

City of Coquitlam

Request for Proposals
RFP No. 19-01-02

Traffic Signal and Street Light
Maintenance

Issue Date: March 15, 2019

TABLE OF CONTENTS

	Page
SUMMARY OF KEY INFORMATION	3
DEFINITIONS	4
1. INSTRUCTIONS TO PROPONENTS	5
1.1. Description of Services	5
1.2. Background.....	5
1.3. Term of Contract	5
1.4. Prices	5
1.5. Rules for Participation.....	6
1.6. Examination of Proposal Documents and Work Sites	6
1.7. Eligibility.....	6
1.8. Withdrawal of Proposal	6
1.9. Extension of Offer	7
2. EVALUATION CRITERIA.....	8
2.1 Multiple Preferred Proponents	8
2.2 Variations in Delivery of the Services.....	8
2.3 Evaluation Criteria.....	9
3. SCOPE OF SERVICES.....	11
3.1 Traffic Signal and Street Light Maintenance.....	11

Attachment 1 - Agreement

[PROPOSAL SUBMISSION FORM](#)

- Appendix A – Fees and Rates

SUMMARY OF KEY INFORMATION

RFP Reference	RFP No. 19-01-02 Traffic Signal and Street Light Maintenance
Overview of the Opportunity	The purpose of this RFP is to invite proposals from qualified firms to provide Traffic Signal and Street Light Maintenance .
Closing Date and Time	2:00 pm local time Thursday, April 4, 2019
Instructions for Proposal Submission	Proposals are to be consolidated into one PDF file and uploaded electronically through Qfile, the City’s file transfer service accessed at qfile.coquitlam.ca/bid <ol style="list-style-type: none"> 1. In the “Subject Field” enter: RFP Number and Name 2. Add files in .pdf format and Send (Ensure your web browser remains open until you receive 2 emails from Qfile to confirm receipt.) Phone 604-927-3060 should assistance be required. The City reserves the right to accept proposals received after the closing date and time.
Obtaining RFP Documents	RFP Documents are available for download from the City of Coquitlam’s website: www.coquitlam.ca/BidOpportunities Printing of RFP documents is the sole responsibility of the Proponents.
Instructions to Proponents	The guidelines for participation that will apply to this RFP are posted on the City’s website: Instructions to Proponents
Questions	Questions are to be submitted in writing quoting the RFP number and name up to 3 business days before the closing date sent to email: bid@coquitlam.ca
Addenda	Proponents are required to check the City’s website for any updated information and addenda issued, before the Closing Date at the following website: www.coquitlam.ca/BidOpportunities
Withdrawal of Submission	Proposals may be withdrawn by written notice only, made by an authorized representative of the Proponent sent to email: bid@coquitlam.ca prior to the closing date and time.

DEFINITIONS

“Agreement” “Contract” means the formal written contract between the City and the successful Proponent for the services, the preferred form of which is the Agreement (Attachment 1).

“City” means City of Coquitlam.

“Contractor” means the person(s) firm(s) or corporation(s) appointed by the City to carry out all duties, obligations, work and services first contemplated in the Request for Proposal and all associated documentation, which may also include mutually agreed revisions subsequent to submission of a Proposal. Both “Contractor” and “Proponent” are complementary in terms of duties, obligations and responsibilities contemplated at the Request for Proposals stage, through evaluation process, execution and performance of the services and Works.

“Proponent” means responder to this Request for Proposals.

“Proposal” means the submission by the Proponent.

“RFP” “Request for Proposals” shall mean and include the complete set of documents, specifications, drawings, agreement and addenda incorporated herein, and included in this Request for Proposals.

“Services” means and includes the provision by the successful Proponent of all services, duties and expectations as further described in this RFP.

“Supply” “Provide” shall mean supply and pay for and provide and pay for.

“Shall” “Must” “Will” “Mandatory” means a requirement that must be met.

“Work” “Works” shall unless the context otherwise requires, mean the whole of the work, tools, materials, labour, equipment, travel, and all that is required to be done, furnished and performed by the Contractor.

1. INSTRUCTIONS TO PROPONENTS

1.1. Description of Services

The City of Coquitlam (“City”) requests proposals from qualified experienced firms for the provision of **Traffic Signal and Street Light Maintenance** (“the Services”).

For further details refer to:

- **Section 3 – Scope of Services**
- **Attachment 1 - Agreement**

Procurement of goods and services is in accordance with Article 5 of the Canadian Free Trade Agreement (CFTA) and the New West Partnership Trade Agreement (NWPTA).

1.2. Background

The City is 123 square kilometres in size, with a population of approximately 140,000 residents. The current inventory of electrical devices in the City consists of:

Full Traffic Signals – 130 (121 with full UPS, 9 without)
Pedestrian Signals – 23 (6 with UPS, 17 without)
Fire Hall Signals – 4
Special Crosswalks – 6
Illuminated Pedestrian Crossings – 18
Advance Warning Flashers – 23
Uninterruptible Power Supply Units – 69
City Street Lights – 9,500 (approximately)
PTZ Cameras - 45

1.3. Term of Contract

The successful Proponent will provide the Goods and Services for a two (2) year term commencing on approximately June 1, 2019 and terminating on May 31, 2021. The contract may be extended for additional terms, subject to mutual agreement of price and service.

1.4. Prices

All Prices shall be in Canadian Funds and shall remain **FIRM** for the initial **two (2) year term** and shall include the provision of all tools, materials, equipment, labour, transportation, fuel, licenses, permits and overhead.

1.5. Rules for Participation

Proponents are advised that the rules for participation that will apply to this RFP are posted on the City's website: [Instructions to Proponents](#)

By submission of a Proposal, the Proponent agrees and accepts the rules by which the bid process will be conducted.

1.6. Examination of Proposal Documents and Work Sites

The Proponent must carefully examine the Proposal Documents and worksite(s). The Proponent may not claim, after the submission of a Proposal, that there was any misunderstanding with respect to the requirements and conditions imposed by the City of Coquitlam.

There will be no opportunity to make any additional claim for compensation or invoice for additional charges that were not considered and included in the Proposal price submitted, unless the City, at its sole discretion, deems that it would be unreasonable to do so, or there are additional work requirements due to unforeseen circumstances.

All information in this RFP Document, Drawings, Specifications, Site Visit and Investigation, and any resulting Addenda will be incorporated into any Contract between the City and the successful Proponent, and therefore must be considered by the Proponent in preparing their Proposal.

1.7. Eligibility

For eligibility, and as a condition of award, the successful company would be required to meet or provide the equivalent:

- a) Professional and Commercial General Liability (CGL) insurance coverage provided on the City's [Certificate of Insurance - Contractor Form](#)
- b) Be registered and provide WorkSafeBC clearance
- c) [Prime Contractor Designation Form](#)
- d) A City of Coquitlam or Tri Cities Intermunicipal [Business License](#)

These items are not required as part of this Proposal Submission but will be required prior to entering into an agreement with the City for Services.

1.8. Withdrawal of Proposal

Proposals may be withdrawn upon request by an authorized representative of the Proponent sent to email: bid@coquitlam.ca prior to the closing date & time.

1.9. Extension of Offer

The successful Proponent agrees to allow other local public agencies with similar needs in adjoining municipalities to participate in this contract.

Additional public agencies may opt to enter into a contract with the Contractor for the purchase of the services described in this RFP based on the terms, conditions, prices, and percentages offered by the Contractor to the City of Coquitlam with possibly only minor changes negotiated.

This condition is intended to be means of promoting cooperative purchasing efforts with the public sector, and provide additional value to the Contractor. Any additional contract would be subject to mutual agreement between the Contractor and other public agencies.

2. EVALUATION CRITERIA

2.1 Multiple Preferred Proponents

The City reserves the right to divide up the Services by type of work, or any other basis as the City may decide, and to select one or more preferred Proponents to enter into discussions with the City for one or more agreements to perform a portion or portions of the Services.

2.2 Variations in Delivery of the Services

The City may consider Proposals that include:

(a) Delivery of All or Portions of the Services

The City is considering the following combinations of Service delivery options:

1) Option 1 – All Traffic Signal Maintenance

The Services include all work orders for scheduled and unscheduled traffic signal maintenance ONLY, including street lighting on combination traffic signal poles.

2) Option 2 – All Street Light Maintenance

The Services include all work orders for scheduled and unscheduled street light maintenance.

3) Option 3 – All of Option 1 and Option 2

The Services include all traffic signal and street light work described in **Attachment 1 - Agreement**

The combinations listed herein (Option 1, 2 and 3) are suggested service delivery options only. The City encourages Proponents to propose Service delivery options that:

- Are most advantageous to the City; and
- Are aligned with the Proponent's experience, expertise, qualifications of personnel, and equipment and resources.

(b) Innovative Variations in the Delivery of the Services

The City is interested in innovative variations to the delivery of the Services. Variations can range from minor modifications to major system and administrative changes. The list below illustrates (but does not limit or promote the implementation of) possible variations. Innovative variations could include:

- 1) Longer or shorter Agreement terms;
- 2) Service delivery methodology improvements
- 3) Alternate vehicles/low emission vehicles; and
- 4) Alternate performance requirements

2.3 Evaluation Criteria

The evaluation of the Proposals may include any criteria that becomes evident during the evaluation process including, but is not limited to the following criteria listed in no order of precedence:

1. Corporate Experience Reputation, Capacity and Resources – 45 points
 - Experience, References, and demonstrated performance of Services for similarly sized municipal clients
 - Past experience with City related projects or contracts
 - Qualified Technical and Certified Personnel
 - Equipment and Resources
2. Technical – Performance Factors – 35 points
 - Experience and compliance with BC regulations, codes, statutes and bylaws
 - Compliance with City Specifications and Scope of Work
 - Service methodology and workplan
 - Quality control and assurance mechanism
 - Reporting – tracking, reports, inspections
 - Response times
3. Financial and Value Added – 20 points
 - Price, operating and maintenance costs, and warranty
 - Overall best value
 - Value added benefits
 - Sustainable Initiatives and benefits

And, upon selection of one or more lead proponent(s):

- Interviews may be conducted
- References may be contacted
- Verify compliance to obtain Insurance, WorkSafeBC and the terms and conditions of Contract

The lowest or any proposal will not necessarily be accepted, rather be analyzed to determine best overall value.

No prices, scores or totals will be provided to any Proponent.

3. SCOPE OF SERVICES

3.1 Traffic Signal and Street Light Maintenance

The successful Proponent (Contractor) will provide all qualified personnel, vehicles, transportation, fuel, materials and equipment necessary to perform the Services in the City.

The Services include the maintenance and repair of the City's existing and future street light systems and traffic control systems, both above and below ground.

The Services include but are not limited to:

- (a) Annual preventative maintenance of traffic signal equipment.
- (b) Annual upgrading and maintenance of street light system components.
- (c) Annual servicing and pole painting of street lights and traffic signals.
- (d) Provision of twenty-four (24) hours per day repair service to traffic signal equipment.
- (e) The repair of malfunctioning street lights during regular working hours except as noted in (e).
- (f) Provision of twenty-four (24) hours per day repair service to street lights, and street light systems described as an immediate hazard by the City, reporting agency or person.
- (g) All general related maintenance as directed by the City.

Complete details of the Goods and Services required are defined in **Attachment 1 - Agreement**.



City of Coquitlam

Attachment 1 - Agreement

Agreement No. 19-01-02

**TRAFFIC SIGNAL AND STREET
LIGHT MAINTENANCE**

THIS AGREEMENT made the _____ day of _____, 2019

BETWEEN:

CITY OF COQUITLAM, a municipal corporation under the laws of the Province of British Columbia, of 3000 Guildford Way in Coquitlam, British Columbia, V3B 7N2.

(the “City”)

AND:

(CONTRACTOR) a body corporate under the laws of Canada having its head office
(ADDRESS) Province of British Columbia,

(the “Contractor”)

WHEREAS the City and Contractor wish to undertake this Agreement for the provision of certain goods and services on the conditions set out in this Agreement:

Traffic Signal and Street Light Maintenance

TABLE OF CONTENTS

1. INTERPRETATION	5
1.1 Definitions	5
1.2 Schedules	5
1.3 Order of Governance	6
2. GOODS AND SERVICES	6
2.1 Goods and Services	6
2.2 Amendment of Goods and Services	6
2.3 Standard of Care/Quality Control	6
2.4 Warranty	7
2.5 Disposal of Waste and Surplus Goods and Materials	8
2.6 Term	8
2.7 Contract Extension	8
3. PERSONNEL	8
3.1 Qualified Personnel	8
3.2 Listed Personnel and Sub-Contractors	8
3.3 Replacement of Personnel or Sub-Contractors	8
3.4 Sub-Contractors and Assignment	8
4. LIMITED AUTHORITY	9
4.1 Agent of City	9
4.2 Independent Contractor	9
5. FEES	9
5.1 Payment for Goods and Services	9
5.2 Regular Hours of Work	10
5.3 Invoices and Payment	10
5.4 Invoice Supporting Documents	10
5.5 Verification of Records	10
5.6 Markup of Goods not listed in Schedule 2	11
5.7 Units of Goods and Services	11
5.8 Payment for “Hour” Units	11
5.9 Personnel Hourly Rates	11
5.10 Personnel Hourly Rates for Unscheduled Maintenance Calls	11
5.11 Equipment Hourly Rates	12
5.12 Preventative Maintenance – Authorization	12
5.13 Incidental Goods Supply	12

6. CITY RESPONSIBILITIES.....	12
6.1 City Information	12
6.2 City Decisions	12
6.3 Notice of Defect.....	13
7. INSURANCE AND DAMAGES.....	13
7.1 Indemnity.....	13
7.2 Insurance Requirements	13
7.3 Waiver of Subrogation.....	14
8. TERMINATION.....	14
8.1 Termination	14
8.2 Termination for Cause	14
8.3 Default.....	15
9. APPLICABLE LAWS, BUILDING CODES AND BY-LAWS.....	15
9.1 Applicable Laws	15
9.2 Codes and By-Laws	15
10. CONFIDENTIALITY AND DISCLOSURE OF INFORMATION.....	16
10.1 No Disclosure	16
10.2 Freedom of Information and Protection of Privacy Act.....	16
10.3 Return of Property	16
11. WORKSAFEBC, OCCUPATIONAL HEALTH AND SAFETY, CODES AND REGULATIONS.....	16
12. BUSINESS LICENSE.....	17
13. DISPUTE RESOLUTION.....	17
13.1 Dispute Resolution Procedures.....	17
14. JURISDICTION.....	18
15. GENERAL.....	18
15.1 Entire Agreement	18
15.2 Amendment	19
15.3 Survival of Obligations.....	19
15.4 Waiver	19
15.5 Signature	19
15.6 Enurement	19
SCHEDULES 1-7	21

1. INTERPRETATION

1.1 Definitions

In this agreement the following definitions apply:

“Agreement” means this agreement, including all Schedules referred to in section 1.2;

“City” means the City of Coquitlam;

“Contractor” means the person, firm or corporation identified as such in the Agreement;

“Fees” has the meaning set out in section 5.1;

“Invoice” has the meaning set out in section 5.3;

“Goods” means the goods, equipment or materials as described generally in Schedule 1, including anything and everything to be done for the fulfillment and completion of this Agreement;

“Term” has the meaning set out in section 2.6;

“Services” means the services as described in Schedule 1 including everything necessary for the fulfillment and completion of this Agreement.

1.2 Schedules

The following Schedules are attached as part of this Agreement:

- (a) Schedule 1 – Specification of Goods and Scope of Services;
- (b) Schedule 2 – Fees and Rates;
- (c) Schedule 3 – Response Requirements;
- (d) Schedule 4 – Personnel Requirements;
- (e) Schedule 5 – Electrical Infrastructure Device Locations;
- (f) Schedule 6 – City of Coquitlam Supplementary Specifications; and
- (g) Schedule 7 – Reporting Requirements.

1.3 Order of Governance

If there is any inconsistency or conflict between the provisions of the Agreement documents then:

The Agreement shall govern and take precedence in the following order:

- (a) Agreement, including the Schedules;
- (b) Addenda (if any);
- (c) Master Municipal Construction Document Specifications (Platinum Edition, 2009); and
- (d) Master Municipal Construction Document Standard Detail Drawings (Platinum Edition, 2009).

2. **GOODS AND SERVICES**

2.1 Goods and Services

The Contractor covenants and agrees to provide the Goods and Services for the City, pursuant to this Agreement.

2.2 Amendment of Goods and Services

The City may from time to time, by written notice to the Contractor, make changes to the Goods and Services. The Fees will be increased or decreased by written agreement of the City and the Contractor in accordance with Schedule 2.

