

**TO:** CHAIR AND MEMBERS  
FINANCIAL MANAGEMENT COMMITTEE

**DATE:** 2017 February 14

**FROM:** DIRECTOR ENGINEERING

**FILE:** 32000-05

**SUBJECT:** 2017 ENGINEERING CAPITAL INFRASTRUCTURE TRAFFIC  
MANAGEMENT BYLAW FUNDING REQUEST

**PURPOSE:** To request funding approval for 2017 Traffic Management capital improvements.

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**RECOMMENDATIONS:**

1. **THAT** Council approve the capital expenditure of \$1.849 Million for Traffic Management capital improvements, as outlined in this report.
2. **THAT** Council authorize staff to bring down a Capital Reserves bylaw in the amount of \$1.935 Million (inclusive of GST), to finance the capital programs as outlined in this report.

**REPORT**

The 2016 – 2020 Annual Financial Plan provides funding for various multi-year capital improvements. The 2017 component of the 2016 – 2020 Annual Financial Plan does not include these expenditures. Upon approval of this funding request by Council, these expenditures will be included in the 2017 – 2021 Annual Financial Plan (Transportation Section). In order to proceed in a timely manner with the contracts for design and construction, funding approval is requested for the below listed projects. Sufficient Capital Reserves are available to complete these works.

**1.1 LED Streetlight Conversion – Phase II & III (EMH.0012 / .0015) \$488,200**

- Funding for phase 3 installation of LED streetlight fixtures and completion of phase 2 LED street light fixture installation
- The LED streetlights will reduce energy use, reduce maintenance costs, and provide higher quality (white) light and last much longer than existing fixtures.
- BC Hydro Energy Savings Rebates will be applied for and if successful the return on investment is estimated to be over 200% with a payback period of less than 6 years.
- This is the third phase of the project and the conversion of the majority of streetlights in the City will be completed in phase 4 (2018).

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**1.3 Bus Shelter Program (EMF.0058) \$250,000**

- Funding for new or replacement bus shelters to improve amenities for transit users.
- All old advertising bus shelters have been replaced and a review is underway to determine if we replace or refurbish existing old non-advertising shelters.
- Locations for bus shelters are determined based on the age of the existing infrastructure and benefit to transit users.
- New locations for advertising shelters are primarily based on transit usage at a bus stop.

**1.4 Traffic Signal Control Device (EMF.0062) \$230,000**

- Funding for the installation of a new traffic signal or upgrades to a full traffic signal to improve the operation of an intersection.
- Location of the traffic signal control devices are determined based on the operation of the intersection which includes an assessment of the traffic volumes, collision history, surrounding land uses, and comparison with other potential locations.

**1.5 Parking Meter Equipment (EMG.0008) \$175,000**

- Funding for City's ongoing infrastructure renewal program involving new or replacement parking meter equipment.
- In 2017, a portion of the funding will be used for the introduction of a mobile payment application and new parking meter equipment that accepts credit cards for increased customer convenience and better audit controls.
- The credit card enabled parking meters will focus on existing locations and single space meters. Multi-space parking equipment may be considered at new locations.

**1.6 Traffic Signal Cabinet Replacement (EMF.0061) \$150,000**

- Funding for the installation of replacement traffic signal control equipment and cabinets to maintain reliable traffic signal operation at all times.
- Replacement locations are determined based on the projected operating life, age of the equipment and tracking of emerging problems through regular maintenance.

**1.7 Minor Traffic Management Projects (EMF.0063) \$100,000**

- Funding for the potential installation of a wide variety of traffic control devices over the course of the year. The funding enables the City to be responsive to needs as they arise and to take advantage of cost efficiencies if completed in conjunction with existing projects underway. This includes the installation of special crosswalks or permanent traffic counters, adjustments to the roadway or existing traffic signals, or any other traffic control devices.
- In addition to staff initiatives, projects are often identified through public requests or a result of other work undertaken by city forces or third parties.

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**1.8 Traffic Camera Replacement (EMF.0064) \$100,000**

- Funding for the installation of replacement traffic signal cameras that are aging and less reliable. Traffic signal cameras, or optical vehicle detectors, are used to detect traffic and trigger the appropriate signal phase. They are often used instead of inductive loop detectors because they are unaffected by road work and one camera can detect multiple lanes. They are more expensive compared to inductive loops, and so are best suited for larger intersections with multiple lanes or in locations where there are ongoing disruptive road works.
- Replacement locations are identified by staff based on the age and model of existing equipment.

**1.9 Traffic Signal Communication (EMF.0065) \$100,000**

- Funding for the installation of replacement traffic signal communication equipment to allow continuous monitoring of traffic signals at City Hall. Many existing radios are beyond their useful life and are no longer reliable.
- Locations are determined based on the age of the equipment and recent maintenance history.

**1.10 Street Light Pole Replacement Program LRN (EMH.0016) \$100,000**

- Funding for the installation of replacement street light poles along the city's local road network where the existing pole has reached the end of its useful life, or where a pole has been damaged and there is no third party which can be pursued for recovery of costs.
- Locations are city wide and determined based on field inspections by Traffic staff.

**1.11 Street Light Pole Replacement Program MRN (EMH.0017) \$75,000**

- Funding for the installation of replacement street light poles along the city's major road network where the existing pole has reached the end of its useful life, or where a pole has been damaged and there is no third party which can be pursued for recovery of costs.
- Locations are city wide and determined based on field inspections by Traffic staff.

**1.12 Audible Signals at Signalized Intersections (EMF.0060) \$50,000**

- Funding for the installation of new or replacement audible signals to provide crossing guidance at signalized intersections for people with visual impairments.
- New locations are determined through public requests or identified by staff.
- Replacements are installed based on the age of the equipment or where they are malfunctioning.

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**1.13 Emergency Vehicle Pre-Emption (EMF.0059) \$20,000**

- Funding for new traffic signal emergency pre-emption installation on Boundary Road at Imperial/49<sup>th</sup> Street.
- Pilot installation program in coordination with the City of Vancouver as they operate and maintain the signal, but road is used by Burnaby Fire and RCMP as a major emergency response route.
- The Boundary corridor is expected to be completed the following year (17 signals) upon successful implementation of the pilot intersection.

**1.14 2014 Pole Replacement Program – MRN (EMH.0010) \$10,620**

- Funding to complete the installation of replacement steel street poles identified in the 2014 Pole Replacement program that are beyond their useful life.

**RECOMMENDATION:**

It is recommended that Council approve the capital expenditure of \$1.849 Million for roadwork capital improvements, as outlined in this report and that Council authorize staff to bring down a Capital Reserves Bylaw in the amount of \$1.935 Million (inclusive of GST) to finance the capital programs as outlined in this report.

Upon approval by Council, these expenditures will be included in the 2017 – 2021 Annual Financial Plan.



Leon A. Gous, P. Eng. MBA  
DIRECTOR ENGINEERING

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Copied to: City Manager  
Director Finance  
City Solicitor