

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF DECEMBER 11, 2017

Item 1, Report No. 13, of the Finance, Administration and Audit Committee, which was adopted without amendment by the Council of the City of Vaughan on December 11, 2017.

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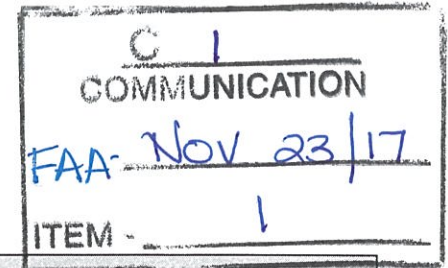
DRAFT 2018 BUDGET AND 2019-2022 FINANCIAL PLAN

(Referred)

Further consideration of the Draft 2018 Budget and 2019-2022 Financial Plan was deferred to the January 30, 2018, Special Council (Budget) meeting to continue deliberations (see 3. OTHER MATTERS CONSIDERED BY THE COMMITTEE, Item 3.1: DRAFT 2018 BUDGET AND 2019-2022 FINANCIAL PLAN).



MEMBER'S RESOLUTION



Meeting/Date: FINANCE, ADMINISTRATION AND AUDIT - NOVEMBER 23, 2017

Title: COMMUNITY GARDENS

Submitted by: REGIONAL COUNCILLOR SUNDER SINGH

Whereas, the City of Vaughan approved green Directions Vaughan, the community sustainability and environmental master plan;

Whereas, Green Directions Vaughan outlines several initiatives, including Community Gardens, that demonstrate leadership in sustainability and encouraging the environmental, social and economic sustainability of the community;

Whereas, Council approved the Community Garden Policy in 2014, reinforcing the positive contribution Community Gardens make to the environmental, social and economic sustainability of the community;

Whereas, the Community Garden Policy provides a framework for managing future community garden initiatives as part of a larger community garden network within the City; and

Whereas, staff have estimated the implementation of a Community Gardens 2018 capital project would cost approximately \$25,000

It is therefore recommended:

1. *That staff be directed to add a Community Gardens 2018 capital project to the Draft 2018 Budget for Council's consideration;*
2. *That the Community Gardens 2018 project include a minimum of one community garden per ward;*
3. *That staff work within the framework of the approved Community Garden Policy to engage Council members and the community in identifying the appropriate locations on City-owned lands;*
4. *That staff bring a communication to the January 30, 2018 Special Council meeting that identifies appropriate fiscally neutral funding sources for the capital project by proposing corresponding offsets in the Draft 2018 Budget.*
5. *That staff be directed to consider the ongoing operations and maintenance of the Community Gardens in the 2019 Budget process.*

Respectfully submitted,


Regional Councillor Sunder Singh

Attachments N/A



memorandum

C 2
COMMUNICATION

FAA- Nov 23/17

ITEM - 1

DATE: November 23, 2017

TO: Mayor and Members of Council

FROM: Stephen Collins, Deputy City Manager, Public Works

RE: Communication: Finance, Administration and Audit, November 23, 2017,
Installation of Traffic Control Signals at Teston Road and Mosque Gate
Ward 1

Purpose

This communication responds to Item 1 of the November 13, 2017 meeting of the Finance, Administration and Audit Committee, specifically the request from Committee to provide information on the costs related to the installation of traffic control signals at Teston Road and Mosque Gate.

Economic Impact

York Region has estimated the cost for the installation and operation of Traffic Control Signals (TCS) at Teston Road and Mosque Gate at:

Capital Cost: \$180,000 (includes design, construction and related soft costs)
Operating Cost: \$78,000 (\$7,800 per year for ten years, includes power, monitoring and maintenance activities)

Current York Region policy for Traffic and Pedestrian Signals (*see attachment 1*) does not allow for the installation of unwarranted TCS, even if the local municipality agrees to fund the capital and operating costs. However, York Region Council's recent practice has been to make exceptions to the policy in circumstances where a local municipality has asked York Region to install the TCS and fully fund the capital and operating costs.

Funding sources for the estimated capital and operating costs have been reviewed by staff.

The capital cost for the installation of the TCS could be funded from City Wide development charges. The capital cost of the project, estimated at \$180,000, would likely be payable to York Region in early 2019.

The annual operating costs for the TCS would need to be funded from the Tax Levy. The annual operating cost is estimated at \$7,800, therefore \$78,000 for the ten-year operating period. York Region has advised that ten years of operating costs would need to be paid in the first year of operation, likely in 2019.

York Region confirmed the City would not be reimbursed for the capital cost, even if in the future the TCS satisfies York Region's policy criteria. However, in the event the TCS becomes warranted within the ten-year operating period, York Region would reimburse the City for the unused portion of the prepaid operating costs.

Communications Plan

Staff have consulted with York Region Transportation Services staff on the potential to install a TCS at the intersection of Teston Road and Mosque Gate.

Background Analysis and Options

Regional Council received and referred to staff a request to install traffic control signals at Teston Road and Mosque Gate

On October 5, 2017, York Region Committee of the Whole received a deputation on behalf of Ahmadiyya Muslim Jama'at Canada, regarding a request to install traffic signals at Mosque Gate and Teston Road. This request was received and referred to staff and ratified by York Region Council at their meeting on October 19, 2017.

In 2015 York Region Council adopted a revised Traffic Signal and Pedestrian Crossing Policy

Prior to 2015, York Region had separate policies guiding the decision making on when TCS and Pedestrian Crossing Signals should be installed. The Policies reflected the 2001 Ontario Traffic Manual, industry best practices and customized criteria specifically developed for York Region.

In 2015 York Region decided to align their criteria with current Ministry of Transportation Ontario (MTO) traffic and pedestrian signal criteria. This was done to provide a consistent approach across the Province for justification of signals and align their criteria with that which is widely used by Ontario municipalities.

The 2015 Traffic and Pedestrian Signal Policy eliminated the Municipal Warrant criteria

Prior to 2015 the policy included an option for a municipal warrant. A municipal warrant reflects criteria that York Region developed which allows municipalities to “fast track” an unwarranted traffic signal at their own cost. When the full warrant is met, the Region will reimburse the municipality who funded advance installation under the municipal warrant.

The 2015 Traffic and Pedestrian Signal Policy removed the municipal warrant criteria. Therefore, the opportunity for a local municipality to advance the installation of an unwarranted TCS was eliminated.