2.3 Standard of Care/Quality Control

The Contractor will provide Goods and perform the Services with the degree of care, skill and diligence normally provided by a qualified and experienced professional. The Contractor represents that it has the expertise, qualifications, resources and relevant experience to provide the Goods and Services. The Contractor shall develop and provide a set of procedures to ensure that the quality of work performed in Coquitlam meets an acceptable standard. This includes but is not limited to checklists, spot inspections and financial audits. Reporting requirements are detailed in Schedule 7.

2.4 Warranty

The Contractor, unless specifically stated otherwise in this Agreement, guarantees to maintain and remedy the Goods and Services against any defects arising from faulty installation, faulty Goods or faulty workmanship which may appear within a warranty period of one hundred twenty (120) days for lamps and lamp installation and one (1) year for all other Goods and Services from the specified completion date on the Contractor's work order for that supply of Goods or provision of Services. During the warranty period, faulty Goods shall be replaced and defects shall be rectified to the satisfaction of the City.

If the City determines that a deficiency or defect exists in the Goods or workmanship in respect to a Service rendered under this Agreement, the City shall notify the Contractor in writing. In the event that the required remedial work, in the opinion of the City, must be done immediately to prevent serious damage, injury or loss of life, the City may perform or cause to be performed the necessary work and shall notify the Contractor accordingly.

Work required under warranty shall, except as otherwise provided herein for emergencies, be carried out by the Contractor within five (5) days of the City's written instruction to perform the work. In the event that this work is not done by the Contractor within the five (5) day period, the City may take whatsoever action is necessary to have the work done.

All costs resulting from the necessity to work under the warranty requirement, whether it be done by the Contractor, or the City, as provided herein, shall be borne by the Contractor. The Contractor shall, in addition, be liable to the City for all expenses, losses or damages incurred by the City as a result of such faulty Goods or defective workmanship, or as a result of the Contractor's failure to meet the warranty requirements as specified herein, including, but without limiting the generality hereof, all costs of engineering, inspection and testing work.

Damage to Goods and Service and labour associated with such damage caused by a motor vehicle accident or third party shall not be covered by any warranty.

2.5 Disposal of Waste and Surplus Goods and Materials

The Contractor shall dispose of all waste and surplus Goods and other materials in accordance with current legislation. Goods and other materials shall be recycled where applicable and any required disposal must be done at the Contractor's own facilities and expense.

2.6 Term

The Contractor will provide the Goods and Services for a two (2) year term commencing on approximately June 1, 2019 and terminating on May 31, 2021 (the "Term").

2.7 Contract Extension

At the discretion and mutual agreement of both parties, the Agreement may be extended for additional terms. If the City and Contractor elect to extend the Term, the provisions of this Agreement will remain in force, including the Fees, except where amended in writing by the parties.

3. PERSONNEL

3.1 Qualified Personnel

The Contractor will provide professional personnel who have the qualifications, experience and capabilities as described in Schedule 4 to provide the Goods and the Services.

3.2 Listed Personnel and Sub-Contractors

The Contractor will provide the Goods and Services using the professional personnel as described in Schedule 4 and identified by the Contractor, and the Contractor will not remove any such listed personnel or sub-contractors from this Agreement without the prior written approval of the City.

3.3 Replacement of Personnel or Sub-Contractors

If the City reasonably objects to the performance, qualifications, experience or suitability of any of the Contractor's personnel or sub-contractors then the Contractor will, on written request from the City, replace such personnel or sub-contractors.

3.4 Sub-Contractors and Assignment

The Contractor will not engage any personnel or sub-contractors, or sub-contract or assign its obligations under this Agreement, in whole or in part, without the prior written approval of the City. The Contractor will be as fully responsible to the City for acts and omissions of sub-contractors.

4. LIMITED AUTHORITY

4.1 Agent of City

This Agreement does not render the Contractor an agent or employee of the City, and without limiting the above, the Contractor does not have authority to enter into any contract or reach any agreement on behalf of the City, except for the limited purposes as may be expressly set out in this Agreement.

Every vehicle used by the Contractor in the course of providing the Goods and Services shall identify the Contractor by name.

4.2 Independent Contractor

The Contractor is an independent contractor. This Agreement does not create the relationship of employer and employee, a partnership, or a joint venture. The City will not control or direct the details, means or process by which the Contractor performs the Goods and Services. The Contractor is primarily responsible for performance of the Goods and Services and may not delegate or assign any Services to any other person except as provided for in section 3.4. The Contractor will be solely liable for the wages, fringe benefits, work schedules and work conditions of any partners, employees or sub-contractors.

5. FEES

5.1 Payment for Goods and Services

The City will pay for Goods and Services provided by the Contractor in accordance with the rates in Schedule 2 (the “**Fees**”). For “Annual Maintenance” and other fixed unit cost items, the unit prices shall include all labour, equipment, overhead, and profit (excluding applicable taxes) to perform the work tasks as outlined in Schedule 1. For “Unscheduled Maintenance” items, the hourly rates shall include all labour and equipment (excluding applicable taxes).

The Contractor’s general management, overhead, profit, and all incidental other items, parts, connectors and fasteners, necessary to complete the work shall be included the fees.

For all scheduled and unscheduled work, the Contractor will only supply the Goods and perform the Services with written authorization issued from the City in the form of a work order with a unique work order number. The work order number must be reported in the supporting documentation that accompanies the monthly invoice submitted by the Contractor.

5.2 Regular Hours of Work

Regular hours of work shall be between **07:00 and 16:00** Monday through Friday, excluding statutory holidays.

5.3 Invoices and Payment

- (a) The Contractor will submit one (1) monthly invoice (the "**Invoice**") for all the Goods supplied and Services performed in each month accompanied by the required reports and supporting documentation;
- (b) Invoices will be submitted in .pdf format sent to email: apinvoices@coquitlam.ca
- (c) Invoices are to include the following information:
 - (1) A unique invoice number;
 - (2) Invoice date;
 - (3) invoice period (one invoice for each calendar month);
 - (4) Subtotals of Service categories and applicable taxes shown separately; and
 - (5) Grand total of the invoice.
- (d) if the City reasonably determines that any portion of an Invoice is not payable then the City will so advise the Contractor; and
- (e) Payment will be made to the Contractor Net 30 days subject to review and approval of the invoice and supporting documentation.

5.4 Invoice Supporting Documents

Invoice supporting documents in Microsoft Excel or comma separated value format must accompany the Invoice. Refer to Schedule 7, Item 3 for additional details. Prices shall be charged to the City in accordance with Schedule 2.

5.5 Verification of Records

The Contractor will maintain accurate records for the Goods and Services that have been provided. Upon request from the City, the Contractor will make their records available to audit examination by the City at any time during regular business hours during Term and for a period of six years thereafter.

5.6 Markup of Goods not listed in Schedule 2

All replacement Goods not specifically listed in Schedule 2 but required for the completion of the work, will be supplied by the Contractor and invoiced to the City at cost plus fifteen percent (15%) mark-up. The Contractor shall submit, upon request by the City, copies of original supplier's invoices to verify the cost of the Goods.

5.7 Units of Goods and Services

The estimated units of Goods and Services in Schedule 2 are provided for evaluation and comparison of the fees and rates only. The City does not guarantee the actual amounts of Goods and Services will correspond even approximately to the estimated units, but reserves the right to increase or decrease the amounts of the Goods and Services, or to omit portions of the Goods and Services that may be deemed necessary or expedient by the City. The Contractor shall make no claim for anticipated profits, for loss of profit, for damages, or for any extra payment whatsoever, because of any difference between the amount of actual Goods and Services provided and the quantities stated in Schedule 2.

5.8 Payment for "Hour" Units

Where the unit of payment in Schedule 2 is an "hour", the time measurement for payment for completing an unscheduled maintenance call during regular working hours shall be calculated as follows:

- (a) a minimum of one (1) hour shall be charged, if the time for completing a service call is one (1) hour or less;
- (b) the time to the next nearest one-half (1/2) hour shall be charged, if the time for completing an unscheduled maintenance call is more than one hour; and
- (c) no payment will be made for travel time to and from each site and such time shall not be included in the time measured for payment.

5.9 Personnel Hourly Rates

The personnel hourly rates in Schedule 2 shall include all overhead, profit and all small tools and other miscellaneous equipment normally required by tradesmen in their provision of the Goods and Services. No payment will be made for travel time to and from each site and such time shall not be included in the time measured for payment.

5.10 Personnel Hourly Rates for Unscheduled Maintenance Calls

The Contractor's minimum charge at hourly personnel rates for unscheduled maintenance calls received for after-hours work, and all statutory holidays shall be as follows:

Between 16:00 and 00:00 (Monday to Friday)	two (2) hours
Between 00:00 and 05:00 (Monday to Friday)	four (4) hours

Between 05:00 and 07:00 (Monday to Friday)	two (2) hours
Weekends	four (4) hours
Statutory Holidays	four (4) hours

Weekends shall be defined as 00:01 Saturday to 05:00 Monday

Statutory Holidays shall be defined as 00:01 (holiday date) to 05:00 the following day.

5.11 Equipment Hourly Rates

The equipment hourly rates in Schedule 2 shall include all overhead, profit, operators, fuel, repairs, and moving charges. Time required for transportation of equipment to and from work sites within Coquitlam will be payable at the appropriate equipment hourly rates. Payment for time required to transport equipment into and out of the City's jurisdictional boundaries will not be payable.

5.12 Preventative Maintenance – Authorization

Any additional Goods and Services provided by the Contractor over and above the preventative maintenance tasks listed in Schedule 1 shall be authorized in writing prior to performing the work. Recurring items may be identified by the contract administrator in writing as a pre-approved extra to an assigned task.

5.13 Incidental Goods Supply

Goods provided to aid or assist in maintenance tasks and installation of new or replacement parts shall be considered incidental, and shall not be paid for separately by the City under Schedule 2.

6. CITY RESPONSIBILITIES

6.1 City Information

The City will, in co-operation with the Contractor, make efforts to make available to the Contractor all information, reports and records which the City has in its possession that relate to the delivery of the Goods and Services. The Contractor will review any such material upon which the Contractor intends to rely and take reasonable steps to determine if that information is complete or accurate. The Contractor will assume all risks that the information is complete and accurate and the Contractor will advise the City in writing if in the Contractor's judgment the information is deficient or unreliable and undertake such new surveys and investigations as are necessary.

6.2 City Decisions

The City will in a timely manner make all decisions required under this Agreement, examine documents submitted by the Contractor and respond to all requests for approval made by the Contractor pursuant to this Agreement.

6.3 Notice of Defect

If the City observes or otherwise becomes aware of any fault or defect in the delivery of Goods or the provision of Services, it may notify the Contractor, but nothing in this Agreement will be interpreted as giving the City the obligation to inspect or review the Contractor's performance with regards to delivering Goods or the provision of Services.

7. **INSURANCE AND DAMAGES**

7.1 Indemnity

The Contractor will indemnify and save harmless the City and all of its elected and appointed officials, officers, employees, servants, representatives and agents (collectively, the "Indemnitees"), from and against all claims, demands, causes of action, suits, losses, damages and costs, liabilities, expenses and judgments (including all actual legal costs) for damage to or destruction or loss of property, including loss of use, and injury to or death of any person or persons which any of the Indemnitees incur, suffer or are put to arising out of or in connection with any failure, breach or non-performance by the Contractor of any obligation of this agreement, or any wrongful or negligent act or omission of the Contractor or any employee or agent of the Contractor.

7.2 Insurance Requirements

The Contractor shall carry Commercial General Liability (CGL) Insurance satisfactory to the City in the amount of FIVE MILLION DOLLARS (\$5,000,000.) inclusive per occurrence.

The Contractor shall submit, upon award by the City of Coquitlam, a Certificate of Insurance certifying that the required insurance policies are in force and that:

- (a) **The City of Coquitlam** be named as "additional insured";
- (b) **The** policy shall not be cancelled, lapsed, transferred, assigned or materially altered without at least thirty (30) days written notice to the City of Coquitlam and the City's written approval of the cancellation, transfer, assignment or alteration.
- (c) **Such** certificate is to be provided as [Certificate of Insurance - Contractor Form](#)

Automobile Liability insurance, in an amount of not less than TWO MILLION DOLLARS (\$2,000,000.) is required on all licensed vehicles owned or used by the Contractor.

Contractor's Equipment Insurance is required for all equipment owned or rented by the Contractor and employees that provides coverage against all risks of loss or damage.

The Contractor shall ensure that all Sub-contractors carry insurance in the form and limits specified in this clause.

Note that the effective date for Certificate of Insurance will be the date of the Notice of Award.

7.3 Waiver of Subrogation

The Contractor hereby waives all rights of recourse against the City for loss or damage to the Contractor's property. The Contractor shall ensure that the property insurance required in section 7.2 (a) above contains a waiver of subrogation in favour of the City and its elected and appointed officials, officers, employees, servants, representatives and agents

8. TERMINATION

8.1 Termination

This Agreement may be terminated by either party without cause or penalty upon sixty (60) days written notice. Despite any other provision of this Agreement, if either party terminates this Agreement before the expiration of the Term, the City will pay to the Contractor all amounts owing under this Agreement in respect of Goods and Services already provided by the Contractor up to and including the date of termination, as determined by the City in its sole discretion. Upon payment of such amounts no other or additional payment will be owed by the City to the Contractor. The City will not be liable for any amount owing on account of lost profits relating to the portion of the Goods and Services not performed or other profit opportunities.

8.2 Termination for Cause

The City may terminate this Agreement for cause as follows:

- (a) If the Contractor is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of its insolvency, or if a receiver is appointed because of its insolvency, the City may, without prejudice to any other right or remedy the City may have, terminate this Agreement by giving the Contractor or receiver or trustee in bankruptcy written notice; or
- (b) If the Contractor is in breach of any term or condition of this Agreement, and such breach is not remedied to the reasonable satisfaction of the City within 5 days after delivery of written notice from the City to the Contractor, then the City may, without prejudice to any other right or

remedy the City may have, terminate this Agreement effective immediately by giving the Contractor further written notice.

If the City terminates this Agreement as provided by this Section, then the City may:

- (c) enter into contracts, as it in its sole discretion sees fit, with other persons to complete the Goods and Services;
- (d) withhold payment of any amount owing to the Contractor under this Agreement for the performance of the Goods and Services;
- (e) set-off the total cost of completing the Goods and Services incurred by the City against any amounts owing to the Contractor under this Agreement, and at the completion of the Goods and Services pay to the Contractor any balance remaining; and
- (f) if the total cost to complete the Goods and Services exceeds the amount owing to the Contractor, charge the Contractor the balance, which amount the Contractor will pay.

8.3 Default

If the Contractor is in default of any of its obligations under this Agreement, then the City may without terminating this Agreement, upon 5 days written notice to the Contractor, remedy the default and set-off all costs and expenses of such remedy against any amounts owing to the Contractor. Nothing in this Agreement will be interpreted or construed to mean that the City has any duty or obligation to remedy any default of the Contractor.

9. **APPLICABLE LAWS, BUILDING CODES AND BY-LAWS**

9.1 Applicable Laws

This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia. The City and the Contractor accept the jurisdiction of the courts of British Columbia and agree that any action under this Agreement be brought in such courts.

9.2 Codes and By-Laws

The Contractor will provide the Goods and Services in full compliance with all applicable laws, electrical codes and electrical regulations.

10. CONFIDENTIALITY AND DISCLOSURE OF INFORMATION

10.1 No Disclosure

Except as provided for by law or otherwise by this Agreement, the Contractor will keep strictly confidential any information supplied to, obtained by, or which comes to the knowledge of the Contractor as a result of the performance of the Goods and Services and this Agreement, and will not, without the prior express written consent of the City, publish, release, disclose or permit to be disclosed any such information to any person or corporation, either before, during or after termination of this Agreement, except as reasonably required to complete the Goods and Services.

10.2 Freedom of Information and Protection of Privacy Act

The Contractor acknowledges that the City is subject to the *Freedom of Information and Protection of Privacy Act* of British Columbia and agrees to any disclosure of information by the City required by law.

10.3 Return of Property

The Contractor agrees to return to the City all of the City's property at the completion of this Agreement.

