

REQUEST FOR PROPOSAL "RFP" NO. PS20200107

SUPPLY AND DELIVERY OF LED LUMINAIRES & INTELLIGENT STREET LIGHT CONTROLS SYSTEM

QUESTIONS AND ANSWERS NO. 4

ISSUED ON: May 29, 2020

Q1.	What is the preferred cellular provider of the City?
A1.	The City's cellular provider is Bell.
Q2.	Would the City consider a Network As A Service (NaaS) offering where the proponent would engineer a network design of proponent owned, operated and serviced gateways installed on City assets? Instead of a gateway charge, there would be a per node per year Network As A Service charge. The proponent would provide enough gateways to meet the needs of the City and NaaS charges would start on install (i.e. a rolling 5 year ramp)
A2.	<p>The City's primary interest is to have full ownership of all control hardware identified in this RFP. The City is open to consider proponents offering alternate solutions to meet the service requirements.</p> <p>Proponents offering alternate solutions must indicate all options and costs necessary to meet the requirement of the RFP. The Proposal must clearly describe how the proposed products and services will be incorporated and function with City assets and meet the objectives outlined in this RFP. At a minimum, the City expects proponent owned and operated assets to comply with industry standards. Preference will be given to proponents whose components can be demonstrated to have a high degree of cross compatibility with devices from other vendors.</p>
Q3.	<p>Currently we use the method of using an under-voltage or low-voltage alarm/report to detect potentially energized poles. This is achieved via using metrology from pins 1-3 of the NEMA receptacle. If this functionality needs to be accomplished using contacts 4-7 of the ANSI C136.41 interface and bonding it to the metal pole, it poses multiple challenges:</p> <ol style="list-style-type: none"> 1. The contacts specified by ANSI C136.41 and the receptacle wiring are not designed for high voltage applications. 2. Under specific lab-controlled circumstances, this solution can be implemented and could work but if the pole gets hit by lightning or is exposed to high energy from some other source, it will blow up the nodes regularly. UL773 which covers safety and high voltage interfaces does not cover exposing the four low-voltage DC contacts to energized AC and potential lightning strikes causing a high potential difference in the detector surface.
A3.	The ability to detect energized pole is a desirable feature. Please clearly describe your solution to provide this function and describe all risks involved to implement the solution.

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Q4.	Please provide the specific wiring diagram on how the pole is to be bonded from the pole arm to the fixture's terminal block?
A4.	Refer to the attached COV drawing, LDS-1.4.
Q5.	<p>Re: CS-5 Is network micro-segmentation available where the sensors connect to the gateways and gateways connect to the internet to enhance the security of each IoT device by segmenting them from other devices or other consumers on the same network? For instance, provide a secure and reliable segmented network that connects multiple vendors streetlight controllers in a way that different controllers would be completely segmented? Please provide details</p> <p>What is the goal/purpose of the micro-segmentation of devices? Is the city trying to segregate vendors devices so they can manage them independently within a common rf mesh network (logical separation) or do they actually want to completely isolate different vendor devices such that they do not participate in the same RF mesh - i.e. will never use the same communication pathways (physical separation)?</p>
A5.	The key purpose is to maintain security and integrity of the components owned by the City (nodes, gateways, etc.) from other tenants / customers that might share the same Mesh / Network.
Q6.	<p>Re: CS-50 Are the encryption-keys/salt-values unique for each customer? provide details including: Does the customer have access to their keys? does vendor have access to the customers keys? where is the key stored? how often the key changes? are the keys symmetric or public/private keys?</p> <p>The solution contains many keys, both of the asymmetric and symmetric varieties. A summary view of key generation and ownership will be provided. If a more detailed response for any specific key or key type is desired, please indicate accordingly.</p>
A6.	Yes, please provide the response for each of the above questions for each of the solution keys involved.
Q7.	What is the difference between Critical/Desirable/Optional tags for each item?
A7.	<p>Critical - essential requirement, impacting the operation of the requirement</p> <p>Desirable - offering may benefit/improve the requirement, but does not impact operation</p> <p>Optional - not required but may be considered at time of contract or in the future</p>
Q8.	On Item CS-1: 3Rd party Security penetration system - Is there any certification/classification of the service provider who does PEN TEST?
A8.	<p>The service provider should be able to demonstrate that they have the required skills and minimum two years of experience to complete the penetration testing.</p> <p>It is preferred that the testers have one or more industry acceptable certificates including CEH, OSCP, GPEN, CRTOP, CMWAPT, CEPT.</p>