York Region staff have advised that the TCS at Teston Road and Mosque is not warranted now based on the 2015 York Region policy

In early November 2017, York Region staff completed the TCS warrant analysis. They concluded that the intersection does not meet the Regional criteria and installation of a TCS is not recommended. York Region staff will be reporting to Regional Council in early 2018, presenting the results of their review and recommending the TCS not be installed.

Staff reviewed the analysis and, based on York Region's warrant criteria, agree that TCS at Teston Road and Mosque Gate are not warranted and this time. On this basis, the City should consider recovering the Operating costs of the unwarranted TCS from the requestor, in this case Ahmadiyya Muslim Jama'at Canada.

Conclusion

In October 2017, the Ahmadiyya Muslim Jama'at Canada asked York Region to install TCS at Teston Road and Mosque Gate. Regional staff have advised that TCS are not warranted now and will be reporting to Regional Council in early 2018 recommending TCS not be installed.

The estimated Capital Cost of the TCS is \$180,000 and the estimated annual Operating cost of the TCS is \$7,800. York Region has advised that ten years of Operating costs, \$78,000, are payable in the first year of operation.

York Region Council has recently approved unwarranted signals that have been requested by a local municipality and with the understanding the local municipality will be fully responsible for the Capital and Operating costs.

Report prepared by:
Stephen Collins, DCM Public Works

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'S. Collins', is written over the printed name.

Stephen Collins, P.Eng.
Deputy City Manager, Public Works

Attachment #1: York Region Traffic and Pedestrian Signal Policy

Clause 3 in Report No. 11 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on June 25, 2015.

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Traffic and Pedestrian Signal Policy

Committee of the Whole recommends adoption of the following recommendations contained in the report dated May 21, 2015 from the Commissioner of Transportation Services:

1. Recommendations

It is recommended that:

1. The Region's current traffic and pedestrian signal policies be replaced with a revised policy, which directly references the Ontario Traffic Manual Book 12.
2. The Regional Clerk circulate this report to the local municipalities.

2. Purpose

This report recommends a revised policy to determine when it is appropriate to install traffic or pedestrian signals (Attachment 1) which directly references Ontario Traffic Manual Book 12.

3. Background

As traffic continues to increase, requests to consider new traffic and pedestrian signals also grow

As traffic continues to grow across the Region, traffic signals are increasingly required to balance movements on major corridors and facilitate access to local communities. The Region has more than 2,000 intersections on Regional roads, of which more than 800 are controlled with traffic signals. The Region receives approximately 100 requests annually from residents and other stakeholders for signal installation at intersections to improve safety or manage congestion.

While the benefits of traffic signals are understood, there are trade-offs that need to be considered prior to installation of new signals. The installation of traffic signals increases delays to traffic on major streets and increases the number of rear-end collisions. Traffic signals cost over \$200,000 to install and have ongoing operation and maintenance costs. It is important that the Region's policy include a signal warrant to determine when a signal installation is beneficial.

The Region has policies in place to determine whether or not traffic or pedestrian signals are required

Council endorsed a Traffic Signal Policy in October 2002 (Attachment 2) and a Pedestrian Crossing Warrant Criteria in June 2007 (Attachment 3). These policies consist of:

- 2001 Ontario Traffic Manual Book 12 traffic signal criteria
- Best practices criteria in the industry
- Customized criteria developed exclusively for York Region.

Regional policies should be consistent with current Ministry of Transportation Ontario (MTO) traffic and pedestrian signal criteria, as outlined in Ontario Traffic Manual Book 12 entitled Traffic Signals.

Traffic and Pedestrian Signal Policy

The MTO signal criteria provides for a consistent approach across the Province for justification of signals

The MTO signal criteria provides for a consistent approach used across the province to determine whether the installation of signals would be beneficial. The signal criterion provides thresholds for vehicle and pedestrian volumes and accounts for delay and safety. A brief description of each Ontario Traffic Manual Book 12 signal criteria is outlined in Attachment 4.

The MTO traffic and pedestrian signal criteria is widely-used by Ontario municipalities

Ontario Traffic Manual Book 12 signal criteria for traffic and pedestrian signals are exclusively used by Ottawa, Toronto, Halton and Waterloo, as well as all local municipalities in York Region.

4. Analysis and Options

The Region's signal policies should be updated to directly reference Ontario Traffic Manual Book 12

Ontario Traffic Manual Book 12 signal criteria was updated in 2012 to include criteria that recognizes the critical four peak traffic hours of the day as well as projected traffic volumes. The current Regional policy is based on eight hours for existing traffic only. The four-hour vehicle volume criteria is more responsive to commuter corridors, which experience high volumes in the morning and evening peak periods, with considerably reduced volumes for the remainder of the day. The projected traffic volume criteria will assist in determining traffic signal requirements as part of new developments. The four-hour vehicle volume and projected traffic volume criteria ensure that the policy is responsive to a wide variety of scenarios which may benefit from traffic or pedestrian signals.

Traffic and Pedestrian Signal Policy

The proposed traffic and pedestrian signal policy does not include the municipal warrant

The current policy includes an option for a municipal warrant. A municipal warrant reflects criteria that York Region developed which allows municipalities to “fast track” a traffic signal at their own cost. To be eligible for the municipal warrant, an intersection is required to meet at least 90 per cent of the Region’s traffic signal warrant. When the full warrant is met, the Region will reimburse the municipality who funded advance installation under the municipal warrant. It is expected that the more responsive four-hour vehicle volume and projected traffic volume criteria of the recommended revised policy will eliminate the need for this municipal warrant.

The revised policy recognizes the need for signalization at intersections that are busy primarily during peak periods

To illustrate the increased responsiveness of the proposed traffic signal policy, Table 1 shows how the various criteria are applied to the intersection of Rutherford Road and Pine Valley Drive.

Table 1
Traffic Signal Warrant Analysis

Criteria	Threshold	Compliance (Need to meet or exceed threshold)	Signals Justified (Y/N)
1. Minimum Volume	100%	48%	No
2. Delay to Cross Traffic	100%	51%	No
3. Volume/Delay Combination	80%	48%	No
4. Four-hour Vehicle Volume *	100%	100%	Yes
5. Collision Experience	100%	27	No
6. Pedestrian Volume Delay	100%	0	No
7. Projected Volume *	150%	N/A	N/A
8. Municipal Warrant	70%	48%	No

* Not included in current policy

As summarized in Table 1, the intersection of Rutherford Road and Pine Valley Drive satisfies traffic signals based on the four-hour vehicle volume criteria under the proposed policy, but not the municipal warrant in the current policy.