11. WORKSAFEBC, OCCUPATIONAL HEALTH AND SAFETY, CODES AND REGULATIONS

- (a) The Contractor will, at its own expense, maintain WorkSafeBC coverage for all personnel engaged in the provision of the Goods and Services. The City has the right to deduct the amount of the unpaid premiums and assessments for WorkSafeBC coverage against any monies owing by the City to the Contractor. The City will have the right to withhold payment under this Agreement until the WorkSafeBC premiums, assessments or penalties in respect of the Goods and Services have been paid in full.
- (b) The Contractor will provide the City with the Contractor's WorkSafeBC registration number confirming that the Contractor is registered in good standing with WorkSafeBC.
- (c) The Contractor agrees that it is the Prime Contractor for the Goods and Services for the purposes of the *Workers Compensation Act*. The Contractor will have a safety program in place that meets the requirements of the WorkSafeBC Occupational Health and Safety Regulation and the *Workers Compensation Act*.
- (d) Without limiting the generality of any other indemnities granted by the Contractor in this agreement, the Contractor will indemnify and save

harmless the Indemnitees from and against all claims, demands, causes of action, suits, losses, damages, costs, liabilities, expenses, judgments, penalties and proceedings (including all actual legal costs) which any of the Indemnitees incur, suffer or are put to arising out of or in any way related to unpaid WorkSafeBC assessments owing from any person or corporation engaged in the performance of this agreement or arising out of or in any way related to the failure to observe safety rules, regulations and practices of the WorkSafeBC, including penalties levied by the WorkSafeBC.

- (e) The Contractor will ensure compliance with and conform to all health and safety laws, by-laws or regulations of the Province of British Columbia, including without limitation the *Workers Compensation Act* and Regulations pursuant thereto.
- (f) The Contractor understands and undertakes to comply with all the WorkSafeBC Occupational Health and Safety Regulations for hazardous materials and substances, and in particular with the "Workplace Hazardous Materials Information System (WHMIS)" Regulations. All "Material Safety Data Sheets (MSDS)" will be shipped along with the Goods and any future MSDS updates will be forwarded.
- (g) All works conducted on the public right of way requiring work zone set-up shall comply with the most current version of the Traffic Management Manual for Work on Roadways (currently 2015 Edition)
- (h) The Goods and Services shall be delivered and performed in accordance with the current CSA "Canadian Electrical Code", or as approved by a registered member of the Engineers and Geoscientists of British Columbia (EGBC).

12. BUSINESS LICENSE

The Contractor and any sub-contractors shall maintain a valid City of Coquitlam Business License. For information, contact the City's License Department -
Tel: 604-927-3085 or go to <https://www.coquitlam.ca/city-services/licenses-and-permits/business.aspx>

13. DISPUTE RESOLUTION

13.1 Dispute Resolution Procedures

The parties will make reasonable efforts to resolve any dispute, claim, or controversy arising out of this agreement or related to this Agreement ("**Dispute**") using the dispute resolution procedures set out in this section 13.

(a) Negotiation

The parties will make reasonable efforts to resolve any Dispute by amicable negotiations and will provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate negotiations.

(b) Mediation

If all or any portion of a Dispute cannot be resolved by good faith negotiations within 30 days, either party may by notice to the other party refer the matter to mediation. Within 7 days of delivery of the notice, the parties will mutually appoint a mediator. If the parties fail to agree on the appointment of the mediator, then either party may apply to the British Columbia International Commercial Arbitration Centre for appointment of a mediator. The parties will continue to negotiate in good faith to resolve the Dispute with the assistance of the mediator. The place of mediation will be Coquitlam, British Columbia. Each party will equally bear the costs of the mediator and other out-of-pocket costs, and each party will bear its own costs of participating in the mediation.

(c) Litigation

If within 90 days of the request for mediation the Dispute is not settled, or if the mediator advises that there is no reasonable possibility of the parties reaching a negotiated resolution, then either party may without further notice commence litigation.

14. JURISDICTION

- (a) Nothing in this Agreement limits or abrogates, or will be deemed to limit or abrogate, the jurisdiction of the Council of the City in the exercise of its powers, rights or obligations under any public or private statute, regulation or by-law or other enactment.

15. GENERAL

15.1 Entire Agreement

This Agreement, including the Schedules and any other documents expressly referred to in this Agreement as being a part of this Agreement, contains the entire agreement of the parties regarding the provision of the Goods and Services and no understandings or agreements, oral or otherwise, exist between the parties except as expressly set out in this Agreement. This Agreement supersedes and cancels all previous agreements between the parties relating to the provision of the Goods and Services.

15.2 Amendment

This Agreement may be amended only by agreement in writing, signed by both parties.

15.3 Survival of Obligations

All of the Contractor's obligations to perform the Goods and Services in a professional and proper manner will survive the termination or completion of this Agreement.

15.4 Waiver

No waiver by either party of any breach by the other party of any of its covenants, obligations and agreements will be a waiver of any subsequent breach or of any other covenant, obligation or agreement, nor will any forbearance to seek a remedy for any breach be a waiver of any rights and remedies with respect to such or any subsequent breach.

15.5 Signature

This Agreement may be executed in one or more counterparts all of which when taken together will constitute one and the same agreement, and one or more of the counterparts may be delivered in person or electronically.

15.6 Enurement

This Agreement shall enure to the benefit of and be binding upon the respective successors and permitted assigns of the City and the Contractor.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and year first above written.

Signed and Delivered by:

FOR THE CITY OF COQUITLAM:

General Manager Engineering & Public Works

FOR THE CONTRACTOR:

Name and Title

Signature

SCHEDULES 1-7

Schedules 1 through 7 will form part of the Agreement for execution, including information from the RFP and successful Proposal(s).

SCHEDULE 1 – SPECIFICATIONS OF GOODS AND SCOPE OF SERVICES

SCHEDULE 2 – FEES AND RATES

SCHEDULE 3 – RESPONSE REQUIREMENTS

SCHEDULE 4 – PERSONNEL REQUIREMENTS

SCHEDULE 5 – ELECTRICAL INFRASTRUCTURE DEVICE LOCATIONS

**SCHEDULE 6 – CITY OF COQUITLAM SUPPLEMENTARY SPECIFICATIONS
(TO BE PROVIDED TO THE SUCCESSFUL PROPONENT)**

SCHEDULE 7 – REPORTING REQUIREMENTS

SCHEDULE 1

SPECIFICATIONS OF GOODS AND SCOPE OF SERVICES

The Goods and Services include without limitation the supply and delivery of material, the provision of skilled labour, and equipment to perform traffic signal maintenance and street light maintenance and other requirements of this Agreement in the City.

A brief description of the Goods and Services include:

- (a) Annual preventative maintenance of traffic signal equipment;
- (b) Annual preventative maintenance of junction boxes, conduits and power service panels and bases;
- (c) Annual luminaire servicing (including conversion to and maintenance of LED technology) and pole painting of all roadway and pathway poles;
- (d) Annual signal module servicing and pole painting of traffic signal poles;
- (e) Provision of twenty-four (24) hours per day repair service to traffic signal equipment and its peripherals as required, such as battery backup systems, communications, cameras and detectors;
- (f) The repair of malfunctioning street lights during regular working hours except as noted in (g);
- (g) Provision of twenty-four (24) hours per day repair service to street lights, and street light systems described as an immediate hazard by the City, reporting agency or person;
- (h) General landscaping/rockscaping or concrete works related to bases and standing pads associated with traffic signal or streetlighting systems;
- (i) Graffiti removal from traffic signal and streetlight infrastructure;
- (j) Other maintenance as directed by the City;

1.0 GENERAL CONDITIONS

1.1 Specifications and Drawings

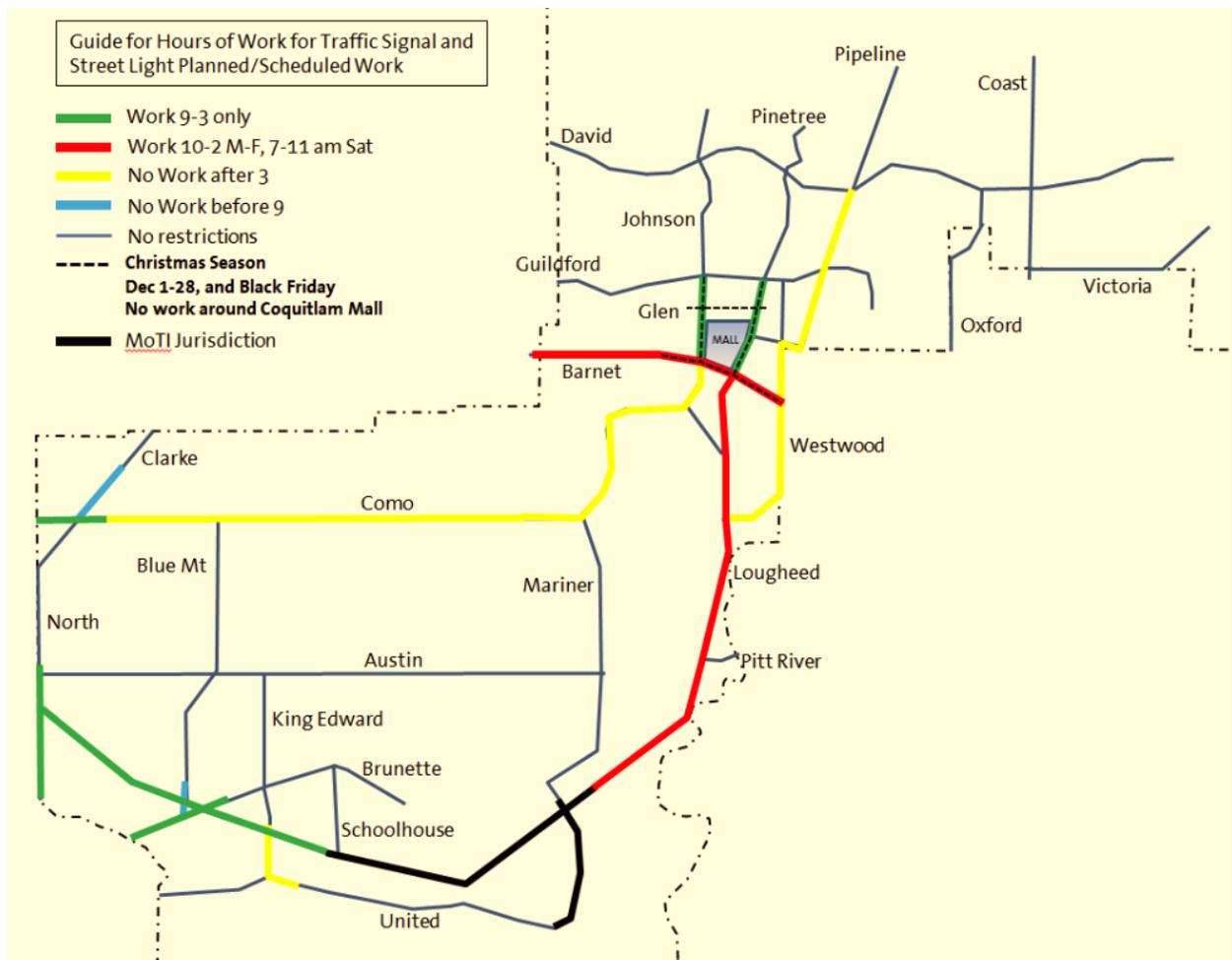
All Goods and Services shall be supplied and performed in accordance with Master Municipal Construction Document Platinum Edition (2009) Specifications and Standard Detail Drawings, as amended by the City of Coquitlam Supplementary Specifications (to be provided to the successful Contractor).

1.2 Protection of the Public and Property

The Contractor shall hold paramount the safety, health and welfare of the public. In supplying the Goods and performing the Services, the Contractor shall protect the City's property and other person's property from damage. The Contractor shall at the Contractor's own expense make good any such damage which arises as a result of the Contractor's operation except for damage which, in the performance of the Services, the Contractor could not reasonably avoid.

1.3 Traffic Control

The Contractor shall be responsible for all temporary traffic marking, signing, signaling and control while performing the Services covered by this Agreement. In general, whenever required to obstruct traffic for the repair and/or maintenance of traffic signals and street lights, the Contractor shall provide the necessary signs, barricades, and other warning devices as specified in the current edition of the document "B.C. Traffic Control Manual for the Work on Roadways". By default, the requirement of the Contractor to obtain City Road and Right-of-Way and Traffic Obstruction Permits is hereby waived, with the exception of complete road closures. Works will be completed unless permitted under exceptional circumstances according to the following restrictions:



1.4 Material Specifications

The Contractor shall supply all materials required for the Agreement except for materials made available and identified by the City (See Section 1.13). All materials used in the

Agreement shall comply with the latest Coquitlam and B.C. Ministry of Transportation Materials Standards and Approved Products List unless otherwise directed by the City in writing. Materials used by the Contractor must be supplied as new, and meet or exceed the latest CSA, (c) UL, or ITS (Warnock Hersey) standards.

If any material is installed by the Contractor, and subsequently recalled by the manufacturer of the material, replacement of the defective materials will be at the Contractor`s sole expense. The Contractor shall notify the City if a recall notice is issued by a manufacturer. Documentation regarding the recall is to be provided by the material manufacturer and Contractor.

1.5 Goods Purchased by City

The City has the right to purchase Goods required for the performance of this Agreement directly from manufacturers and suppliers, and to supply same to the Contractor. The Contractor shall be obligated to use such Goods, as directed by the City, for Services covered under this Agreement.

1.6 Alternate Goods

Use of substitute Goods shall be at the sole discretion of the City. If the Contractor wishes to use replacement Goods of an alternate type or manufacture from those which are approved, full particulars of the alternate item(s) shall be provided to the City, and the City's written approval of the substitution obtained. Should the Contractor use substitutions without prior approval from the City, and these substitutions are deemed unsatisfactory by the City, the Contractor shall be required to remove those items and replace them with Goods as specified by the City at the Contractor's sole expense.

1.7 Records and Reporting

The Contractor shall maintain accurate records of the Goods supplied and the Services performed. The Contractor shall complete all forms, record sheets, and procedure check lists specified by the City for each Service rendered. The information required include but is not limited to:

- (a) Date and time request for service was received;
- (b) Authority making request, e.g., Engineering, Parks, Facilities, etc;
- (c) Name of individual making request;
- (d) Identification of damaged unit, i.e., traffic signal or street light;

- (e) Location of damaged unit, traffic signal intersection and / or street light unique identifier;
- (f) Description of problem as reported;
- (g) Description of problem as field determined. Damaged traffic signals shall be identified as primary or secondary signal head. For traffic signal controller malfunctions, a Controller Failure Report shall be completed;
- (h) Indication of probable cause of damage, e.g., general, vandalism, third party damage, motor vehicle collision, etc;
- (i) Detailed description of action taken;
- (j) List of labour, equipment and material items and quantities thereof required to effect repair. Separate sub totals shall be shown for:
 - (1) Labour/equipment;
 - (2) Materials paid at unit prices;
 - (3) Materials paid at cost (including tax and 15 %); and
 - (4) Fuel emissions data for all equipment.
- (k) Date and time and initials of repair crew that arrived on site;
- (l) Date and time repairs completed. If a second repair call is required to complete the work, e.g., reinstall equipment repaired in shop, a separate maintenance activity sheet shall be completed. The initial record sheet shall be referenced on all subsequent sheets, items (a) to (h) above, inclusive, shall be listed on the initial maintenance activity sheet only; and
- (m) Unanticipated traffic signal and street light Services shall be documented with at least one photograph at no charge to the City.

The preceding list is provided as a sample of the information that the Contractor will be required to record. The City reserves the right to make amendments to this list as necessary.

A copy of all records specified by the City shall be forwarded to the City at the end of the month in which the Services were performed, together with a monthly invoice. A second copy of each record shall be maintained at the Contractor's place of business.

1.8 Meetings

The Contractor shall be required to meet with the City from time to time, as necessary, to review the performance and progress of this Agreement. The Contractor shall provide such additional details as may be requested by the City.

1.9 Traffic Signal and Street Light Maintenance Calls

- Definition of Unscheduled Maintenance Call

Unless otherwise directed by the City, an unscheduled maintenance call shall be defined as Services that are not part of preventative maintenance.

- Definition of Emergency Unscheduled Maintenance Call

Unless otherwise directed by the City, an emergency unscheduled maintenance call shall be defined as:

- a. repair to a primary (overhead) traffic signal head (one or more lamps out);
- b. repair to malfunctioning traffic signal equipment, including detector non-calls and signal in flash;
- c. maintaining power to a traffic signal as directed, either through changeout of City owned batteries or through use of a generator; and
- d. repair to damage that presents an immediate hazard to motorists, pedestrians and/or public or private property.

