed within this report is a review of existing policies and recommendations building on the policy work completed to date. Overall the philosophy presented is twofold:

1) When new infrastructure is approved, an annual contribution based on lifecycle replacement principals is added to the operating budget for replacement purposes.

2) That an inflationary adjustment be added annually to contributions based on historical costs to ensure contributions keep pace with future values.

The future condition and state of municipal infrastructure is an important factor in assessing a community's overall quality of life and economic health. The recommendations contained within this report help to protect and sustain the foundation of our community.

Relationship to Vaughan Vision 2020

This study addresses two main goals identified in the Vaughan Vision 2020 under management excellence:

1. Maintain Assets and Infrastructure
2. Ensure Financial Stability

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Regional Implications

NA

Attachments

None

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