

NO: R084

COUNCIL DATE: April 23, 2018

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **April 20, 2018**

FROM: **General Manager, Engineering**

FILE: **5420-01**

SUBJECT: **2018 LED Roadway Lighting Upgrade Program**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Authorize the product purchase of 5,935 Cobra head style LED roadway lighting fixtures with a total upset limit in the amount of \$2,731,000.00 from the Provincial Corporate Supply Arrangement (“CSA”) to replace existing street light fixtures within re-lamp Zone C, including Newton Town Centre (see Appendix “I”). This requires that:
 - LED Roadway Lighting Ltd. be engaged with an upset limit in the amount of \$2,500,000.00, (including GST/PST and contingency), for the supply of 5,587 LED fixtures; and
 - EECOL Electric be engaged with an upset limit in the amount of \$231,000.00 (including GST/PST and contingency), for the supply of 348 LED fixtures for intersections and other specific locations requiring brighter lighting levels.
2. That LUMCA Inc. be engaged with an upset limit in the amount of \$300,000.00 (including GST/PST and contingency) for the supply of 254 decorative LED fixtures.

INTENT

The purpose of this report is to request approval of the second phase of the 2018 LED Roadway Lighting Upgrade Program to retrofit 6,189 streetlights within re-lamp Zone C, including Newton Town Centre (see Appendix “I”) to LED technology.

BACKGROUND

The overall five phase implementation strategy for the 2018 LED Roadway Lighting Upgrade Program to LED Technology was approved on February 1, 2016 as part of Corporate Report R018; 2016 The first phase of the Program was approved on May 30, 2016 in Corporate Report R121; 2016, and was completed in City Centre, Guildford, and Fleetwood during 2016/2017. Approximately 6,200 High Pressure Sodium (“HPS”) streetlight fixtures were replaced with LED fixtures.

The superior light quality of the LED fixtures has been well received by residents. Staff have received positive comments from individuals and community associations specifically stating that the improved lighting has made their streets more accessible, improved the security of their personal spaces, and created safer interactions between pedestrians and vehicles.

This initiative has saved over 1,500,000 kWh of energy consumed compared to the same period in the previous year. This is the equivalent of powering 130 homes for a year. Since installation, the lower energy consumption has saved the City approximately \$160,000. This is on track with achieving the expected energy savings of \$700,000 per year anticipated in Corporate Report Ro18; 2016. Maintenance calls for LED street lights have been approximately 40% lower than HPS equivalent fixtures and believe this is on track to the anticipated maintenance cost savings.

DISCUSSION

The 2018 LED Roadway Lighting Upgrade Program estimated quantities of product and related product procurement costs are detailed in Appendix "II". The total estimated product cost for the 2018 LED Roadway Lighting Upgrade Program is \$3,031,000.00.

The City's electrical maintenance contractor, Cobra Electric Ltd., has agreed to take delivery of the LED products acquired by the City, provide storage during the installation process and provide environmentally friendly disposal of removed lighting fixtures at no additional cost.

Product Procurement

Consistent with Phase 1 of the 2018 LED Roadway Lighting Upgrade Program, the Engineering Department recommends the purchase of product through the CSA organized by the Provincial Government as part of the B.C. Hydro "LED Street Lights Across B.C." initiative. The CSA has been endorsed by the City's Purchasing Section. A competitive process for purchasing product will not be required, since identical product pricing is offered to all B.C. Hydro municipal customers. The City assessed the quality, characteristics and cost of the provincial CSA approved products and chose the fixture that provided the best value for each lighting type required within the Phase 2 project area.

Labour Procurement

The City completed a competitive tender process for the renewal of the Electrical Maintenance Contract in 2017. The open call for tenders included an option for proponents to bid solely on the scheduled re-lamping of Surrey's streetlights. Cobra Electric Ltd. was the successful proponent and has provided 2018 maintenance contract pricing to install LED lighting fixtures. The labour cost for the LED retrofit program will be offset by the 2018 re-lamping program, and is already included in the Electrical Maintenance Contract budget.

Project Funding

Funding for the product procurement of the 2018 LED Roadway Lighting Upgrade Program is available in the 2018 Roads and Transportation Budget.

Implementation

Cobra Electric Ltd. would be able to begin the process of retrofitting LED street light fixtures within re-lamp Zone C, including Newton Town Centre (see Appendix "I") in June with an expected completion date in September.

SUSTAINABILITY CONSIDERATIONS

This initiative to adopt LED roadway lighting supports the following Desired Outcomes ("DO") and Strategic Directions ("SD") identified in the City's Sustainability Charter 2.0:

- **Infrastructure:**
 - D03: Infrastructure systems are designed to protect human health, preserve environmental integrity, and be adaptable to climate change impacts;
 - D09: The transportation network supports and provides safe mobility for all ages and abilities;
 - D10: Surrey is part of a coordinated effort to reduce the risk of harm for all road users, with attention to those who are most vulnerable, including pedestrians and cyclists; and
 - SD2: Develop and manage our assets to adapt to technological change.

- **Public Safety:**
 - D01: Residents are safe and have a strong sense of security in all neighbourhoods and throughout the city; and
 - SD8: Ensure all public infrastructure is built and maintained to ensure community safety and well-being for all ages and abilities.