1.10 Locality and Continuity of Service

The Contractor must have an established local service centre complete with readily accessible equipment and resources in Metro Vancouver for the duration of this Agreement. Services must be available and provided in a timely and uninterrupted manner under all conditions and occasions, including implement weather and states of emergency unless otherwise agreed upon and acknowledged by the City in writing.

1.11 Street Light Preventative Maintenance and Upgrade

The City is currently converting to light emitting diode technology for roadway and pathway lighting. Depending on the phase of the project and schedule, this component of

work will either entail the conversion of the current system to the new, or maintenance of the updated LED system. The Contractor shall complete, as described below, street light upgrading and preventative maintenance:

- (a) The City shall provide geodata and mapping tools identifying the streetlights for the annual program to the Contractor to establish the schedule. The annual scope of work is generally one-fifth of the City's inventory completed on a 5-year rotation. Approximately 2,000 street lights and approximately 150 service bases are to be serviced each year.
- (b) The City has completed Year One of the streetlight conversion, with the remainder tentatively scheduled for 2019 through 2022.
- (c) The City shall complete the lighting design and procure the parts required for each of the conversion programs. Parts will be shipped directly to the contractor for secure storage.
- (d) Cobra head fixtures will be directly replaced. Post top twistpak fixtures will be removed and converted to a davit style with an adapter. Select ornamental fixtures in special precincts will be outfitted with retrofit kits. The City will supply the fixtures, adapters and retrofit kits. The contractor shall provide all other required material such as conductors.
- (e) The contractor shall replace the the entire run of conductor should the existing conductor not be sufficient for the conversion process.
- (f) Surge suppression shall be provided by the contractor and installed in the service base maintenance portion of the LED upgrade.
- (g) Regular preventative maintenance of the LED streetlights will be performed in subsequent years once inventory has been fully converted;
- (h) The Goods and Services required are described in Schedule 1, Section 3.0.
- (i) The Contractor shall be equipped to service poles with a minimum of 11 metres in height.
- (j) Street light maintenance will take place on all roadway street light assets under jurisdiction of the City; and

- (k) Any extra maintenance work required outside the scope of the annual maintenance shall be reported immediately to the City so that a separate work order may be issued, unless otherwise identified in writing as preauthorized by the contract administrator.

1.12 Electrical Infrastructure Inventory Changes

Electrical infrastructure inventory is continually being updated and adjusted. The City reserves the right to make adjustments to Schedule 5.

1.13 Traffic Signal Materials Supplied by City

Generally, The Contractor will supply all Goods required to perform the Works except the following items supplied by the City:

- (a) Controller cabinets;
- (b) Controller units and associated controller cabinet cards/modules;
- (c) MMUs;
- (d) All pre-emption equipment and cabling;
- (e) Traffic Signal to central system communication equipment (Ethernet/radio);
- (f) Uninterruptable Power Supply system components;
- (g) Video Detection Systems and CCTV camera systems;
- (h) Radios;
- (i) Padlocks and keys; and
- (j) Controller and other equipment interface software;

The City carries only a limited supply of the above items in stock, and therefore is subject to delay due to ordering and delivery. The Contractor shall have no claim due to delivery delay of City supplied materials.

Materials supplied by the City and materials delivered following execution of the Agreement shall be examined by the Contractor for quality and defects. The Contractor

shall sign a statement of materials acceptance, specifically listing materials and quantities thereof and noting all defective material.

1.14 Fuel Emissions Data

The Contractor shall report on the quantity of fuel (gasoline, diesel, natural gas, propane, and bio-fuel blends) used to operate vehicles, equipment and machinery as part of the delivery of the Services “in scope” on a mutually agreeable basis. Fuel consumption associated with the provision of these Services must be provided to the City relating to the Services provided in the previous period, in the following sample format.

Sample Report:	
P.O. Number	567932
Date Range	March 1 – September 15
Gasoline (litres)	1,200
Diesel (litres)	4,500
Prorated Based on	Service hours

Data provided should include the following information:

Litres of fossil fuels consumed in relation to the service delivered under the Agreement in each vehicle class, and the fuel type, for the Goods and Services provided in the previous period.

The City can provide direction, if necessary, to calculate this information.

2.0 TRAFFIC SIGNAL PREVENTATIVE MAINTENANCE

The Contractor must submit a detailed work schedule for the year upon receipt of the confirmed list of locations for annual maintenance from the City within seven (7) days of award of contract. The work shall start within seven (7) days of approval of the work schedule.

The Contractor shall perform assigned traffic signal preventative maintenance annually in each calendar year of the Contract.

Traffic signal preventative maintenance shall be completed at each traffic signal device location within 13 months of the previous traffic signal preventative maintenance.

Any extra maintenance work required outside the scope of the annual maintenance shall be reported immediately to the City so that a separate work order may be issued, unless otherwise identified in writing as preauthorized by the contract administrator.

Annual traffic signal preventative maintenance consists of the following work:

- (a) Major annual maintenance of above ground and underground Traffic Signals and Pedestrian Signals;
- (b) Annual maintenance of uninterruptible power supply systems;
- (c) Annual maintenance of Fire Signals;
- (d) Annual maintenance of Illuminated Pedestrian Crossings and Special Crosswalks; and
- (e) Annual maintenance of Advance Warning Flashers

2.1 Above Ground Equipment

The interval between annual preventative maintenance for traffic control devices shall not be more than 13 calendar months.

The Contractor shall undertake the following maintenance tasks for each location listed in Schedule 5.

- (a) Replace all burnt out sign and combination pole luminaire lamps. Check for correct photocell operation and luminaire outages by covering the photocell. Also test photocell bypass after correct photocell operation is verified.
- (b) Clean all backboards (front and back), visors and signs with biodegradable cleaning solution. Rinse with clean water and wipe dry.
- (c) Repair or replace any lenses, sockets, terminals, reflectors, wires and weather seals that are burnt, corroded, or broken or otherwise damaged. Confirm that LED displays are installed with the letters “top” located at the top of the lens. Inspect LED display units for burnt out/defective LED arrays. Replace the unit if any LED arrays appear defective. For incandescent traffic signal lamps, replace all lamps with the products specified in the City’s “Approved Materials and Products List” (to be supplied to the Contractor upon award of the Contract). The filament of the lamps shall have the open end of the “horseshoe” in the up position.
- (d) Spray all signal display lenses with a mild detergent and water solution and polish dry with a soft cloth (do not use glass cleaner).
- (e) Lubricate signal head door hinges and latches.
- (f) Confirm appropriate tightness of all screws, bolts and nuts on mast arm or davit mounted sign and signal mounting hardware.
- (g) Test integrity of safety cables. Report any mast arm or davit mounted equipment lacking safety cables to the City, including post-top mount head sections, where applicable.
- (h) Repair any damaged wire insulation. Inspect traffic spring cushion hangers for hinge pin failure and wire insulation wear.
- (i) Inspect poles and arms and all mounting hardware for general structural integrity, broken or cracked welds and excessive corrosion. Heavily corroded areas shall be tested. Locations with corrosion problems shall be noted on the maintenance check lists for immediate follow-up. Inspect the condition of the concrete pole base for cracks, spalling or other defects. The Contractor shall

report to the City any poles or base deficiencies. Poles that have bent studs or do not appear plumb shall be reported to the City.

- (j) Replace and secure damaged or missing hand hole covers.
- (k) Confirm that all pole and arm assembly and mounting bracket nuts/bolts are present and correctly tightened.
- (l) Any observable hazard, related to the pole's proximity to overhead electrical lines checked against the current guidelines and shall be reported immediately to the City.
- (m) Any utility infrastructure that visually obstructs primary traffic signal heads from oncoming traffic shall be reported immediately to the City.
- (n) Ensure that the traffic signal equipment does not have any contact/visibility obstructions due to vegetation/trees. Any damaged, faulty, worn, missing or other above ground equipment requiring further works found onsite are to be reported immediately to the City for further instruction.
- (o) Spray all pole assembly and base flange nuts and bolts with penetrating corrosion inhibiting lubricant and confirm correct torque.
- (p) Ensure all signal heads and pedestrian heads have proper vertical and horizontal alignment.
 - 1. All heads shall be vertical and not leaning left or right when facing them.
 - 2. Heads facing towards an inclined roadway shall also be inclined to match the grade of the approaching roadway.
 - 3. Primary traffic signal heads shall be pointed squarely toward the lane(s) of oncoming traffic.
 - 4. Secondary heads shall be adjusted to be clearly visible on the approach and as far forward as the center of the intersection.
 - 5. Pedestrian heads and audible signals shall be aimed at the center of the crosswalk markings at the opposite end of the crosswalk. Audible heads shall have the front face tilted slightly downward to prevent water entry. The Contractor shall test each audible signal for proper operation and appropriate volume through a pushbutton actuation.

- (q) Clean and polish Video Detection Image Sensor Enclosure lenses and PTZ camera domes (inside and out) or lenses with cleaner and cloth suitable for such optical systems. Openings into the camera are to be plugged with duct seal to prevent insect entry.
- (r) Confirm tightness of all fittings and mounting brackets on Ethernet Radio and antenna panels. DO NOT ALTER THE RADIO ALIGNMENT. Notify the City immediately after radio inspection is complete, so that communication can be verified. Adjust radio alignment if necessary.
- (s) Confirm tightness of all Image Sensor mounting brackets and cable connectors. DO NOT ALTER THE IMAGE SENSOR ALIGNMENT. Notify the City immediately after image sensor inspection is complete, so that alignment can be verified. Adjust image sensor alignment and sun shroud if necessary.
- (t) Open Image Sensor Pole Mounted Junction Boxes. Check for signs of moisture. Drill 1/8 inch hole in bottom of box if signs of moisture are found. Remove any accumulations of dirt, insects etc. Tighten all terminals and inspect all connectors and cables for corrosion, wear and general condition.
- (u) Test for proper operation of all pedestrian buttons and pedestrian push button stations. Check for responsiveness and audible feedback. Replace faulty push-buttons with Bulldog BDLM2-Y or approved/provided equivalent. Report faulty advanced audible pedestrian systems push button stations to City for repair/replacement assessment.
- (v) Ensure tightness of all terminal connections in service panel and seal any water leaks. If labels are missing or incorrect, re-label breakers with standard labels supplied by the City. For combined traffic signal and street lighting system services, add warning label supplied by City to panel if not already in place. Lubricate or replace lock as necessary and ensure that hinge screws/bolts are tight.
- (w) Ensure the connections between the ground rod and ground conductor are clean and tight.

2.2 Underground Equipment

- (a) Open each electrical and communication junction box associated with the traffic signal. Clean dirt accumulations and organic material out of junction box rim, bottom, and bolting mechanisms. Clean and lubricate bolt and threaded insert. Replace missing bolts. Report any damaged junction boxes, lids, collars and any junction box or lid that is either protruding or is recessed more than 20mm from the surrounding sidewalk grade. Install hanger bar (if missing) and tie wrap splices to bar;
- (b) Ensure all metal junction boxes and metal vault lids are bonded; and
- (c) Add permanent bond wire bolted directly to steel lids for poly junction boxes if not already present.

2.3 Controller and UPS Cabinets

- (a) Clean outside of all cabinets, remove all organic material such as mold and sap, as well as graffiti with non-damaging cleaning chemicals/detergents. Report any cabinets requiring repainting due to un-removable graffiti or damaged/deteriorating paint;
- (b) Ensure upper vent holes are clear of debris;
- (c) Ensure that cabinet is securely mounted and base gaskets are sealing against moisture/debris entry;
- (d) Lubricate latches, lock and hinges. Replace missing or damaged locks;
- (e) Repair any door gasket damage, spray gaskets with silicone spray if door sticks closed;
- (f) Vacuum complete cabinet interior. Blow remaining dust out with compressed air;
- (g) Megger for proper cabinet ground. Report test results in the traffic signal log book provided by the City;
- (h) Ensure that all terminal screws, crimp on connectors, cable connectors and plug-in components are tight and seated firmly;
- (i) Ensure flash transfer relays are in good condition and operate correctly. Replace if faulty;

- (j) Ensure flasher operates correctly. Repair if faulty;
- (k) Record and compare serial number of each cabinet component using a tabular form for submission to contract administrator upon request;
- (l) Replace air filter;
- (m) Check that the vehicle detection system registers calls properly;
- (n) Complete an electronic test of the CMU or MMU using an ATSI, electronic conflict monitor/MMU tester;
- (o) Ensure duct seal is installed on all conduits entering the base of the controller cabinet. Fill any gaps between the conduits and base knock out with grout. Cap any empty ducts;
- (p) Test thermostatic operation of fans and heaters. Replace fans showing signs of bearing failure (noise and vibration);
- (q) Load switches shall be checked for their proper operation. Off state voltages of each output shall be recorded on the test record form supplied by the City. Replace load switches showing off state voltage above maximum allowable limit.
- (r) Ensure all major cabinets components are labeled with equipment number labels (supplied by the City). Major cabinet components include detectors, controllers, communication devices, CMU/MMUs, BIUs, TS-2 power supplies, video equipment and UPS equipment;
- (s) Install velcro straps for seismic restraint on all shelf mounted components; and
- (t) Check plug-in style power supplies for auxiliary equipment and ensure they are held in place by straps.
- (u) Secure and tidy patch cabling in the cabinet using Velcro or straps as appropriate.
- (v) Check switch for link activity on all active ports. Report inactivity immediately to staff for remediation.

2.4 Uninterruptible Power Supplies (UPS)

UPS maintenance shall be completed by the Contractor at locations identified in the schedule as part of the annual preventative maintenance.

The Contractor shall undertake the following services at each UPS included in Schedule 5. This maintenance applies to both the full intersection control UPS systems only.

Perform a Self -test on the UPS system. Refer to the specific UPS user guide below:

- (a) Activate the UPS Self-test function. Control Menu BATT TEST. Test duration = two (2) minutes.
- (b) After self test, turn off UPS by shutting down the DC breaker. Measure the individual battery voltages using a Midtron battery tester. There should be no more than 0.6 volts difference between the highest battery voltage and the lowest battery voltage. Record Siemens values and voltage readings at given temperature in database template provided by the City;
- (c) Verify there is no Low Battery Alarm;
- (d) Look at the UPS indicator control panel (with 3 neon indicators) and ensure the “ON BATT” indicator is on;
- (e) Open the front door of the traffic cabinet and ensure the ‘ON BATT” indicator is on;
- (f) Inspect top of batteries for dirt, rust, moisture, etc. Clean as required;
- (g) Inspect batteries for cracks or swelling. Replace defective battery or batteries;
- (h) Check battery terminals for corrosion. Clean terminals and add anti-oxidation materials such as No-Ox, NCP, Penetrox, etc. Ensure battery terminals are tight;
- (i) Ensure the battery temperature probe is attached with duct tape;
- (j) Ensure batteries are not sitting directly on concrete;
- (k) Ensure a gap of no less than ¼” is provided for proper airflow around batteries and UPS unit. Ensure nothing is on top of the UPS control unit; Record all findings in UPS log book provided by the City; and
- (l) Install firmware upgrades as instructed and required.

Alternate Test:

Use this test if on battery testing is necessary for periods longer than the two minute BATT TEST performed above.

- (a) On the Automatic Transfer Switch (ATS), locate the “UPS INPUT” circuit breaker and depress and then release the button. This will interrupt the AC power to the UPS control unit and the ATS will transfer the UPS output to the load (traffic controller cabinet). The LCD screen should indicate “INVERTER”;
- (b) Keep in this state for ten (10) minutes. Monitor the traffic controller and traffic signals to ensure they remain operational. Look at the UPS indicator control panel and ensure the “ON BATT” indicator is on. Open the front door of the traffic cabinet and ensure the “ON BATT” indicator is on; and
- (c) After 10 minutes, depress the “UPS INPUT” circuit breaker and release. The circuit breaker is now engaged and the UPS status display should indicate “LINE”. The Contractor should be able to hear the ATS transfer back to nominal AC power.

2.5 Fire Signal Preventative Maintenance

Fire Signal maintenance shall be completed by the Contractor at each location within thirteen (13) months of the previous Fire Signal maintenance.