Traffic and Pedestrian Signal Policy

Over the next three years, seven intersections across the Region will satisfy the proposed policy for the installation of traffic signals based on the four-hour vehicle volume or projected traffic volume criteria, which would not have otherwise been warranted. Table 2 lists these intersections by municipality.

Table 2
Additional Traffic Signals Based on Revised Policy

Municipality	Intersection
City of Markham	16 th Avenue at Williamson Road
City of Vaughan	Dufferin Street at Maurier Boulevard
City of Vaughan	Pine Valley Drive at Rutherford Road
City of Vaughan	Teston Road at St. Joan of Arc Avenue
Town of Georgina	The Queensway South at Richmond Park Drive
Town of Richmond Hill	Bathurst Street at Augustine Avenue
Township of King	King Road and Parker Avenue

Traffic and pedestrian signal warrants are now included in a combined policy

A combined policy emphasizes the importance of balancing the needs of all intersection users. The proposed policy will continue to evaluate the need for pedestrian signals based on pedestrian volume and crossing opportunity or delay.

Council will continue to have the authority to approve signals that do not meet the policy criteria under the revised policy

Under the revised policy, Council retains the option to approve any new traffic and pedestrian signals. Since implementation of the Region's policy in 2002, traffic or pedestrian signals have been installed at 19 locations where the warrant was not satisfied. In these cases, the need for signals was justified based on specific needs that were proposed by staff and approved by Council on a case-by-case basis.

Link to key Council-approved plans

This report supports Vision 2051, which responds to the needs of our residents and promotes safety on York Region roads through effective policing, education and context-sensitive design.

Traffic and Pedestrian Signal Policy

5. Financial Implications

The installation of traffic and pedestrian signals are funded through the Transportation Services Capital budget. Each signal costs between \$200,000 and \$350,000 to install, and \$7,000 annually for operating and maintenance. The costs associated with additional intersection warranting signals under the proposed policy are not significant and can be accommodated within the funding included in the outlook years of the approved 2015 budget.

Funding of traffic or pedestrian signals at private entrances, whether warranted or unwarranted, would remain at the expense of the property owner. In addition, property owners are required to pay a one-time up-front fee which represents the net present value of ten years of operating and maintenance costs for the traffic or pedestrian signal.

6. Local Municipal Impact

Local municipalities have the ability to establish their own policy for traffic and pedestrian signals at intersections under their jurisdiction. The local municipalities, in consultation with Regional staff, will aid in the assessment of the need to install signals on Regional roads. Local municipal staff have been consulted on the proposed changes within this report and have indicated their support.

7. Conclusion

Staff recommends updating the current Traffic and Pedestrian Signal policies to directly reference the Ontario Traffic Manual Book 12, which reflects industry best practices in determining the need for the installation of new traffic or pedestrian signals on Regional roads. The increased responsiveness of the proposed policy will eliminate the need for the municipal warrant. Council will continue to have authority to approve signals that do not meet the warrants of the policy on a case-by-case basis.

For more information on this report, please contact Brian Titherington, Director, Roads and Traffic Operations at ext. 75901.

Traffic and Pedestrian Signal Policy

The Senior Management Group has reviewed this report.

May 21, 2015

Attachments (4)

6126261

Accessible formats or communication supports are available upon request

Attachment 1



STATUS: Draft
Council Approved: No
CAO Approved: No

TITLE: TRAFFIC AND PEDESTRIAN SIGNAL POLICY	Edocs No.: 5980367 Original Approval Date: October 17, 2002 Policy Last Updated: June 25, 2015 Posted on Intranet: (date)
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POLICY STATEMENT:

This policy provides guidelines for the installation of traffic and pedestrian signals within the Regional road network.

APPLICATION:

The Traffic and Pedestrian Signal Policy will be used by staff in determining acceptable locations for the installation of traffic and pedestrian signals within the Regional road network.

PURPOSE:

This policy is meant to provide a technically sound and consistent method of determining appropriate locations for the installation of traffic and pedestrian signals within Regional road network.

DEFINITIONS

Traffic Signals: Electronic signalling devices positioned at road intersections to alternate right-of-way for all road users.

Traffic Signal Warrant: A set of criteria used to determine the relative need for and appropriateness of traffic signals. Warrants are usually expressed in the form of numerical requirements such as the volume of vehicular or pedestrian traffic, delay to cross traffic, or collisions.

Traffic and Pedestrian Signal Policy

Local Municipality: Municipalities located within the Regional Municipality of York: Town of Aurora, Town of East Gwillimbury, Town of Georgina, Town of King, City of Markham, Town of Newmarket, Town of Richmond Hill, City of Vaughan and Town of Whitchurch-Stouffville.

Pedestrian Signals: Electronic signaling devices positioned at road intersections and pedestrian crossings to specifically control pedestrian movements versus competing traffic flows.

Safety: Implies the minimum hazard to vehicles, pedestrians and other road users.

DESCRIPTION:

Regional Intersections

Traffic and pedestrian signals are required to balance alternating right-of-way between all road users and to facilitate access to local communities. The Region receives numerous requests annually from residents and other stakeholders to install signals to manage congestion or improve safety.

Unwarranted installation of traffic signals increases overall delay on the major street; negatively impacting the flow of traffic and potentially increasing the incidences of collisions. It is important that the Region's policy include a traffic signal warrant to determine when a traffic signal installation is beneficial.

The Ministry of Transportation Ontario's traffic signal criteria, as per Ontario Traffic Manual Book 12 is widely used by Ontario municipalities. Ontario Traffic Manual Book 12 outlines criteria that includes traffic/pedestrian volumes, conditions and characteristics of an intersection and peak traffic hours to determine the technical need for the installation of new signals. Regional staff are to directly reference Ontario Traffic Manual Book 12 in determining the need for the installation of new traffic and pedestrian signals on Regional roads. In cases where the policy is not satisfied, Council will continue to have the authority to approve signals at those intersections.