CONCLUSION

The Engineering Department recommends that Council:

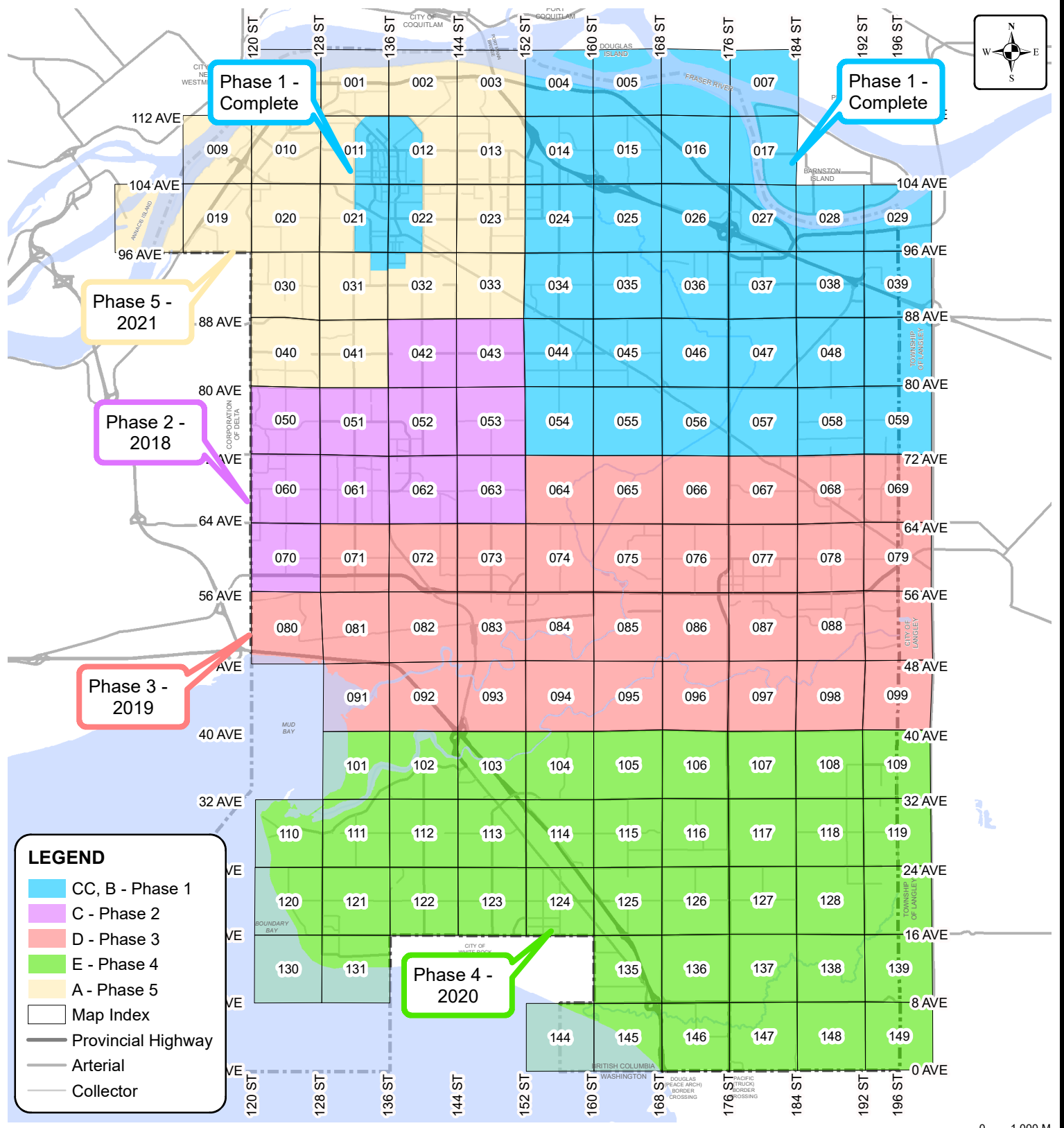
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Fraser Smith, P.Eng., MBA
General Manager, Engineering

FS/JB/RKR/jma/ggg

Appendix “I”: Map of Re-lamp Zones

Appendix “II”: Estimated Product Procurement Cost for Lighting Fixture Replacement in Re-lamp Zone C



LEGEND

- CC, B - Phase 1
- C - Phase 2
- D - Phase 3
- E - Phase 4
- A - Phase 5
- Map Index
- Provincial Highway
- Arterial
- Collector

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Scale: 1:124,437 0 1,000 M



Streetlight Relamp Zones

ENGINEERING DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.

APPENDIX “II”

Estimated Product Procurement Cost for Lighting Fixture Replacement in Re-lamp Zone C

Vender/Supplier of Led Street Light Fixture	Number of units to be replaced with LED lighting fixtures	Total Estimated LED Fixture Cost including GST/PST plus 10 contingency From CSA
LED Roadway Lighting (LRL)	5,587	\$2,500,000.00
American Electric Lighting – EECOL Electric Ltd.	348	\$231,000.00
Sub-Total	5,935	
LUMCA Inc. - City Centre Specified Decorative Fixtures	254	\$300,000.00
Total number of lighting fixtures to be replaced	6,189	Total estimated cost of product \$3,031,000.00