The Contractor shall undertake the following Services at each Fire Signal included in Schedule 5:

- (a) Repair or replace any lenses, sockets, terminals, reflectors, wires and weather seals that are burnt, corroded, or broken or otherwise damaged. Confirm that LED displays are installed with the letters “top” located at the top of the lens. Inspect LED display units for burnt out/defective LED arrays. Replace the unit if any LED arrays appear defective. For incandescent traffic signal lamps, enquire with staff whether replacement with LED is preferred and if required, replace lamps with the products specified in the City’s “Approved Materials and Products List” (to be supplied to the Contractor upon award of the Contract). The filament of the lamps shall have the open end of the “horseshoe” in the up position.
- (b) Clean all backboards (front and back), visors and signs with biodegradable cleaning solution. Rinse with clean water and wipe dry. Spray all signal display lenses with a mild detergent and water solution and dry with a soft cloth. (do not use glass cleaner)
- (c) Repair or replace any lenses, sockets, terminals, reflectors, wires and weather seals that are burnt, corroded, or broken or otherwise damaged.
- (d) Wipe inner surface of lenses with soft damp cloth to clean where necessary.
- (e) Lubricate signal head door hinges and latches as necessary.
- (f) Ensure tightness of all screws, bolts and nuts on mast arm or davit mounted sign and signal mounting hardware and replace any excessively worn pins or clips in signal hangers.
- (g) Check integrity of safety cables. Install safety cables on any overhead hardware that is missing them.
- (h) Repair any damaged wire insulation. Inspect spring cushion hangers for component failure and wire insulation damage.
- (i) Inspect poles and arms and all mounting hardware for general structural integrity, broken or cracked welds and excessive corrosion. Heavily corroded areas shall be tested for soundness using a hammer and center-punch.

Locations with corrosion problems shall be noted on the maintenance check lists.

- (j) Replace and secure damaged or missing hand hole covers.
- (k) Check and confirm that all pole and arm assembly and mounting bracket nuts/bolts are present and correctly tightened. Replace broken or missing bolt caps. Clean all inside and outside of controller cabinet including removing any graffiti. Report any un-removable graffiti and cabinets requiring re-painting.
- (l) Check that all terminals in fire signal controller are tight.
- (m) Check that all connectors in fire signal controller are tight and components are properly seated in their sockets.
- (n) Check service panel for damage and ensure locking mechanism is secure.
- (o) Test operation of all signal activation buttons.
- (p) Verify that all pre-empt sequences operate properly.
- (q) Verify that pre-empt outputs to adjacent controllers function properly.
- (r) Check all junction boxes for damage and ensure lids are secure.
- (s) Report any junction boxes in walkways that protrude more than 20mm above the surrounding surface.

2.6 Illuminated Pedestrian Crossing Sign (IPCS) and Special Crosswalk Maintenance

IPCS and Special Crosswalk maintenance shall be completed by the Contractor at each location within thirteen (13) months of the previous IPCS and Special Crosswalk maintenance.

The Contractor shall undertake the following Services at each IPCS and Special Crosswalk included in Schedule 5:

- (a) Replace fluorescent tubes with same style of cold start rated tube. Replace HPS down light with diffuse coated HPS lamp.
- (b) Clean with a mild detergent and water solution, wipe the interior and outer surfaces of the sign, including the inside sign faces and wipe dry.
- (c) Check mounting hardware and power cables. Tighten or re-secure if necessary.
- (d) Test for proper operation by using P.E.C. by-pass switch at service panel.

- (e) Inspect Photo-electric-cell and replace with modified early-on style as specified by the City.
- (f) Inspect and clean service panel, check breaker operation and ensure all power terminals/connections are tight and in good condition.
- (g) Check that fuse holder is in good condition and that hand hole covers are present and secure.
- (h) Inspect ballast or driver and replace if faulty.

Special Crosswalks are Illuminated Pedestrian Crossings with an additional flashing beacon feature and require the following additional maintenance tasks:

- (a) Inspect controller for proper operation, clean all foreign materials from cabinet and ensure all terminals are tight and in good condition.
- (b) Look for signs of water/insect entry and correct by applying sealant or weather stripping as necessary.
- (c) Repair or replace any lenses, sockets, terminals, reflectors, wires and weather seals that are burnt, corroded, or broken or otherwise damaged. Confirm that LED displays are installed with the letters “top” located at the top of the lens. Inspect LED display units for burnt out/defective LED arrays. Replace the unit if any LED arrays appear defective. For incandescent traffic signal lamps, enquire with staff whether replacement with LED is preferred and if required, replace lamps with the products specified in the City’s “Approved Materials and Products List” (to be supplied to the Contractor upon award of the Contract). The filament of the lamps shall have the open end of the “horseshoe” in the up position.
- (d) Inspect and test actuation buttons and/or sensors.

2.7 Advance Warning Flasher Maintenance

Advance Warning Flasher maintenance shall be completed by the Contractor at each location within thirteen (13) months of the previous Advance Warning Flasher maintenance.

The Contractor shall undertake the following Services at each Advance Warning Flasher included in Schedule 5:

- (a) Replace sign luminaire lamps, where applicable.

- (b) Clean all sign boards, with biodegradable cleaning solution. Rinse with clean water and wipe dry. Report any decay or damage of the sign board.
- (c) Repair or replace any lenses, sockets, terminals, reflectors, wires and weather seals that are burnt, corroded, or broken or otherwise damaged. Confirm that LED displays are installed with the letters “top” located at the top of the lens. Inspect LED display units for burnt out/defective LED arrays. Replace the unit if any LED arrays appear defective. For incandescent traffic signal lamps, enquire with staff whether replacement with LED is preferred and if required, replace all lamps with the products specified in the City’s “Approved Materials and Products List” (to be supplied to the Contractor upon award of the Contract). The filament of the lamps shall have the open end of the “horseshoe” in the up position.
- (d) Spray all signal display lenses with a mild detergent and water solution and polish dry with a soft cloth (do not use glass cleaner).
- (e) Lubricate signal head door hinges and latches. Ensure the finial caps are installed in the top and bottom of signal heads.
- (f) Confirm appropriate tightness of all screws, bolts and nuts on mast arm or davit mounted sign and signal mounting hardware.
- (g) Repair any damaged wire insulation.
- (h) Inspect poles and arms and all mounting hardware for general structural integrity, broken or cracked welds and excessive corrosion. Heavily corroded areas shall be tested for soundness using a hammer and center-punch. Locations with corrosion problems shall be noted on the maintenance check lists. Inspect the condition of the concrete pole base for cracks, spalling or other defects. The Contractor shall report to the City any poles or base deficiencies. Poles that do not appear plumb shall be reported to the City.
- (i) Replace damaged or missing hand hole covers.
- (j) Confirm that all pole and arm assembly and mounting bracket nuts/bolts are present and correctly tightened.
- (k) Spray all pole assembly and base flange nuts and bolts with penetrating corrosion inhibiting lubricant and confirm correct torque. Replace broken or missing bolt caps.

3.0 STREET LIGHT PREVENTIVE MAINTENANCE PROGRAM

The Contractor shall undertake the following Services at each street light location included in Schedule 5.

- (a) Terminal block connections shall be removed and replaced with a grease marette connection. Install in-line fuse holders and fuses.
- (b) Remove fuse blocks and replace with a in-line fuse holder, and new 10A fuse.
- (c) In-line fuse holders shall be inspected, cleaned and checked for proper fit. Check to ensure that a 10A fuse in in use and replace as necessary.
- (d) Check all wiring and insulation for signs of physical damage, heat stress, or charring. Repair, re-terminate or replace as required.
- (e) Check for bonding wire and ensure pole is properly bonded.
- (f) Ensure duct seal is installed on all conduits entering the base of each streetlight. Empty conduits are to be capped.
- (g) Replace missing or damaged hand hole covers. Install security hand hole cover and security bolt. Use anti-seize compound on bolt. If security cover and bolt already exist then remove cover, wipe bolt clean coat with anti-seize compound and re-install.
- (h) Reflectors and refractors or lenses are to be clean with a mild detergent cleaner. Ensure reflectors and refractors are dry and streak free upon completion of task.
- (i) Check, and repair as necessary, the luminaire enclosure for signs of overheating and loose connections.
- (j) Check driver for signs of overheating. Review driver settings and correct as necessary.
- (k) Check LED light array for proper light output. Report and replace as required.
- (l) Inspect the seal for the lamp chamber and replace if necessary.
- (m) Tighten all clips, fittings or other hardware holding refractor or lenses in place.

- (n) Ensure the door to the luminaire enclosure is properly closed. Check hinges and tabs for good operation. Test the spring release button. Repair as necessary.
- (o) Check that any house side light shields are secure and oriented appropriately.
- (p) Ensure tightness of luminaires to their pole tenon. Check and adjust for proper vertical and horizontal alignment of the luminaire to the roadway.
- (q) Ensure the vertical alignment of the lamp standard between the concrete base and the flange plate of the pole and report all defects to the City. Shim if necessary. Tighten securely all bolt and nut connections to the anchor rods. Ensure nut covers are plastic, removing all others (aluminum).
- (r) Inspect poles and all mounting hardware for general structural integrity, broken or cracked welds and excessive corrosion. Heavily corroded areas shall be tested for soundness using a hammer and centre-punch. Immediately contact the City if structural failure is imminent.
- (s) Remove vegetation or any soil build-up from around the base and base flange of the pole, as directed, to improve drainage and mitigate corrosion. Ensure all drain holes are functioning and clear of debris.
- (t) Locate and inspect all junction boxes up-stream between the pole and the next pole towards the service. Clean excessive contamination from box, inspect splices, Ensure all lids are exposed, accessible, and properly bonded. Check for tripping hazards and damage. Lift all splices to top of box and install a hanger bar to ensure that all splices are secured and not contacting the lid.
- (u) Update asset attributes with provided database and streetlight locations on the mapping application.

3.1 Street Light Service Base Preventative Maintenance

The Contractor shall undertake the following Services at each street light service base included in Schedule 5.

- (a) Thoroughly vacuum the service base and ensure all soil, grass and other organic material are removed from the interior of the base. Clean the

service panel of all residual dust, dirt and rust. Touch-up all rusted surfaces with anti-corrosive paint matched in colour to the service panel;

- (b) Mitigate water intrusion into the service base by sealing all holes or cracks at the top of the service base with a clear, weather and temperature rated exterior caulking compound (RTV/silicone sealant);
- (c) Repair or replace all broken or missing latches, fittings and mounting screws using stainless steel hardware. Install security bolts where required;
- (d) Install surge protection device as directed. Ensure existing surge suppressor is in working order and securely fastened in place. Ensure tightness of all terminal connections; inspect all wiring and splices in the service base circuitry;
- (e) Check the contact surfaces of the contactor. If more than 70% of the contact surfaces of the contactor are burned or pitted, or if contactor chatters, buzzes loudly or fails to snap closed, replace the contactor;
- (f) Check voltage differences, under full load, between input and output terminal connections of both contactor circuits. If the difference in voltage is not zero, replace the contactor;
- (g) Check voltage differences, under full load, between service panel and the two extreme end loads of both street light circuits. Ensure minimum voltages are present to allow proper operation of the system. Report all system loading concerns to the City;
- (h) Install special high security locking hasp on service base;
- (i) Visually inspect the service feed and dip service. Inspect, expose, and clean junction boxes that are in-line with the service feed;

3.2 Pole Painting (Street Light and Traffic Signal Poles)

This annual program establishes a seven (7) year cycle for painting the City's street light and traffic signal poles and may run in conjunction with the re-lamping program during the summer months. Approximate quantities appear in Schedule 2. Detailed maps and quantities will be provided following the award of, to enable the Contractor to establish a schedule and materials requirements. The Contractor's schedule must reflect pole painting during the dry and warmer months from May through to September.

The Contractor is to provide a Street light Pole Re-Painting Program work schedule within seven (7) calendar days of receipt of the detailed information for approval by the City. The City has the right to reject or request amendments to the schedule to ensure completion of the program.

The program shall commence within fourteen (14) calendar days of approval of the schedule. These dates will be confirmed in writing by the City with approval of the schedule.

The Contractor shall undertake the following Services at each street light and traffic signal pole identified by staff at the beginning of the maintenance year.

- (a) Scrape, brush or sand all surface rust, flaked paint, blisters, foreign material and other marks affecting adhesion to the existing paint or surface.
- (b) Expose all buried or covered surfaces by removing shrubs, tree branches, leaves, and surface materials near the pole (base of standard inclusive). Thoroughly clean and wash these surfaces once exposed.
- (c) Ensure all signs (front and back sides), banners, luminaires and other attachments are properly covered or protected from the re-painting process. Protect all street furniture, parked cars, and traffic signal heads but do not block cover or obscure the signal display.
- (d) If the pole has a powder coat finish, repair cracks or chips only, using manufacturer recommended procedures and materials.
- (e) Apply one coat of paint, assuring that all primer is completely covered and that the entire standard has received a new coat. If painting a new or previously unpainted galvanized pole apply a second coat of paint once the first has thoroughly dried.
- (f) Attach a 'wet paint' sign to each pedestrian approach side of poles. Signs shall not be hand lettered.
- (g) Update all City provided mapping information as prescribed with correct field data and completion dates.

(h) Paint codes are in the City’s “Approved Materials and Products List”.

Note: Do not apply paint or primer unless surfaces are free from moisture or when frost is predicted within 24 hours of proposed painting. This may dictate blackout dates when work cannot be completed due to unfavourable climatic conditions.

4.0 REPAIR OF MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT

The procedures outlined in this section describe the typical basic repair procedure steps required to remedy malfunctioning traffic signal equipment. These procedures shall in no way replace the troubleshooting skills and judgment of a journeyman electrician. It is the Contractor's responsibility to repair traffic signal equipment using the most safe, cost effective, efficient procedures, while meeting all applicable electrical code, electrical regulations, and WorkSafeBC regulations.

4.1 Traffic Signals Malfunctions

The Contractor, on arrival at the site of a malfunctioning traffic signal shall observe the traffic signal. The following conditions will typically be present:

- Condition A. Traffic Signal Displays operating correctly
- Condition B. One or more of the displays absent or not performing as designed
- Condition C. Displays in the "Fail Safe Mode" (Flash)

The Contractor shall record every visit to a traffic signal location in the log book provided in each traffic controller cabinet. The following information shall be recorded: date, service person, arrival time, departing time, job complete, nature of call, action taken and any other notable events that may occur (i.e. MVAs).

Condition A

If the displays appear to be operating correctly, the problem may be related to one of the four situations listed below:

- (a) Traffic hardware damage - The Contractor shall apply one or all repair procedures listed in Schedule 1, Section 4.2 - Traffic Signal Repairs.
- (b) Detection related malfunctions - The Contractor shall observe that the signal will not actuate or that a continuous call is present, or if in the vehicle recall mode phases, will not extend. As an interim measure prior to the repair of the loop assembly or detection system, the Contractor shall contact the City for temporary timings and further instruction.

When the replacement loop has been activated, the Contractor shall contact the City to confirm faults are cleared from the advanced traffic management system.

- (c) Timing complaint - The Contractor shall first check the controller log book for any recent known issues such as failed loops and temporary timing parameters in effect, check to ensure the program, defining maximum extension, vehicle extension, maximum and minimum gap is consistent with the timings in the signal system database. If the programs do not match, the Contractor shall notify the City.
- (d) Erroneous calls for service - If the signal appears to have no problems, the Contractor shall then actuate and observe the operational displays of all the phases and pre-emption sequences as well as the orientation of all traffic signal displays. If all the above is in correct working order and the orientations of the traffic and pedestrian heads are correct, the Contractor shall advise the City that the traffic signal installation has been checked and confirm that no problems were found.

Condition B

The Contractor shall follow the repair procedures outlined in Schedule 1, Section 4.2 - Traffic Signal Repairs - Procedure 1 - Display Failure.

Condition C

The Contractor shall follow and fill out the information required in the Traffic Signal Troubleshooting Guide provided by the City. In general the Contractor should determine whether the problem is internal or external to the controller cabinet. Where the cause of the malfunction is determined as external to controller, the Contractor shall trace through the conductors relating to the conflicting phases as directed by the conflict monitor. This trace shall follow between the output terminals of the controller to the lamp socket assembly at the traffic head displays of the conflicting phases.

If the problem is determined to be internal to the controller cabinet, the Contractor shall repair as detailed in Schedule 1, Section 4.2 – Traffic Signal Repairs – Procedure 5 - Malfunction Within the Controller Cabinet.

4.2 Repair Procedures for Traffic Signal Equipment

The Contractor shall undertake the procedures and instructions set out below in the repair of traffic signal equipment.

(a) Procedure 1 – Display Failure

The service response to a display failure of the traffic signal/pedestrian head is for the Contractor to replace the failed display with a new display.

The Contractor shall examine the lamp socket and the conductors leading to the socket for corrosion, burns, breaks, and bad contacts. If problem is found in the socket or associated wiring, the Contractor shall repair or replace the defective or damaged items. The Contractor shall replace or clean faulty or dirty lenses and reflectors associated with the head with the lamp failure as necessary.