The Region will be responsible for all costs for installation, operation and maintenance of traffic and pedestrian signals at Regional intersections.

Private Entrances

Funding of traffic and pedestrian signals for private entrances remains at the expense of the property owner. Property owners are required to pay a one-time fee, valued at the net present value of 10 years of the Region's traffic signal operating and maintenance costs at the time of application, to offset operating and maintenance costs. Traffic and pedestrian signals associated with development applications will be subject to the Development Charge Bylaw.

Traffic and Pedestrian Signal Policy

RESPONSIBILITIES:

York Region:

- The Region shall assess the need for the installation of traffic and pedestrian signals on the Regional road network based on the criteria set out in Ontario Traffic Manual Book 12
- Council continues to have the authority to approve the installation of traffic and pedestrian signals whether they satisfy the criteria or not

Local Municipalities:

- The local municipalities, in consultation with Regional staff, shall aid in the assessment of the need to install traffic and pedestrian signals

REFERENCE:

On October 17, 2002, Regional Council adopted the current Traffic Signal Installation Policy, which is comprised of criteria from the Ontario Traffic Manual, industry best practices and a custom warrant to reflect municipal desires in developing areas of the Region.

On June 21, 2007, Regional Council amended the Pedestrian Signal Installation Policy adopted on February 21, 2002 to permit the use of mid-block pedestrian signals on Regional roads. The current policy is comprised of a custom procedure based on a combination of the 2002 Pedestrian Signal Installation Policy and industry best practices.

CONTACT:

Brian Titherington, Director Roads and Traffic Operations, Transportation Services Department.

<u>APPROVAL INFORMATION</u> <i>[complete the details from the approved policy report]</i>		
CAO Approval Date: N/A		
Committee: Transportation Services	Clause No.:	Report No. Edocs. No. 5980367
Council Approval: Minute No.	Page:	Date: June 25, 2015



STATUS	Final
Council Approved	Y
CAO Approved:	Y

TITLE: Traffic Signal Warrants	Edocs No.: 32922 Original Approval Date: October 17, 2002 Policy Last Updated: December 18, 2008 Posted on Intranet: April 21, 2010
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POLICY STATEMENT:

The Traffic Signal Warrant policy is a policy providing a warrant process for the installation of traffic signals at locations along The Regional Municipality of York road network.

APPLICATION:

The Traffic Signal Warrant policy will be used by all Regional Employees, in particular Transportation and Works Employees who are involved in determining the locations for the installation of traffic signals along the Regional road network.

PURPOSE:

This policy is meant to provide a credible, technically sound and consistent method of determining warranted locations for the installation of traffic signals on Regional roads.

DESCRIPTION:

Traffic signals alternate the right-of-way between conflicting streams of vehicular traffic, or vehicular traffic and pedestrians crossing a roadway, with maximum efficiency and safety. Maximum efficiency implies the minimum delay to traffic. Safety requires that the traffic signals operate at the minimum hazard to vehicles and pedestrians.

The following warrants are to be used to determine whether or not traffic signals are justified at a location.

1. **Traffic Control Signal Warrants as Outlined in Book 12 of the Ontario Traffic Manual**

These warrants are currently used within The Regional Municipality of York. They are comprised of the following:

Warrant 1 – Minimum Vehicle Volumes

Warrant 2 - Delay To Cross Traffic

Warrant 3 – Collision Experience

If any one warrant is satisfied by 100% or if any two warrants are satisfied by 80% or more, the installation of traffic signals is considered to be justified.

2. Safety Warrant

The safety warrant is an analysis based upon the safety performance of an intersection, compared to other intersections with similar characteristics. These characteristics are summarized into safety performance functions (SPFs). In simple terms, the existing safety performance of an unsignalized intersection can be determined and then compared to a projected safety performance, if traffic signals were installed.

If the rate of equivalent collisions is substantially lower with the installation traffic control signals than as an unsignalized intersection, then the installation of traffic control signals is considered to be justified.

3. “T” Type Intersections Warrant

The threshold volumes for side street traffic shall not be increased by 50% when evaluating "T" type intersections because the side street traffic still faces the same traffic flows on the major street.

4. Peak Hour Delay For Entering onto the Major Street from the Side Street

A Peak Hour Delay warrant is met when:

- The total delay experienced by the traffic on one minor-street approach (one direction only) controlled by a stop sign equals or exceeds four vehicle-hours for a one lane approach and five vehicle-hours for a two lane approach; and
- The volume on the same minor street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes; and
- The total entering volume during the hour equals or exceeds 800 vehicles per hour for intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.

5. Installation of Unwarranted Traffic Signals Paid by Local Municipalities

Area municipalities shall be permitted to pay for the installation of unwarranted traffic signals subject to a number of conditions being met.

- The Transportation and Works Department have no technical objections to the installation of traffic signals at the location requested.
- Warrant 1 and Warrant 2 are satisfied by at least 70%.
- All installation costs are incurred by the local municipality. Installation costs are estimated at \$120,000 per location, permanent installation, \$60,000, temporary installation.
- All on-going maintenance costs are incurred by the local municipality, until such time as the traffic signals become warranted. On-going maintenance costs are estimated at \$4,000 per location/annually. Actual costs will be charged to the municipality.
- When the traffic signal becomes warranted, the Region will reimburse the local municipalities 100% of the original installation cost of permanent signals. Temporary installation will be done in areas where road improvements are planned within five years. For temporary installation, the Region will reimburse the local municipality, the value of the material that is recoverable.

RESPONSIBILITIES:**Transportation and Works Department:**

- The Transportation and Works Department shall assess the need for the installation of traffic signals on the Regional Road system.

Area Municipalities:

- The Area Municipalities, in consultation with Regional staff, shall aid in the assessment of the need to install traffic signals.

REFERENCES:

Report 10(7), Transportation and Works Committee, adopted by Council December 18, 2008

CONTACT:

Director of Roads Transportation, Transportation and Works Department

APPROVAL INFORMATION

CAO Approval Date: September 20, 2002

Committee: Transportation and Works

Clause: 8

Report No: 9

Council Approval:

Minute No. 156 **Page:** **Date:** October 17, 2002

32922 P01/5/1
822254 P06 2008 Extract



STATUS	Final
Council Approved	Y
CAO Approved:	Y

TITLE: Pedestrian Crossing Warrant	Edocs No.: 1818446 Original Approval Date: June 21, 2007 Policy Last Updated: June 21, 2007 Posted on Intranet: April 16, 2010
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POLICY STATEMENT:

This policy provides a warrant process for setting pedestrian crossing facilities along York Region road system.