For LED displays, the Contractor shall check for appropriate 120V AC supply to the LED display before replacing the LED display. The Contractor is to ensure that the letters “TOP”, embossed on the inside rim of the lenses are at the top when the new LED display is secured firmly in position.

All LED displays at an intersection shall be supplied in accordance with the City’s current approved products list.

The Contractor shall check the internal housing of the traffic head for evidence of water entry. If water entry is evident, the Contractor shall drain all water from the housing and seal the head against further water entry.

Before leaving the site, the Contractor shall check that all traffic signal audible and visual displays are operating as designed and shall replace any other failed displays at the site. The Contractor shall replace or repair all failed displays or malfunctioning displays before leaving the site.

(b) Procedure 2 – Traffic or Pedestrian Head and Bracket Support Damage

If traffic or pedestrian head assembly damage is encountered, the Contractor shall repair or replace the damaged assembly. If the assembly is repaired, the Contractor shall advise the City immediately so that the repaired assembly may be assessed as to its function and visual acceptability to the City.

Where the traffic or pedestrian head assembly is exposed to frequent or likely traffic damage due to minimal clearance distances, the Contractor shall advise the City of any options to relocate the head assembly to a safer location on the pole.

(c) Procedure 3 – Traffic Signal Pole Post or Base Damage

If damage to traffic signal pole, post or base is assessed by the Contractor as a public hazard, the Contractor shall replace the pole, post or base as quickly as possible. The replaced pole shall meet the loading specifications of the manufacturer. If full repairs are not practical until a later date, then a temporary pole or base may be required. Temporary poles and bases shall meet the minimum requirements for signals as defined in the BC Motor Vehicle Act and Regulations and shall be located such that it does not present a hazard or unreasonable obstruction to vehicle or pedestrian traffic.

If the pole or post appears to be repairable and does not constitute a hazard to the public, the Contractor shall inform the City of the damage immediately. The City, at his discretion, may request the pole be taken down and replaced with a new one.

The Contractor shall contact the City when damaged poles or heads are removed. The City will advise whether a temporary head or pole shall be installed.

(d) Procedure 4 – Conductor and Conduit Damage

Where conduit and/or conductor damage occurs, the Contractor shall withdraw the conductors from the damaged conduit. The Contractor shall replace the conductors and damaged section of conduit.

The Contractor shall repair the broken conduit by cutting out the damaged section and replacing it with a new section of conduit. The Contractor shall ream the internal ridge of the two couplings and slide them over each of the open ends of the existing conduit. The new conduit section shall be cut to fit snugly between the two open ends of the existing conduit. The PVC welding compound shall be applied and the two couplings shall be slid into place.

The repaired conduit is to be blown clean of all foreign matter before the Contractor shall restore the conductors into the repaired conduit. The Contractor shall splice and reseal all conductor joins with a CSA approved water sealant. Splices and insulation repairs shall not be permitted in conduits.

The Contractor shall not leave the traffic signal installation until the traffic signal is operating safely and correctly. Special attention shall be taken to ensure that accidental cross connections are not present in the completion

of the conductor repairs. Each reconnected or new signal indication shall be tested and confirmed to be connected to the proper controller phase prior to it being put into service. Bundle neatly, and label all conductors with respect to phase and colour at junction boxes and controller cabinet. If the rod designed to keep splices above the bottom of the junction box is not in place, Contractor shall install rod and attach all splices within the box to the rod. The Contractor shall ensure that all junction boxes and hand holes are properly closed and bolted.

(e) Procedure 5 – Malfunction Within the Controller Cabinet

The Contractor shall identify the malfunction within the controller cabinet by reading the indicator displays on the cabinet components. Record this information on a form provided by the City for future reference. In addition to the above indicator displays, the Contractor shall check the main and branch circuit breakers on the power distribution panel.

Where the cause of the malfunction is determined to be internal to the controller the Contractor shall determine the faulty components and where there is more than one damaged or faulty component identify which component failure or field fault was the source of the problem and subsequent failures.

If the conflict monitor or malfunction management unit (CMU/MMU) is determined to be faulty, it shall be replaced with a CMU/MMU that has been fully tested within the previous 6 months. The program card from the faulty CMU/MMU shall always be inspected and transferred to the new CMU/MMU.

Once the malfunctioning unit is replaced or repaired the Contractor shall return the signal to normal operation. The Contractor shall follow signal flash and restart procedures as outlined in Schedule 1, Section 4.3 – Traffic Signal Flash, Re-Start and Power Down/Power Up Procedures. The Contractor shall then observe the signal cycle through all of its possible operations and timing extensions. Before leaving, the Contractor shall ensure no further problems or malfunctions are observed and the signal is operating correctly. If a problem persists the Contractor shall contact the City for assistance. The malfunctioning unit removed from the controller cabinet shall be returned to the City and exchanged for a new spare. The malfunctioning unit shall be tagged with the site removed from, date and a detailed description of the problem and an equipment movement form (provided by the City) shall be filled out and submitted.

Where the malfunctioning component or cause of malfunction in a controller cannot be definitively identified, the Contractor shall contact the City. The City shall provide the Contractor with any equipment required within the traffic signal controller cabinet.

4.3 Traffic Signal Flash, Restart and Power Down/Power Up Procedures

(a) Signal Flash Procedures

It may be necessary for the Contractor to switch the traffic signal from normal operation to flash operation or to return from flash operation to normal operation.

The procedure outlined below describes the typical steps required for traffic signal flash and restart. These procedures shall in no way cover every circumstance encountered by the Contractor, and do not replace the skill and judgment of a journeyman electrician with IMSA Work Zone Safety, and Traffic Signals II certification. It is the Contractor's responsibility to ensure that switching the traffic signal from normal operation to flash operation or to return from flash operation to normal operation is done using the most safe, effective method, causing the least amount of confusion to motorists.

(b) Switching Traffic Signal to Flash Operation

1. Determine the phase designation of the major street. The major street phases generally are programmed for recall operation.
2. Determine which phase/s flash operation will follow. Flash operation shall be initiated at the end of the amber interval of the major street. If the minor street has an obviously higher traffic volume then flash shall be initiated at the end of the minor street amber interval.
3. Switch to flash at the end of the appropriate amber interval and when the intersection is clear of pedestrians. It may be necessary to wait several cycles.

(c) Switching Traffic Signal Out of Flash Procedure

Switch off controller unit, place "flash/auto" switch in "Auto" position, ensure stop-time switch is in "auto" position and "manual/auto" switch is in "auto" position. If flag persons are available, have them stop all traffic and pedestrians. When intersection is clear of pedestrians and fast moving traffic or at a reasonably safe instance, switch controller unit on and watch for proper start-up sequence to occur.

(d) Switching Pedestrian Signals Into or Out of Flash Procedure

Pedestrian signals shall be switched into or out of flash only when clear of pedestrians and traffic.

(e) Signal Power-down/Power-up Procedures

It may be necessary for the Contractor to remove power from the traffic signal for emergency repairs.

The procedure outlined below describes the typical steps required for removing the power and restoring power to a traffic signal. These procedures shall in no way cover every circumstance encountered by the Contractor, and do not replace the skill and judgment of a journeyman electrician with IMSA Work Zone Safety, and Traffic Signals II certification. It is the Contractor's responsibility to ensure that removing the power and restoring power to a traffic signal is done using the most safe, effective method, causing the least amount of confusion to motorists.

The Contractor shall obtain approval from the City prior to any full power-down of a signal except in emergency situations. If an emergency power-down is necessary, the City shall be notified as soon as possible.

Prior to power-down, the Contractor shall arrange for alternate traffic control as directed by the City. Alternate traffic control shall be Traffic Control Personnel.

(f) Power-down Procedure

Switch signal to flash operation following the signal flash procedure and setup "Traffic Control Persons Ahead" signs for each approach. Have qualified Traffic Control Personnel enter intersection and begin controlling traffic manually as required. Disconnect power once traffic control personnel have control of the intersection.

(g) Power-up Procedure

Turn signal on in flash mode and have Traffic Control Personnel on standby. Provided that the signal has been in flash at least 5 seconds, switch to normal operation using the signal out of flash procedure.

4.4 Street Light Outages – Repair Procedures

The Contractor shall undertake the following in response to an unscheduled maintenance call, which is not motor vehicle/vandalism damage related, to repair a malfunctioning street light.

1. Activate the photocell bypass switch and check all streetlights energized by the service base;
2. If a system malfunction is apparent, check for proper voltages and circuit operation of all components, including contactors. Repair as required;
3. Identify pole(s) with street light outages or other deficiencies and record location and/or unique pole number as indicated on City supplied database;
4. Lock-out service supply as per normal safety and all WorkSafeBC requirements. Re-energize the system to check progress of repair only when safe to do so;
5. For each malfunctioning street light, do the following checks:
 - a. Check fuse for continuity, and replace if necessary;
 - b. Tighten terminal and fuse block or fuse holder connections, and replace if necessary;
 - c. Tighten terminals within the ballast chamber and ensure proper wire splicing. Re-splice if necessary; and
 - d. Replace lamp if above actions fail to remedy the street light malfunction.

If the above actions do not remedy the problem, replace either the luminaire or individual components, whichever is less costly.

If no problems are initially observed when bypassing the photocell circuitry, ensure proper operation by placing a hood over top of the photocell to activate the system. Repair or replace as required.

Note: The Contractor shall receive a streetlight system map series and database on which the individual poles are identified by their respective numbers. If the streetlight is not shown on the map, the Contractor shall advise the City in writing of its location, pole type, luminaire type, and wattage.

SCHEDULE 2

FEES AND RATES

*****PLEASE NOTE: Quantities are estimates and are not guaranteed.**

Refer to “Schedule 2” attached (Microsoft Excel Spreadsheet)

SCHEDULE 3

RESPONSE REQUIREMENTS

1.0 RESPONSE REQUIREMENTS

1.1 Type of Response

In order to verify the extent of the damage or malfunction, the Contractor shall provide an immediate response to work orders regarding a malfunctioning traffic signal, pedestrian signal, special crosswalk or illuminated pedestrian crossing and any damaged electrical infrastructure.

Response time shall be measured as the elapsed time between the Contractor's receipt of an authorized work order and the arrival of the first qualified and equipped Contractor personnel at the specific work site.

1.2 Immediate Response (Emergency)

Immediate Response shall be defined as the Contractor, on notification by the City, arranging for qualified personnel to proceed without delay to the specified location or locations and beginning the required work.

(a) Unless otherwise directed by the City, **Immediate Response** shall include:

- i. repair to a primary (overhead) traffic signal head display or left turn arrow signal head display.
- ii. repair malfunctioning traffic signal equipment, including traffic signals in Flash state.
- iii. repair to damage that presents an immediate hazard to motorists, pedestrians and/or public or private property, including but not limited to exposed wires, unstable poles/fixtures, mis-directed traffic signal/pedestrian displays.

If the Contractor becomes aware of a malfunctioning traffic signal or damaged transportation system electrical infrastructure via a third party or the signal system software, the City shall immediately be contacted to authorize any further action. The Contractor shall record the name and phone number of the third party.

1.3 Normal Response (Non-Emergency)

Normal Response shall be defined as the Contractor, on notification by the City, arranging for qualified personnel to proceed to the specified location or locations and beginning the required work.

- (a) Unless otherwise directed by the City, **Normal Response** shall be defined as, but not limited to:
 - i. repair of a secondary traffic signal head display, pedestrian head display or pedestrian pushbutton.
 - ii. repair of a damaged or poorly aligned traffic signal or pedestrian head (but still functioning as intended).
 - iii. repair of a single street light outage or street light system outage.

1.4 Repair Completion Deadlines (Immediate Response and Normal Response)

The following table details the deadlines required by the City for the traffic signal and street light repairs listed in (a) and (b) above:

Repair Work Required	Response Time	Condition Made Safe	Repair Completion Time
Immediate Response			
Repair to a primary (overhead) traffic signal head display or left turn arrow signal head display.	1 hour	1 hour	1 Day
Repair malfunctioning traffic signal equipment, including traffic signals in flash state.	1 hour	1 hour	1 Day
Repair to damage that presents an immediate hazard to motorists, pedestrians and/or public or private property, including but not limited to exposed wires, unstable poles/fixtures, mis-directed traffic signal/pedestrian displays.	1 hour	1 hour	3 Days*
Normal Response			
Repair of a secondary traffic signal head display, pedestrian head display, or pedestrian pushbutton.	1 Day	Not Applicable	3 Days*
Repair of a damaged or poorly aligned traffic signal or pedestrian head.	1 Day	Not Applicable	3 Days*
Repair of a single street light outage or island flasher outage.	5 Days	Not Applicable	May be clustered for scheduled repair at staff discretion
Repair of a street light system outage.	1 Day	1 Day**	5 Working days

*If the repair completion time for traffic signals spans an intervening weekend or holiday, then the repairs must be completed prior to that weekend or holiday (except as directed by the City). Any work delays shall be documented and approved by the City. Regular or outside regular hour rates will apply in this situation.

**Streetlight system failures (defined as an outage of 3 or more consecutive lamp standards) shall be attended to and made safe within one (1) working day of the work order being issued (Report of Fault). If the next working day follows an intervening weekend or holiday, then the repair shall be initiated and completed on date of report. Completion of the work shall not exceed 5 working days. Any work delays shall be documented and approved by the City. Regular or outside regular hour rates will apply in this situation.

Note: The Contractor shall attempt to use resources efficiently and effectively, i.e., Wherever possible, multiple work orders should be scheduled in a single work day as opposed to scheduling a single repair based on the five day response requirement. The City shall be notified by the Contractor if repairs will exceed these time frames.

It shall be the responsibility of the Contractor to advise the City immediately when the Contractor is unable to diagnose the cause or origin of a traffic signal or street light malfunction.

If, during the course of the Agreement, the Contractor is unable to provide adequate response, it may be considered a breach, and the City may, without prejudice, terminate this Agreement.

SCHEDULE 4

PERSONNEL REQUIREMENTS

1.0 PERSONNEL REQUIREMENTS

1.1 Qualifications of Key Personnel

The Contractor's personnel must be knowledgeable in the function, operation and features of current electrical and electronic signal control equipment. Certification in IMSA sanctioned courses related to traffic signals and street lighting is advised.

1.2 Traffic Signal Electricians

Traffic Signal Electricians shall hold a valid Journeyman Electrician Trade Certification in B.C. and have at least two (2) years of experience maintaining and installing traffic signals and signal systems. Traffic Signal Electricians shall have IMSA Traffic Signal Level I Certification or better.

1.3 Street Lighting Electricians

Street Lighting Electricians shall hold a valid Journeyman Electrician Trade Certification in B.C. and have a minimum of two (2) years experience maintaining and installing street lighting systems. Street Lighting Electricians shall have IMSA Roadway Lighting Level I Certification or better.

1.4 Primary Electrician with Bucket Truck

Assignment:

The Primary Electrician shall be exclusively assigned to this Contract. The Primary Electrician shall report to Coquitlam by 07:00 hours every normal working day and shall stay on site until 16:00 hours.

Duties:

- Work on annual maintenance work orders except when there are other non-annual (unscheduled maintenance) work orders to be completed;
- Act as the Contractor's technical representative;
- Meet with and advise City staff on related works;

- Coordinate work of secondary electricians, labourers and sub-contractors and ensure work is completed on schedule and in accordance with the Agreement;
- Act as the primary contact for communications with the City regarding work in progress, work planning, scheduling and quality control;
- Act as both primary traffic signal and street lighting electrician;
- Where multiple Contractor personnel are involved in maintenance or installation tasks, the primary electrician shall be responsible for coordinating all work and completing all necessary documentation under this Contract. No additional moneys will be paid for performing these tasks beyond the unit time utilized to complete the work.

1.5 Secondary Electricians and Specialized Personnel

Duties:

- These personnel shall be utilized on an “as required” basis to provide backup for the primary electrician, or for additional assistance;
- Perform installation or maintenance services as necessary to complement the primary electrician; and
- These personnel shall be under the direct supervision of the primary electrician.

The Contractor shall give 30 days written notice if the primary traffic signal electrician is to be re-assigned. The choice of replacement primary traffic signal electrician shall be mutually agreeable to the Contractor and City.

Should the primary electrician be unable to report to the site due to illness or other reason, the Contractor shall immediately provide an alternate primary electrician. Alternate primary electricians shall meet the qualifications required under this Contract for a “primary electrician”. The City shall be notified when an alternate primary electrician is assigned.

1.6 Alternate Personnel

If, over the term of the Contract, it becomes necessary for the Contractor to assign different primary, secondary or on-call electricians to perform the work, a request in writing stating the reasons for the change(s), the name(s), position to be held for the Contract, experience, and independent references which can verify the proposed personnel's experience, shall be provided. The City reserves the right to similarly test any proposed signal maintenance electrician, and accept or reject the personnel on the basis of test results.

The City reserves the right to request (in writing) different primary or secondary electricians based on poor performance or repeated

unprofessional behaviour and/or call backs. The Contractor shall immediately act to remedy the situation. Failure to adequately provide suitable qualified electricians within 60 days will be a breach of this Agreement.

SCHEDULE 5 – ELECTRICAL INFRASTRUCTURE DEVICE LOCATIONS (2019)

1.0 ELECTRICAL INFRASTRUCTURE DEVICE LOCATIONS

1.1 Traffic Signal Locations

Number	Asset #	UPS (Y/N)	Location Description
1	TSS1000	Y	TS: Alderson Ave at Blue Mountain St
2	TSS1050	Y	TS: Alderson Ave at Lougheed Hwy
3	TSS1100	N	TS: Allard St at Brunette Ave
4	TSS1125	Y	TS: Anson Ave at Pinetree Way
5	TSS1140	Y	TS: Anson Ave at Ponderosa St
6	TSS1150	Y	TS: Anson Ave at Westwood St.
7	TSS1200	Y	TS: Austin Ave at Blue Mountain St
8	TSS1250	Y	TS: Austin Ave at Bromley St
9	TSS1300	Y	TS: Austin Ave at Gatensbury St
10	TSS1400	Y	TS: Austin Ave at Guilby St
11	TSS1500	Y	TS: Austin Ave at Hickey Dr
12	TSS1600	Y	TS: Austin Ave at Hillcrest St
13	TSS1650	Y	TS: Austin Ave at Laurentian Cres
14	TSS1700	Y	TS: Austin Ave at Linton St
15	TSS1800	Y	TS: Austin Ave at Mariner Way
16	TSS1900	Y	TS: Austin Ave at Marmont St
17	TSS2000	Y	TS: Austin Ave at Mundy St
18	TSS2100	Y	TS: Austin Ave at Nelson St
19	TSS2200	Y	TS: Austin Ave at North Road
20	TSS2300	Y	TS: Austin Ave at Poirier St
21	TSS2400	Y	TS: Austin Ave at Schoolhouse St
22	TSS2500	Y	TS: Austin Ave at Walker St
23	TSS2600	Y	TS: Austin Ave at Westview St
24	TSS2700	Y	TS: Baker Dr at Como Lake Ave
25	TSS2720	Y	TS: Barnet Hwy at Falcon Dr
26	TSS2740	Y	TS: Barnet Hwy at Johnson St & Mariner Way
27	TSS2760	Y	TS: Barnet Hwy at Lansdowne Dr
28	TSS2780	Y	TS: Barnet Hwy at Lougheed Hwy/Pinetree Way
29	TSS2800	Y	TS: Blue Mountain St at Como Lake Ave
30	TSS3000	N	TS: Blue Mountain St at Foster Ave
31	TSS3025	Y	TS: Blue Mountain St at Lougheed Hwy
32	TSS3100	Y	TS: Blue Mountain St at Rochester Ave
33	TSS3200	Y	TS: Brigantine Drive at United Blvd
34	TSS3250	Y	TS: Brunette Ave at Lougheed Hwy
35	TSS3300	Y	TS: Brunette Ave at Marmont-King Edward St
36	TSS3500	N	TS: Brunette Ave at Schoolhouse St

Number	Asset #	UPS (Y/N)	Location Description
37	TSS3550	Y	TS: Burbidge St at United Blvd
38	TSS3600	Y	TS: Cameron Ave at North Road
39	TSS3700	Y	TS: Cape Horn Ave/United Blvd at Mariner Way
40	TSS3800	Y	TS: Chapman Ave/Robinson St at Clarke Rd
41	TSS3900	Y	TS: Chilko Drive at Mariner Way
42	TSS4000	Y	TS: Chilko Dr at Riverview Cres
43	TSS4100	Y	TS: Christmas Way at Westwood St
44	TSS4250	Y	TS: Clarke Rd @ Mall Access
45	TSS4300	Y	TS: Clarke Rd at Como Lake Ave
46	TSS4400	Y	TS: Clarke Rd at Glenayre
47	TSS4500	Y	TS: Clarke Rd at Kemsley Ave
48	TSS4600	Y	TS: Clarke Rd at Smith Ave
49	TSS4700	Y	TS: Clipper St at United Blvd
50	TSS4750	Y	TS: Coast Meridian Road at David Avenue
51	TSS4761	Y	TS: Coast Meridian Rd at Gislason Ave/Mason Ave
52	TSS4768	Y	TS: Coast Meridian at Princeton
53	TSS4770	Y	TS: Coast Meridian Rd at Victoria Dr
54	TSS4775	Y	TS: Cochrane Avenue at North Road
55	TSS4850	Y	TS: Colony Farm Rd at Lougheed Hwy
56	TSS4900	Y	TS: Como Lake Ave at Gatensbury St
57	TSS4950	Y	TS: Como Lake Ave at Lougheed Hwy
58	TSS5000	Y	TS: Como Lake Ave at Linton St
59	TSS5100	Y	TS: Como Lake Ave / Spuraway Dr at Mariner Way
60	TSS5200	Y	TS: Como Lake Ave at North Road
61	TSS5300	Y	TS: Como Lake Ave at Poirier St
62	TSS5400	Y	TS: Como Lake Ave at Porter St
63	TSS5500	Y	TS: Como Lake Ave at Robinson St
64	TSS5600	Y	TS: Como Lake Ave at Schoolhouse St
65	TSS5800	Y	TS: Como Lake Ave at Thermal Dr
66	TSS5850	Y	TS: Crabbe @ Westwood
67	TSS5900	Y	TS: David Ave at Johnson St
68	TSS5950	Y	TS: David Ave at Lansdowne Dr
69	TSS6000	Y	TS: David Ave at Noons Creek Dr
70	TSS6050	Y	TS: David Avenue at Oxford Street
71	TSS6100	Y	TS: David Ave at Pinetree Way
72	TSS6200	Y	TS: David Avenue at Pipeline Road
73	TSS6250	Y	TS: David Avenue at Shaughnessy Street
74	TSS6275	Y	TS: Delahaye Drive at Johnson Street
75	TSS6300	Y	TS: Delestre Ave at North Road
76	TSS6375	Y	TS: Dewdney Trunk Rd at Lougheed Hwy
77	TSS6400	Y	TS: Dewdney Trunk Rd at Mariner Way
78	TSS6500	N	TS: Dewdney Trunk Rd at Norman Ave

City of Coquitlam
 Agreement No. 19-01-02 – Traffic Signal & Street Light Maintenance

Number	Asset #	UPS (Y/N)	Location Description
79	TSS6600	Y	TS: Dewdney Trunk Rd at Westwood St
80	TSS6700	Y	TS: Douglas College Dwy at Pinetree Way
81	TSS6750	Y	TS: Dunkirk Ave at Pipeline Road
82	TSS6775	Y	TS: Durant Dr @ Johnson St
83	TSS7000	Y	TS: Falcon Dr at Guildford Way
84	TSS7100	N	TS: Foster Ave at North Road
85	TSS7125	Y	TS: Gabriola at Pipeline Rd
86	TSS7150	Y	TS: Gatineau at North Road
87	TSS7200	N	TS: Galette Ave at Pipeline Rd
88	TSS7300	Y	TS: Glen Dr at The High St
89	TSS7400	Y	TS: Glen Dr at Johnson St
90	TSS7500	Y	TS: Glen Dr at Lansdowne Dr
91	TSS7550	Y	TS: Glen Dr at Pacific St
92	TSS7600	Y	TS: Glen Dr at Pinetree Way
93	TSS7750	Y	TS: Glen Dr at Westwood St
94	TSS7760	Y	TS: Guilby St at Lougheed Hwy
95	TSS7800	Y	TS: Guildford Way at Johnson St
96	TSS7850	Y	TS: Guildford Way at Lansdowne Dr
97	TSS7900	Y	TS: Guildford Way at Pinetree Way
98	TSS8000	Y	TS: Guildford Way/Ozada Ave at Pipeline Rd
99	TSS8100	Y	TS: Guildford Way at Westwood St
100	TSS8200	Y	TS: Hawser Ave at Mariner Way
101	TSS8400	Y	TS: Hickey Dr/Riverview Cres at Mariner Way
102	TSS8450	Y	TS: Johnson St. at North Mall Dwy
103	TSS8550	Y	TS: Johnson St. at Panorama Drive/Meadowvista Pl.
104	TSS8600	Y	TS: Johnson St at Parkway Blvd
105	TSS8650	Y	TS: Johnson St at South Mall Dwy
106	TSS8700	Y	TS: Johnson St at Walton Ave
107	TSS8725	Y	TS: King Edward St at Lougheed Hwy
108	TSS8750	N	TS: King Edward St at Seguin Dr
109	TSS8825	Y	TS: King Edward Street at United Boulevard
110	TSS9000	Y	TS: Lansdowne Dr at Runnel Dr
111	TSS9050	Y	TS: Lincoln Ave at Pipeline Rd
112	TSS9100	Y	TS: Lincoln Ave at Westwood St
113	TSS9200	Y	TS: Lincoln Ave at Pinetree Way
114	TSS9202	Y	TS: Lougheed Hwy @ Woolridge Connector
115	TSS9205	Y	TS: Lougheed Highway at North Road
116	TSS9208	Y	TS: Lougheed Hwy at Orchid Dr. (Valleyview)
117	TSS9210	Y	TS: Lougheed Highway at Pitt River Rd
118	TSS9240	Y	TS: Lougheed Hwy at Westwood St
119	TSS9245	Y	TS: Lougheed Hwy at Woolridge St
120	TSS9250	N	TS: Lucille Starr Dr at Schoolhouse St

Number	Asset #	UPS (Y/N)	Location Description
121	TSS9275	Y	TS: Mara Dr at Mariner Way
122	TSS9400	Y	TS: Mariner Way at Park 'n Ride
123	TSS9500	Y	TS: Mariner Way at Service Centre Dwy
124	TSS9535	Y	TS: North Road at Rochester
125	TSS9550	Y	TS: Northern Ave at Pinetree Way (Henderson)
126	TSS9600	Y	TS: Pinetree Way at Pinewood Dr
127	TSS9650	Y	TS: Pinetree Way at Robson Dr
128	TSS9700	N	TS: Pipeline Rd at Robson St
129	TSS9825	N	TS: Pipeline Rd at Windsor Gate
130	TSS9900	Y	TS: Schooner St at United Blvd
131	TSS9925	Y	TS: Soball (Apel) at Victoria Dr

1.2 Pedestrian Signal Locations

Number	Asset #	UPS (Y/N)	Location Description
1	TSS1175	N	TS: Austin Ave. at 1000 Blk. (Safeway)
2	TSS2710	N	TS: Banting St. at Como Lake Ave
3	TSS2900	N	TS: Blue Mountain St at Dansey Ave
4	TSS3015	N	TS: Blue Mountain St at King Albert Ave
5	TSS3225	N	TS: Brunette Avenue @ Laval Street
6	TSS3400	N	TS: Brunette Ave at Nelson St
7	TSS4767	Y	TS: Coast Meridian at Millard
8	TSS4800	N	TS: Como Lake Ave at Charles Best School
9	TSS4890	N	TS: Como Lake Avenue at Custer Court
10	TSS4895	N	TS: Como Lake Ave at Dogwood St
11	TSS5700	N	TS: Como Lake Ave at Seymour Dr
12	TSS5825	N	TS: Como Lake Ave at Wasco St
13	TSS5875	Y	TS: David Ave at Genest Way
14	TSS6350	N	TS: Dewdney Trunk Rd at Irvine St
15	TSS6800	Y	TS: Eagleridge Drive at Guildford Way
16	TSS6900	N	TS: Eastwood St at Guildford Way
17	TSS7700	N	TS: Glen Dr at Pipeline Rd
18	TSS7875	Y	TS: Guildford Way at Pacific St
19	TSS8050	Y	TS: Guildford Way at Town Centre Blvd
20	TSS9300	N	TS: Mariner Way at Mariner Park
21	TSS9510	N	TS: Marmont St @ Rochester Ave
22	TSS9675	Y	TS: Pinetree Way @ Town Centre Blvd

1.3 Fire Signal Locations

Number	Asset #	Location Description
1	TSF1000	TSF: Mariner Way @ Mariner Fire Hall
2	TSF2000	TSF: Nelson Street @ Austin Heights Fire Hall
3	TSF3000	TSF: Pinewood Street @ Town Centre Fire Hall
4	TSF4000	TSF: David Avenue @ Burke Mountain Fire Hall

1.4 Special Crosswalk Locations

Number	Asset #	Location Description
1	TSP3550	IPC: Brunette Ave @ 900 block
2	TSP3700	IPC: David Ave @ Bramble Park
3	TSP3800	IPC: David Ave @ Summit pathway
4	TSP4155	IPC: Lincoln Ave @ Ponderosa
5	TSP4415	IPC: Pinetree Way @ Silverthrone/Grizzly
6	TSP5000	IPC: Robinson St @ Egmont Ave

1.5 Illuminated Crosswalk Locations

Number	Asset #	Location Description
1	TSP3400	IPC: Blue Mountain @ Cottonwood
2	TSP3500	IPC: Blue Mountain @ Regan
3	TSP3600	IPC: Cape Horn @ Dawes Hill
4	TSP3625	IPC: Chartwell Green; E of Plateau
5	TSP4000	IPC: Dunkirk @ Nestor
6	TSP4050	IPC: Eastwood @ S of Guildford
7	TSP4075	IPC: Heffley Crescent @ 1100 Blk
8	TSP4100	IPC: Hickey @ Bognor
9	TSP4150	IPC: Hickey @ Leduc
10	TSP4160	IPC: Lucille Starr Drive (East X-ing)
11	TSP4170	IPC: Lucille Starr Drive (West X-ing)
12	TSP4200	IPC: Paddock, 1760 (South)
13	TSP4250	IPC: Parkway @ N of Johnson
14	TSP4300	IPC: Parkway, 1735
15	TSP4325	IPC: Parkway, 1937
16	TSP4400	IPC: Paddock, 1765 (North)
17	TSP4425	IPC: Plateau Blvd; N of Chartwell
18	TSP4450	IPC: Poirier @ 600 Block

1.6 Advance Warning Flashers

Number	Asset #	Location Description
1	TSS2900	Blue Mountain at Dansey (Southbound)
2	TSS4000	Chilko Dr at Riverview Cres (Westbound)
3	TSS4000	Chilko Dr at Riverview Cres (Eastbound)
4	TSS4850	Colony Farm Rd at Lougheed Hwy (Westbound)
5	TSS4850	Colony Farm Rd at Lougheed Hwy (Eastbound)
6	TSS4950	Como Lake Ave at Lougheed Hwy (Northbound)
7	TSS4950	Como Lake Ave at Lougheed Hwy (Southbound)
8	TSS6375	Dewdney Trunk Rd at Lougheed Hwy (Northbound)
9	TSS6375	Dewdney Trunk Rd at Lougheed Hwy (Southbound)
10	TSS6400	Dewdney Trunk Rd at Mariner Way (Northbound)
11	TSS7000	Falcon Dr at Guildford Way (Eastbound)
12	TSS7200	Galette Ave at Pipeline Rd (Southbound)
13	TSS8200	Hawser Ave at Mariner Way (Northbound)
14	TSS8600	Johnson St at Parkway Blvd (Southbound)
15	TSS8725	Lougheed Hwy at King Edward St (Northbound)
16	TSS8825	United Blvd at King Edward St (Southbound)
17	TSS9208	Lougheed Hwy at Orchid Dr. (Valleyview) (Northbound)
18	TSS9208	Lougheed Hwy at Orchid Dr. (Valleyview) (Southbound)
19	TSS9210	Lougheed Highway at Pitt River Rd (Northbound)
20	TSS9210	Lougheed Highway at Pitt River Rd (Southbound)
21	TSS9300	Mariner Way at Mariner Park (Northbound)
22	TSS9700	Pipeline Rd at Robson St (Southbound)
23	TSS9925	Victoria at Soball/Apel (Eastbound)

SCHEDULE 6

CITY OF COQUITLAM SUPPLEMENTARY SPECIFICATIONS

(Schedule 6 Supplementary Specifications are in the process of being updated to align with the MMCD Platinum Edition 2009 and will be provided to the successful Contractor upon award)

SCHEDULE 7

REPORTING REQUIREMENTS

1.0 REPORTING REQUIREMENTS

The Contractor is responsible for providing the following reports throughout the duration of the Agreement. All reports must be submitted in a timely manner and may be amended as required by the City. These reports are to be submitted electronically via file transfer protocol in accordance with the instructions provided by the City. Hardcopies are to be submitted by mail. Requirements for each reporting category are outlined below.