APPLICATION:

The pedestrian crossing warrant criteria provide a consistent approach to determine appropriate location for the installation of pedestrian facilities within the York Region.

PURPOSE:

The purpose of this policy is to provide guidelines for the installation of Intersection Pedestrian Signal and Mid-block Pedestrian Signal on roads in York Region in such manner to increase the safety of all road users and encourage pedestrian and cyclist traffic in accordance with the concepts of a mobility and walk-able community.

DESCRIPTION:

This policy contains separate guidelines for implementing pedestrian crossing signals at intersections and mid-block locations.

Warrants

An IPS or an MPS is warranted when ALL of the following conditions apply:

1. If during any **4 hours** of a day the *pedestrian crossing demand (PCD)* exceeds 50 AND the number of *pedestrian crossing opportunities (PCO)* during the worst hour is less than 60.

OR

If during any **2 hours** of a day the *pedestrian crossing demand (PCD)* exceeds 25 AND the number of *pedestrian crossing opportunities (PCO)* during the worst hour is less than 60.

2. The distance to the closest signalized intersection exceeds 200 metres
3. Adequate sight distance is available for both pedestrians and vehicles for the operating speed of the roadway.
4. At proposed IPS locations fewer than 5,000 vehicles per day must be present on the intersecting side street approaches
5. There is adequate street lighting to illuminate the crossing and the approaches to the crossing

i. Pedestrian Crossing Demand (PCD)

Pedestrian crossing demand is the expected number of pedestrians that will utilize a pedestrian crossing after its signalization and will not necessarily be the same as the actual number of pedestrian counted using an unsignalized crossing. To account for this potential discrepancy the formula to estimate the PCD includes an adjustment factor (*f*). This factor represents the expected increase in pedestrian crossing volumes after the signalization of the pedestrian crossing.

$$PCD = f(A + 3 * E + 3 * C + 3 * PD)$$

f = Adjustment factor (Default = 1.2)

A = Observed number of pedestrians older than 12 years and less than 60 years

E = Observed number of pedestrians older than 60 years

C = Observed number of pedestrians less than 12 years old

PD = Observed number of pedestrians with physical disabilities

The adjustment factor (*f*) should be ideally estimated from an assessment of:

- The size and type of pedestrian generators. (e.g. the number of occupants in a senior citizen facility).
- The size and nature of pedestrian attractions (e.g. community centres, medical facilities, shopping malls etc.).
- The number of pedestrians avoiding the uncontrolled pedestrian crossing to use alternative routes or modes of transport

In some cases after a preliminary assessment it may be so evident that the PCD will exceed the threshold values of *Warrant 1* that a detailed pedestrian survey and/or an estimation of *PCD* may not be required.

ii. Pedestrian Crossing Opportunities (PCO)

The PCO index provides a measure of how difficult it is for a pedestrian to cross a uncontrolled pedestrian crossing, considering the existing roadway width and traffic volumes.

The PCO Index can be estimated from the following formula:

$$PCO = fQ * \left(\frac{e^{-fqG}}{1 - e^{-fqG}} \right)$$

The factor f accounts for the impact of arterial signal progression on gap availability. A worst case scenario is represented by $f = 1$ i.e. no arterial progression.

Q is the peak traffic flow (vehicle per hour)

$$q = \frac{Q}{3600}$$

G is the minimum gap required in the traffic stream for a pedestrian to perform an uninterrupted crossing:

$$G = \frac{W}{s}$$

W = Width of the roadway (metres)

s = Walking speed (Default = 1 m/s)

iii. Check Warrants

The need for a traffic control signal at an intersection or mid-block crossing shall be considered if an engineering study finds that **ALL** the following criteria are met:

A. Pedestrian Crossing Demand (PCD) \geq 50 per 4 hours

Or

B. PCD \geq 25 per 2 hours

And

C. Pedestrian Crossing Opportunities (PCO) ≤ 60 **GLOSSARY:**

Acceptable Gap - The time needed to cross the travelled lanes of a roadway at a walking speed of 1.2 m per second plus three seconds of perception and reaction time.

Controlled location – intersection or mid-block location with signal or stop sign.

Crossing Opportunities – the number of times a pedestrian can cross the roadway over a given period of time (e.g. one hour)

Crosswalks – portion of the roadway where pedestrian are permitted to cross the street; may be marked or unmarked.

Gap – the time a crosswalk is unoccupied by successive vehicles.

Mid-block crossing – a crossing point located between the intersections.

Sight Distance – the length of a roadway visible to the driver, bicyclist or pedestrian with an unobstructed line of sight.

Travel arrival patterns – the manner in which traffic arrives at the study location (e.g. random, platoon). A time space can be used to determine the traffic arrival pattern at a location between signalized intersections.

REFERENCE:

Replaces previous policy “Intersection Pedestrian Signal (IPS) Warrant Criteria” adopted by Council February 21, 2002, Report 2(1), Transportation and Works Committee

CONTACT:

Director, Operations, Roads Branch, Transportation and Works Department

APPROVAL INFORMATION

CAO Approval Date: May 31, 2007

Committee: Transportation and Works

Clause: 4

Report No: 6

Edocs No. 429995

Council Approval:	Minute No. 124	Page: 7	Date: June 21, 2007
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1818446 P01/5/1