1.1 Work Status Reports – Scheduled Maintenance

All scheduled maintenance work performed is to be reported and summarized by month with the following headings:

(a) Traffic Signals (all)

- i. Work Order #
- ii. Municipal Account Code (see below)
- iii. Task Description
- iv. Location Description
- v. Location Asset Code (to be provided)
- vi. Status % Complete
- vii. Scheduled Date
- viii. Completion date
- ix. Technicians on site
- x. Comments (i.e. extras requiring separate WO#, etc.)

This report shall be submitted a minimum of seven (7) days prior to first day of the scheduled work and then monthly to the City in a tabular electronic Microsoft Excel format until the maintenance is complete.

(b) Street Lights (Repainting)

- i. Zone
- ii. GIS ID (ELSL #)
- iii. Pole Type
- iv. Pole Style
- v. Pole Height
- vi. Pole Colour
- vii. Re-paint completion date

This report shall be submitted seven (7) days prior to first day of the scheduled work and then monthly to the City in a tabular electronic Microsoft Excel format until the program is complete.

This report shall detail any changes or corrections to street light attributes as listed in the map tables issued to the Contractor at the start of the relamping program. The base report file will be provided by the City.

1.2 Work Status Reports –Unscheduled Maintenance

All unscheduled maintenance work performed under this Agreement is to be reported and summarized by day with the following array headings:

1. Work Order #
2. Municipal Account Code (see below)
3. Task Description
4. Location Description
5. Location Asset Code (to be provided where applicable)
6. Start, Finish, Arrival and Departure Times (and dates)
7. Technicians on site
8. Comments (detailing works completed and findings)

This report shall be submitted twice per week on Mondays and Wednesdays to the City in a tabular electronic Microsoft Excel format. The Monday submission shall contain the work orders completed the preceding Wednesday through Sunday and the Wednesday submission shall contain the work orders completed the preceding Monday and Tuesday.

If, during the course of the Agreement, the Contractor is unable to provide reports as outlined in a timely manner, it may be considered a breach, and the City may, without prejudice, terminate this Agreement.

2.0 INVOICE AND SUPPORTING DOCUMENTATION

One invoice shall be submitted monthly for all of the work performed in each month. Invoice supporting documents in Microsoft Excel format must accompany the invoice. The supporting documentation shall provide details for each individual work order under provided municipal account codes..

Each work order within the supporting documentation shall be detailed separately with the following headings:

1. City Contract No. (19-01-02)
2. The Invoice #
3. City Maximo Work Order # (provided by City)
4. Internal Work Order # (provided by contractor, where applicable)
5. Municipal Account Code
6. Job # (where applicable, may be used for specific quotes, etc.)
7. Location Asset Code
8. Call Type (general, MVA-related, vandalism/theft, etc.)
9. Address or Location
10. Call Date
11. Completion Date
12. Arrive Time
13. Depart Time

14. Item Code (where applicable)
15. Item Description (item being charged, labour and material)
16. Quantity
17. Unit Cost Charged
18. Subtotal amount (pre-tax)
19. Tax Charged (GST)
20. Problem / Task Code or Description (where applicable)
21. Problem (class of problem related to the invoice item)
22. Technicians on site
23. Work Done (comments detailing the work to date)

The monthly invoice, supporting documentation and reports shall be submitted on a monthly basis in a digital database format and as a physical hardcopy.

Please note that for Annual Maintenance Work Orders, the breakdown for materials and labour costs will not apply and there will only be one total price for both labour and materials. This must be clearly indicated on all reports.

3.0 ASSET INVENTORY UPDATE

As part of the annual maintenance, cursory asset inventory data collection may need to be performed. The data collection may include confirming the make, model and year as well as serial numbers of controllers, cabinets and any other major equipment related to the traffic signal scheduled maintenance. Street lighting assets found to not be represented or in existence in our reports and mapping will also need to be reported. The Contractor will provide asset inventory updates upon request by the City at no additional charge.

4.0 QUALITY MANAGEMENT DOCUMENTATION

A manual that defines the scope and structure of the quality control process is to be submitted start of contract. The manual will include a clear description of the process and documentation required to execute the services. Monthly reporting of quality management audits will be submitted on a monthly basis to the contract administrator. This includes checklists of the spot inspections as well as any internal auditing of time billed to tasks.



City of Coquitlam
REQUEST FOR PROPOSALS
RFP No. 19-01-02

Traffic Signal and Street Light Maintenance

Proposals will be received on or before 2:00pm (local Time)

Thursday, April 4, 2019

(Closing date and time)

INSTRUCTIONS FOR PROPOSAL SUBMISSION

Proposal submissions are to be consolidated into one PDF file and uploaded through QFile, the City's file transfer service accessed at website: qfile.coquitlam.ca/bid

1. **In the "Subject Field" enter:** RFP Number and Name
2. **Add files in .pdf format and "Send"**
(ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete)

Proponents are responsible to allow ample time to complete the Proposal Submission process. If assistance is required phone 604-927-3060.

PROPOSAL SUBMISSION FORM

Complete and return this Proposal Submission Form including:

- **Appendix A – Fees and Rates**

Submitted by:

_____ (company name)

1. **I/We confirm** having full knowledge that the City reserves the right to divide up the Goods and Services by type of work, or other basis as the City may decide, and to select one or more Preferred Proponents to enter into discussions with the City for one or more agreements to perform a portion or portions of the Goods and Services.

Yes

2. **I/We confirm** having full knowledge that the City considers the following combinations of delivery options as viable alternatives:

Yes

- (1) Option 1 – All Traffic Signal Maintenance

This work entails all work orders related to scheduled and unscheduled traffic signal maintenance both scheduled and unscheduled, including street lighting on combination traffic signal poles.

- (2) Option 2 – All Street Light Maintenance

This work entails all work orders related to scheduled and unscheduled street light maintenance.

- (3) Option 3 – All of Option 1 and Option 2

This work entails all traffic signal and street light work as described in Schedule 1.

3. **KEY PERSONNEL**

Provide information on key personnel that would be providing the services and staff responsible for this project.

Name	Roles and Responsibilities	Qualifications & Experience

4. CAPACITY AND RESOURCES

Provide information about how many certified staff/crews you have available for this service.

5. SUBCONTRACTORS

Sub-contractors are to be identified with a full description of the type of services to be provided. The Contractor is responsible to ensure that Sub-contractors comply with all the terms and conditions outlined in this RFP.

Name of Company	Roles and Responsibilities	Contact Person – Name and Contact Information

6. SAMPLE REPORTS

Attach to the proposal, examples of reports as part of the proposal submission.

Attached in electronic format

7. METHODOLOGY FOR INSPECTION AND TESTING

Describe the methodology for inspection and testing activities as well as the standards, criteria and test procedures to be followed for quality assurance in conducting the Services.

8. GUARANTEE AND DATA VALIDATION

The Contractor must provide a **three (3) month guarantee** to maintain the data integrity against any defects arising from inconsistent or missing data may be discovered within one (3) months from the date of acceptance of the work by the City.

Faulty data discovered during the guarantee period must be rectified to the satisfaction of the City within 1 week of notification. This shall be at no cost to the City of Coquitlam.

Confirm guarantee period and describe how validation of data and Quality Assurance will be achieved:

9. RISK FACTORS

Describe risk factors and how data collection will be adjusted for areas under construction, involving accidents, for other types of road closures, or during special events:

10. HEALTH AND SAFETY PROGRAM

Confirm your company has a written safety program in place that meets the requirements of WorkSafeBC.

11. VALUE ADDED

Please provide information on what makes your firm innovative, what is your competitive advantage, and what other services your firm provides that would assist or be of benefit to the City such as; energy efficiency recommendations, new products, market research

12. SUSTAINABLE PRACTISES AND INITIATIVES

Describe all initiatives, policies or programs that illustrate your efforts towards sustainable practises that would be of benefit to the City and the community.

(Social/Ethical, Environmental, Economic/Financial)

13. NON-COMPLIANCE

Fully describe any deviations to the requirements outlined in this RFP that your company is unable to comply with.

14. CONFLICT OF INTEREST DECLARATION

Proponents shall disclose any actual or potential conflicts of interest and existing business relationships it may have with the City, it's elected or appointed officials or employees:

15. ADDENDA

We acknowledge receipt of the following Addenda related to this Request for Proposals and have incorporated the information received in preparing this Proposal:

Addendum No.	Date Issued

16. EXPERIENCE AND REFERENCES

Proponents shall be competent and capable of performing the services requested.

Contracts indicated below should be for similar services similar in size, scope and complexity.

By submission of a proposal, Proponents agree the City may contact references to verify information provided. Information obtained from references will not be disclosed or discussed with any Proponents.

Year Started and Completed	
Description of Services Provided and Primary Personnel Responsible	
Company Name	
Contact Person	
Telephone and Email	
Approximate Annual Value	

Year Started and Completed	
Description of Services Provided and Primary Personnel Responsible	
Company Name	
Contact Person	
Telephone and Email	
Approximate Annual Value	

Year Started and Completed	
Description of Services Provided and Primary Personnel Responsible	
Company Name	
Contact Person	
Telephone and Email	
Approximate Annual Value	

17. Authorization

We hereby submit our Proposal for the services as specified and undertake to carry out the work in strict accordance with all referenced Terms & Conditions, Regulations and Codes, applicable to this RFP. We agree to the rules of participation outlined in the [Instructions to Proponents and should our proposal be selected, will accept the City’s contract: Terms and Conditions of Purchase](#)

Company Name:	
Address:	
Phone:	
GST Registration No.:	
Project Contact: Name and Title of Individual <i>for communication related to this RFP</i> (please print)	
Contact Email:	
Name & Title of Authorized Signatory: (please print)	
Signature:	
Date:	

The signature is an authorized person of the organization and declares the statements made in their submission are true and accurate.

For the purpose of this RFP, electronic signatures will be accepted.

City of Coquitlam
RFP No. 19-01-02 - Traffic Signal and Street Light Maintenance

APPENDIX A

SCHEDULE 2 - FEES AND RATES

(All prices quoted shall Exclude GST)

Should there be any discrepancy in the information provided or submitted, the City's original file copy shall prevail

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
	TRAFFIC SIGNAL - PREVENTATIVE MAINTENANCE				
1.00	Major Maintenance: To supply everything including labour and equipment to meet the minimum requirements specified in Schedule 1, Section 2.				
1.01	Full Traffic Signal (with or without UPS)	Each	131		\$0.00
1.02	Pedestrian Signal (with or without UPS)	Each	22		\$0.00
1.03	Fire Signal	Each	4		\$0.00
1.04	Illuminated Pedestrian Crossing Sign	Each	18		\$0.00
1.05	Advance Warning Flasher	Each	23		\$0.00
1.06	Special Crosswalk	Each	6		\$0.00
1.07	Signal Module Replacement - includes storage of City material and recycling of refuse	Each	330		\$0.00
	TRAFFIC SIGNAL - UNSCHEDULED MAINTENANCE				
2.00	To supply everything including labour and equipment for traffic signal regular unscheduled maintenance calls.				
2.01	Primary Electrician with Bucket Truck	Hour	550		\$0.00
2.02	Secondary Electrician with Bucket Truck	Hour	600		\$0.00
2.03	Labourer with Pickup Truck	Hour	1,200		\$0.00
2.04	Labourer Only	Hour	75		\$0.00
2.05	Operator with Backhoe	Hour	150		\$0.00
2.06	Operator with Crane/Hi-Reach Truck	Hour	150		\$0.00
2.07	Specialty Truck, equipment and crew including jackhammer, compressor, concrete saw and compactor	Hour	150		\$0.00
2.08	Operator and Buffer Truck	Hour	150		\$0.00
2.09	Flagpersons	Hour	150		\$0.00
2.10	Supply and Install Inductance Loops	Each	30		\$0.00

Name of Contractor: _____

City of Coquitlam
RFP No. 19-01-02 - Traffic Signal and Street Light Maintenance

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ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
3.00	To supply everything including labour and equipment for emergency unscheduled maintenance calls other than those specifically listed in this schedule <u>outside regular working hours.</u>				
3.01	Primary Electrician with Bucket Truck	Hour	120		\$0.00
3.02	Secondary Electrician with Bucket Truck	Hour	50		\$0.00
3.03	Labourer with Pickup Truck	Hour	50		\$0.00
3.04	Labourer Only	Hour	50		\$0.00
3.05	Operator with Backhoe	Hour	20		\$0.00
3.06	Operator with Crane/Hi-Reach Truck	Hour	50		\$0.00
3.07	Specialty Truck, equipment and crew including jackhammer, compressor, concrete saw and compactor	Hour	20		\$0.00
3.08	Operator and Buffer Truck	Hour	50		\$0.00
3.09	Flagpersons	Hour	100		\$0.00
	STREET LIGHT - ANNUAL PREVENTATIVE MAINTENANCE				
4.00	To supply everything including labour and equipment to carry out street light preventative conversion and maintenance as specified in Schedule 1, Section 3.				
4.01	Street light pole and luminaire(s) general preventative maintenance (post-LED conversion)	per pole	1,400		\$0.00
4.02	Street light luminaire conversion, no buffer truck needed - Cobra head to cobra head	per lum	500		\$0.00
4.03	Street light luminaire conversion, buffer truck needed - Cobra head to cobra head	per lum	500		\$0.00
4.04	Street light luminaire conversion, no buffer truck needed - Post-top to cobra head	per lum	500		\$0.00
4.05	Street light luminaire conversion, buffer truck needed - Post-top to cobra head	per lum	250		\$0.00
4.06	Street light luminaire conversion, no buffer truck needed - Specialty fixture with retrofit kit	per lum	250		\$0.00
4.07	Street light luminaire conversion, buffer truck needed - Specialty fixture with retrofit kit	per lum	0		\$0.00
5.00	To supply everything including labour, equipment and Goods to carry out pole painting specified in Schedule 1, Section 3.2				
5.01	Street light pole less than 10.5m	Each	300		\$0.00
5.02	Street light pole greater than 10.5m	Each	100		\$0.00
5.03	Standard traffic signal or combination pole	Each	50		\$0.00
5.04	Secondary traffic signal pole	Each	50		\$0.00

Name of Contractor: _____

City of Coquitlam
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ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
6.00	To supply everything including labour and equipment to carry out street light electrical service base prevenative maintenance as specified in Schedule 1, Section 3.1				
6.01	Service Bases	Each	140		\$0.00
	STREET LIGHT - UNSCHEDULED MAINTENANCE CALLS				
7.00	To supply everything including labour and equipment for street light unscheduled maintenance calls.				
7.01	Primary Electrician with Bucket Truck	Hour	550		\$0.00
7.02	Secondary Electrician with Bucket Truck	Hour	600		\$0.00
7.03	Labourer with Pickup Truck	Hour	1,200		\$0.00
7.04	Labourer Only	Hour	75		\$0.00
7.05	Operator with Backhoe	Hour	150		\$0.00
7.06	Operator with Crane/Hi-Reach Truck	Hour	150		\$0.00
7.07	Specialty Truck, equipment and crew including jackhammer, compressor, concrete saw and compactor	Hour	150		\$0.00
7.08	Operator and Buffer Truck	Hour	150		\$0.00
7.09	Flagpersons	Hour	150		\$0.00
8.00	To supply everything including labour and equipment for emergency street light unscheduled maintenance calls <u>outside regular working hours.</u>				
9.01	Primary Electrician with Bucket Truck	Hour	200		\$0.00
9.02	Secondary Electrician with Bucket Truck	Hour	50		\$0.00
9.03	Labourer with Pickup Truck	Hour	50		\$0.00
9.04	Labourer Only	Hour	50		\$0.00
9.05	Operator with Backhoe	Hour	20		\$0.00
9.06	Operator with Crane/Hi-Reach Truck	Hour	50		\$0.00
9.07	Specialty Truck, equipment and crew including jackhammer, compressor, concrete saw and compactor	Hour	20		\$0.00
9.08	Operator and Buffer Truck	Hour	50		\$0.00
9.09	Flagpersons	Hour	50		\$0.00
(exclude GST) TOTAL					\$0.00

Name of Contractor: _____