Ontario Traffic Manual Book 12

Traffic and Pedestrian Signal Warrant Justifications

Criteria	Description
1. Minimum Volume (8 peak hour volumes)	<ul style="list-style-type: none"> • Considers cumulative volume on minor and major street and volume of intersecting traffic • Minimum Volume warrant at 100% fulfillment
2. Delay to Cross Traffic (8 peak hour volumes)	<ul style="list-style-type: none"> • Applied where heavy major street volume results in excessive minor street delay or hazardous crossing conditions • Delay to Cross Traffic warrant at 100% fulfillment
3. Volume/Delay Combination (8 peak hour volumes)	<ul style="list-style-type: none"> • Volume/Delay Combination warrant where both Minimum Volume and Delay to Cross Traffic warrant at 80% fulfillment
4. Minimum Four- hour Vehicle Volume	<ul style="list-style-type: none"> • Intended for intersections with excessive peak hour delays • Not to be applied in combination with other justifications • Minimum Four-hour Vehicle Volume warrant at 100% fulfillment • New Criteria, not included in current Policy
5. Collision Experience	<ul style="list-style-type: none"> • Signals may be considered at intersections with unusually high collision history • Collision Experience warrant at an average of five or more collisions susceptible to correction per 12-month period
6. Pedestrian Volume Delay	<ul style="list-style-type: none"> • Applicable where pedestrians experience excessive delays or hazard due to heavy traffic volume • Applicable for high pedestrian crossing volumes
7. Projected Volume	<ul style="list-style-type: none"> • Identifying traffic signal requirements as a result of development • Average hourly volume applied to Criteria 1 and 2 • Project Volume warrant at 150% fulfillment • New Criteria, not included in current Policy

DRAFT 2018 BUDGET AND 2019-2022 FINANCIAL PLAN

(Referred)

The Finance, Administration and Audit Committee, at its meeting of November 13, 2017, (Item 1, Finance, Administration and Audit Committee Report No. 12), recommended:

- 1) That the recommendation contained in the following report of the Chief Financial Officer and City Treasurer, the Director of Financial Planning & Development Finance and Deputy City Treasurer, and the Director of Financial Services and Deputy City Treasurer, dated November 6, 2017, be referred to the November 23, 2017, Finance, Administration and Audit Committee meeting to continue deliberations;
- 2) That the following presentations and Communication C5, presentation material titled "Vision, Leadership and Responsibility, Volume 1, Draft 2018 and Budget and 2019 – 2022 Financial Plan", be received:
 1. Chief Financial Officer and City Treasurer;
 2. Deputy City Manager, Public Works;
 3. Director of Parks Operations;
 4. Deputy City Manager, Community Services;
 5. Chief Executive Officer, Vaughan Public Libraries; and
 6. Chief Corporate Initiatives and Intergovernmental Relations;
- 3) That the following be approved in accordance with Communication C4, from the Deputy City Manager, Community Services, and the Director, Recreation Services, dated November 13, 2017, and referred to the Finance, Administration and Audit Committee meeting to continue deliberations:
 1. That the cost options associated with a proposed pilot project for youth ("Open to You(th)"), be received;
- 4) That the following deputations, be received:
 1. Mr. Kevin Hanit, Queensbridge Drive, Concord;
 2. Ms. Monika Sudds, Oren Street, Kleinburg;
 3. Ms. Melanie Borel, Bologna Road, Woodbridge;
 4. Mr. Liviu Zugravu, Scarborough;
 5. Ms. Heather Reppin, Tulip Drive, Brampton;
 6. Ms. Lydia Carroccia, Flushing Avenue, Woodbridge; and
 7. Mr. Richard Lorello, Treelawn Boulevard, Kleinburg; and
- 5) That the following Communications, be received:
 - C1 Chief Financial Officer and City Treasurer, the Director of Financial Planning and Development Finance and Deputy City Treasurer, dated November 10, 2017;
 - C2 Chief Financial Officer and City Treasurer, the Director of Financial Planning and Development Finance and Deputy City Treasurer, dated November 10, 2017; and
 - C3 Ms. Susan Jagminas, dated November 11, 2017.

Finance, Administration and Audit Committee meeting of November 6, 2017:

Recommendation

The Finance, Administration and Audit Committee, at its meeting of November 6, 2017, (Item 1, Finance, Administration and Audit Committee Report No. 11), recommended:

- 1) That the recommendation contained in the following report of the Chief Financial Officer and City Treasurer, the Director of Financial Planning & Development Finance and Deputy City Treasurer, and the Director of Financial Services and Deputy City Treasurer, dated November 6, 2017, be referred to the November 13, 2017, Finance, Administration and Audit Committee meeting to continue deliberations;
- 2) That the following be approved in accordance with Communication C1, from the Deputy City Manager of Public Works, the Chief Financial Officer and City Treasurer, and the Director of Environmental Services, dated November 2, 2017 and referred to the November 13, 2017, Finance, Administration and Audit Committee meeting to continue deliberations:
 1. That the recommended Draft 2018 Budget be updated to include both the capital and operating impacts of the Smart Water Meter Project as outlined in this communication;
 2. That upon further investigation into the merits of internal or external borrowing for the project, that the Chief Financial Officer and City Treasurer be delegated the authority to finance the project with the method that minimizes financial risk and interest costs and maximizes value for money; and
 3. That staff be directed to pursue a partnership with Alectra to implement an Advanced Metering Infrastructure solution;
- 3) That the presentation by the Chief Financial Officer and City Treasurer and Communication C2, presentation material titled "Draft 2018 Budget and 2019-2022 Financial Plan", dated November 6, 2017, be received; and
- 4) The following deputations be received:
 1. Mr. Kevin Hanit, Queensbridge Drive, Concord;
 2. Mr. Adriano Volpentesta, America Avenue, Vaughan; and
 3. Mr. Richard Lorello, Treelawn Boulevard, Kleinburg.

Report of the Chief Financial Officer and City Treasurer, the Director of Financial Planning & Development Finance and Deputy City Treasurer, and the Director of Financial Services and Deputy City Treasurer, dated November 6, 2017

Recommendation

The Chief Financial Officer and City Treasurer, the Director of Financial Planning & Development Finance and Deputy City Treasurer, and the Director of Financial Services and Deputy City Treasurer, in consultation with the City Manager and the Senior Management Team recommend:

1. That the presentation on the DRAFT 2018 Budget and 2019 - 2022 Financial Plan (the "2018 Budget Book") be received;
2. That Council approve the 2018 tax supported operating budget with budgeted operating gross expenditures of \$296.8 million and budgeted revenues of \$296.8 million;

3. That Council approve the 2018 water, wastewater rate and stormwater charge supported operating budget (collectively the “Rate Budgets”) with budgeted operating gross expenditures of \$161.3 million and budgeted revenues of \$161.3 million;
4. That the list of 2018 capital projects, together with their total costs in the amount of \$121.2 million, summarized in Volumes 1 and 2 and detailed in Volume 3 of the Draft 2018 Budget and 2019 - 2022 Financial Plan, be approved subject to annual capital funding;
5. That the list of 2019 - 2022 capital projects together with their total costs, outlined in Volume 3 of the Draft 2018 Budget and 2019 - 2022 Financial Plan, be recognized;
6. That the draft 2018 operating and capital spending authority be approved and the 2019-2022 plan be recognized as outlined in the 2018 Budget Book Volume 1, 2 and 3.
7. That the City Clerk and/or CFO & City Treasurer be authorized to apply for grants and to execute required documents including but not limited to funding agreements, should grants be made available related to initiatives within the approved or recognized budget.
8. That for user fees and service charges:
 - a. The schedules outlined in Volume 3 of the 2018 Budget Book be approved;
 - b. That the necessary by-laws be passed with effective dates of January 1, 2018;
 - c. That should the indexing of the user fees and service charges not be prescribed in the respective by-law and a budget not be passed by January 1st in a given year, the Treasurer be authorized to apply a 3 per cent fee/charge increase for economic adjustment, on January 1st of each year in 2019 and years after; and
 - d. That the Treasurer be authorized to revise Harmonized Sales Tax (HST) applicability for user fees and service charges as required by legislation.
9. That this matter and any comments received be referred to the next Finance, Administration and Audit Committee to continue deliberations.

Contribution to Sustainability

The City’s multi-year budget and financial plan contribute to sustainability by planning for the collection of revenues and allocation of resources to deliver the City’s programs and services, achieve the priorities set out in the Term of Council Service Excellence Strategy map and investing in infrastructure with a view toward achieving long-term financial sustainability.

Economic Impact

Tax rate increases set to a maximum of 3 per cent annually for the next three years.

At the January 12, 2015 meeting of the Finance, Administration and Audit (FAA) Committee, the following Committee recommendation was received and subsequently approved at Council:

That recognizing the community’s need for fiscal restraint, over the next few months the Finance, Administration and Audit Committee and City staff shall be directed to work toward a set target not to exceed 3% per annum for the period of 4 years.

The proposed 2018 tax supported operating budget includes a property tax increase of three per cent, which is an increase of approximately \$56 for the average annual residential tax bill. If adopted as presented, the draft 2018 property tax supported operating budget would have the following economic impacts, consistent with Council’s direction

Table2: Draft 2018 Property Tax Supported Operating Budget

\$ M	2017 Approved	2018 Proposed Budget
Gross Operating	278.4	296.8
Less: Non-Tax Revenue	89.7	100.8
Net Operating	188.7	196.0
Assessment Growth	2.9	1.8
Supplemental Taxation and PIL	5.8	5.8
Net Levy Requirement	179.9	190.2
Incremental Levy Requirement	5.2	5.5
Incremental Tax Rate	2.90%	3.00%

Note: some numbers may not add due to rounding.

Property Tax Supported and Rate Budgets Tabled Together

The tax supported budget has been tabled prior to the end of the fiscal year for the past three years. Beginning with the 2018 budget, the Rate Budgets are being tabled at the same time as the tax supported budget.

The Draft 2018 Budget and 2019-2022 Financial Plan includes a 2019-2022 operating and capital forecast at a summary level

The progress on the current Term of Council Service Excellence Strategy Map and projections identified in the department business plans help inform the development of a 2019 -2022 operating and capital forecast. This forecast is intended to provide staff with the information they require for department business planning, and to provide community stakeholders with the planned progress of City initiatives. Staff are currently undertaking the preliminary work on refreshing Vaughan Vision 2020 (the City's long-term vision) and the development of the next Term of Council Strategy Map with work beginning in 2017, continuing into 2018 with final deliberations and approval to occur in conjunction with the start of the new Council at the end of 2018 or early 2019. Any amendments to priorities and strategic initiatives that result from this update will be incorporated into future budget processes.

The following table presents the 2018 proposed budget and 2019-202 forecasted gross operating expenditures by Portfolio/Office.

Table1: Gross Expenditures by Portfolio/Office

\$ M	2017 Approved	2018 Proposed Budget	2019 Plan	2020 Plan	2021 Plan	2022 Plan
Community Services						
Fire and Rescue Services	48.3	49.5	51.3	52.1	52.4	52.7
Recreation and Other Community Services	54.0	54.9	56.7	57.3	57.4	57.5
	102.2	104.4	107.9	109.4	109.8	110.2
Public Works	206.9	223.7	239.9	255.2	263.5	270.3
Planning and Growth Management	24.7	26.3	26.4	26.3	26.2	26.3
Corporate Services	28.0	28.6	29.6	30.5	31.5	31.5
Vaughan Public Libraries	17.9	19.2	20.1	20.3	20.3	20.4
Other Offices	50.5	56.0	55.4	60.2	67.6	75.3
Combined Tax and User Rate Gross Expenditures	430.2	458.1	479.4	501.9	518.9	534.0
Less: Water, Wastewater and Stormwater	151.8	161.3	175.8	190.6	198.4	204.6
Tax Rate Gross Expenditures	\$278.4	\$296.8	\$303.6	\$311.3	\$320.5	\$329.4

Communications Plan

The following key themes resonate throughout all budget communications:

- Keeping taxes low
- Maintaining service levels
- Moving forward with city-building initiatives
- Ensuring an open and transparent process

A comprehensive multi-channel public communication plan has been developed to support the budget and to help ensure Vaughan residents have opportunities to be informed and involved in the budget process.

The communications plan includes a mix of communications channels to ensure all residents can be informed and involved in their preferred format: print/online/in-person. Communications tactics include:

- Print material (flyers and posters)
 - distributed to community centres, libraries, seniors' groups, ratepayer associations
- Advertisements, including meeting dates, times and topics to be covered
- Media outreach
- Public meetings that are also streamed online
- Enhanced web content
- Online feedback form and telephone hotline
 - feedback received will be incorporated into presentations at FAA meetings
- eCommunications (social media, eNewsletters)

Public Outreach on the Budget Process Occurs Year-round.

Outreach on the budget process is often a year round activity for the administration, both in formal and informal settings. This year, the Finance Office, in collaboration with the Asset Management Section of the Public Works Portfolio, created a new financial sustainability booth for both the Public

Works Day and Concerts in the Park at City Hall. Both event booths were well attended and staff engaged the public through priority setting games, surveys on value for services and general education/discussions on the financial and infrastructure issues within the City. The feedback on the booths were positive and staff intend to continue with the initiative in 2018.

Making Strides to Improve the Budget Book

The Budget Book received a refresh in 2016 as a result of staff making strides to achieve clear and easy to understand content. This year further improvements have been made to streamline the budget for easier navigation. A new section titled “This is Vaughan” provides an update on progress toward achieving the Council’s priorities on the Term of Council Service Excellence Strategy Map and outlines the actions planned for 2018 and 2019-2022.

Purpose

The purpose of this report is to present the Finance, Administration and Audit Committee with the DRAFT 2018 Budget Book that outlines the DRAFT 2018 Budget and 2019 - 2022 Financial Plan and the corresponding tax adjustments and water and wastewater rate increase that, if adopted, would allow the City to continue providing a wide range of services and infrastructure to Vaughan households and business.

Background - Analysis and Options

The Citizen Satisfaction Survey shows that residents are happy with the programs and services provided by the City

Citizen Satisfaction Surveys are an important tool to hear from citizens about their top-of-mind issues of concern and satisfaction with city services. The results of the Survey provides the City with valuable feedback from residents which inform policy decisions, budgetary spending and continuous improvement.

Overall the City is meeting the needs of residents, providing for a good quality of life, satisfaction for taxpayer dollars and a positive customer service experience. Findings from the last Citizen Satisfaction Survey indicate that 97% of respondents felt the quality of life in the City was very good or good. In addition, 94% of residents indicated that they were satisfied or very satisfied with the delivery of all services provided by the City.

The proportion of residents who believe they receive good value for their tax dollars has also increased and is now at the highest level recorded over the years with 85% of the residents agreeing that they receive at least fairly good value for their tax dollars, up 13% from 2014.

As we continue to deliver the Term of Council Service Excellence Strategy Map, the information gathered through the 2016 Citizen Satisfaction Survey will measure the impact of delivering on Council’s priorities and service delivery improvements.

Financial Sustainability is a Service Excellence Initiative on the City Strategy Map

Earlier in 2017, City Council approved a new Fiscal Framework through the Financial Sustainability Service Excellence initiative. This framework included guiding principles to inform staff and Council on decision making related to financial matters. In alignment with the guiding principles, the objective of the City’s financial planning process is to develop a multi-year budget that balances the need to maintain existing services, accommodate growth requirements, undertake corporate initiatives and safeguard water resources against the City’s capacity to fund them. The City’s financial management policies and practices are based on legislation and best practices to maintain the City’s strong financial position.

Building Capacity while Ensuring that Growth Pays for Growth

The City is growing rapidly. We are delivering on the vision of being a City of Choice, improving service delivery, managing growth and delivering services more effectively and efficiently. This is being done while maintaining tax rate increases that are aligned with the target set by Council while ensuring that growth pays for growth.

The DRAFT 2018 Budget is aligned with the term of council priorities and the service excellence strategic initiatives presented in the Term of Council Service Excellence Strategy Map. The plan provides a focused set of priorities for the corporation to deliver on our mission of citizens first through service excellence. The plan also aligns the City's 2018 budget with the priorities and goals of the strategic plan while keeping the tax rate in line with targets set by Council. This budget also presents a plan for achieving the City's priorities in the 2019 to 2022 period.

Focusing on service excellence means that we will seek out ways to improve how residents and businesses experience our services. The goal is to offer great value in our programs and services while also seeking efficiencies in how services are delivered. This will include identifying opportunities to use technology and apply digital strategies to improve our ability to deliver service excellence cost-effectively.

The draft 2018 budget outlined in the attached Draft 2018 Budget Book sets out staff's recommended operating allocations to deliver the City's programs and services over the next year including additional resource requests. It also provides information about capital projects that are underway, recommended new capital projects and forecasts for the City's obligatory and discretionary reserves. Investments in the Service Excellence Initiative projects proposed in this 2018 Budget Book will help achieve department efficiencies to ensure we will achieve Council's mandated maximum tax rate increases of not more than three per cent per year.

Relationship to Term of Council Service Excellence Strategy Map (2014-2018)

This report is consistent with the Term of Council Priority to meet Council tax rate targets of no greater than three percent and the Service Excellence Initiative related to Financial Sustainability.

Regional Implications

The Rate Budgets include wholesale purchases from the Region for 2018 representing 77 per cent of the City's combined water and wastewater costs.

The residential and business tax bills include levies from the City of Vaughan, the Region of York and the Province. The proposed tax levy increase presented in the Draft 2018 Budget Book is for the City's share, which is approximately 28% of the total average residential tax bill or 16% of the average business tax bill. The Region's budget will be tabled to York Region's Council on November 16, 2017.

Conclusion

The DRAFT 2018 Budget and 2019 -2022 Financial Plan is aligned with the Term of Council Service Excellence Strategy Map. The infrastructure investments have also been aligned to Council's priorities. This draft budget provides a financial framework within which the corporation can move forward in delivering the needed services and infrastructure to Vaughan citizens, while continuing its pursuit of service excellence.

Attachments

Attached Draft 2018 Budget Book is set out as follows:

Draft 2018 Budget Book

- Draft 2018 Budget and 2019 -2022 Financial Plan Volume 1 – Budget Overview
- Draft 2018 Budget and 2019 -2022 Financial Plan Volume 2 – Department Budgets
- Draft 2018 Budget and 2019 -2022 Financial Plan Volume 3 – Appendices and Proposed User Fees/Service Charges

Attachments have been posted on-line and a hard copy of each attachment is on file in the Office of the City Clerk. They can be found by clicking on this [link](#).

(Attachments to this report were previously distributed with the Agenda for the November 6, 2017, Finance, Administration and Audit Committee meeting)

Report prepared by:

Maggie Wang, MBA, CPA, CGA, A.I.M.A.
Manager, Corporate Financial Planning & Analysis

Sean Skinkle
Finance Manager, Water, Wastewater and Stormwater

Christina Bruce
Senior Manager of Strategic Planning

Rita Selvaggi, CPA, CA
Manager, Financial Planning & Analysis

Varant Khatchadourian, MBA, CPA, CMA, PMP
Manager, Financial Planning & Analysis

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)