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Q9.	On Item CS-17: Firmware updates - Is it OK to have a signing verification at the gateway side, as the channel from gateway to device is a secure (protocol level) channel?
A9.	Yes.
Q10.	On Item CS-24: on Cyber Security events - Can the City provide a List of physical and cyber-security events to be detected?
A10.	<p>Sufficient audit-logging information need to be retained to answer the following questions:</p> <ol style="list-style-type: none"> 1. What Activity was performed? 2. Who or what performed the activity, including where or on what system the activity was performed from (subject)? 3. What the activity was performed on (object)? 4. When was the activity performed? 5. What tool(s) was the activity performed with? 6. What was the status (such as success vs. failure), outcome, or result of the activity? <p>Based on the log collected detect and alert on security and operational activities including:</p> <ul style="list-style-type: none"> • Attacker gaining privileged access to one system and issuing control commands to other devices in the environment. • Spoofing a controller and injecting fraudulent responses to valid commands as in denial- of-service attacks. • Tampering of data traversing the device. • Creating a denial of service, which would prevent the utility from issuing control commands. • Exploiting vulnerabilities in OWASP top 10, denial of service, authentication/ authorization deficiencies, buffer overflows, key management, injection/man-in-the-middle attacks, web services and XML content attacks, network segmentation, secure implementation of WAN or FAN network, device and network hardening.

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Q11.	On Item CS-71: on Cyber Security events - The token expiry and session management. Is it expected for user sessions alone or for the gateway sessions as well?
A11.	For both.
Q12.	Schedule B item 1.3 (Rated Life) states "the design life of the LED array shall be defined as L89 at 100,000 hours." IES guidelines state that the hours of operation should not exceed 6X the test time of the LEDs. Since LEDs are generally tested to 10,000 hours, this limits the reported life rating to 60,000 hours maximum. Please see below. In consideration of IES position would you like to restate the TM-21 life at 60,000 hours?
A12.	City of Vancouver requires TM-21 life at 88,000 hours. The proponent should be prepared to provide LM-79 and LM-80 used to generate TM-21.
Q13.	In section 8.2 items a to i list various selection criteria. Below this listing is a table that is divided into Technical, Financial, and Sustainability. Would you please advise for each criteria listed (a to i) which of the three categories do they fall under. For example, what criteria is considered "technical." Under which criteria is efficacy or total cost of ownership accounted for?
A13.	Items in Section 8.1 list the general criteria for the evaluation. The City does not provide any breakdown or classification of the detail evaluation criteria.
Q14.	If a luminaire supplier is not able or willing to supply a 15 year warranty price will this result in exclusion.
A14.	Proponent should provide their most competitive proposal. The City will evaluate proposals for the best value to the City.
Q15.	Evaluation of Proposals (Part A, s. 8.2, table) shows only the weight % of the overall Evaluation Criteria (there are no breakdowns/details). Will the City provide a further breakdown that aligns with "Appendix 2 - Questionnaire" and "Appendix 3 - Commercial Proposal", as this will allow all proponents an equal opportunity to ensure that the most valued elements are sufficiently addressed and evaluated equally?
A15.	No, breakdown of high level weighting will not be provided.
Q16.	Are any of the sections outlined in "Appendix 2 - Questionnaire" or "Appendix 3 - Commercial Proposal" to be evaluated as pass/fail? If so, please list each section that will be evaluated as such.
A16.	No.

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Q17.	Given that Appendix 2 is separate from Appendix 5, there's an implication that subcontractors may be evaluated differently than the Prime. There is a concern with the potential circumstance where a general contractor (GC) is the Prime, and a manufacturer (or distributor) is a subcontractor, and GC's experience with the supply of luminaires scores lower than if that manufacturer were the Prime (as they will have significantly greater luminaire supply experience). Given that this is an all-in-one team proposal, will the City evaluate the Prime's experience (in Appendix 2 - Questionnaire, s. 1.2) and the subcontractors' experience (in Appendix 5 - Subcontractors) in combination with each as an all-in-one total score? If not, can the City validate why the scoring may evaluate a Prime's experience greater than their Subcontractors' when this is a collaborative approach?
A17.	Proponent should provide sufficient detail (company, personnel, subcontractor, services and specifications) throughout the proposal for the City to evaluate its proposal as a total package.
Q18.	Will the City define a scoring criteria that will be used to determine which proponents will be selected to proceed to the "Shortlist for Performance Test" (eg. All proponents with a score over X%, top three proponents, etc.)?
A18.	No.
Q19.	<p>a) Will this RFP be evaluated as a two-envelope process where minimum technical requirements need to be met prior to opening pricing—as per industry standards?</p> <p>b) Please indicate if there is a minimum technical score required prior to "Appendix 3 - Commercial Proposal" being opened, and if so, please provide that minimum score.</p> <p>c) Will pricing only be opened if technical requirements are met (i.e., technical evaluation results in a 'pass')?</p>
A19.	No for a), No for b), and No for c).
Q20.	Suppliers' Warranties and Covenants, (Part D, Article 6, s. 6.1, (b) and (d)), states "the Supplier is a company duly organized, validly existing and in good standing under the laws of British Columbia and is lawfully authorized to do business in the Province of British Columbia" and "the Supplier has a valid City of Vancouver business license or a Metro West Inter-Municipal business license that applies to all of the Supply;". It is acceptable that these conditions will be met by the time of contract execution (i.e., signing the Form of Agreement)?
A20.	Refer to QA3, A20
Q21.	<p>Emergency Services and Disaster Response Support (Part B, Schedule A, s.1.2 (a)(i) and (ii)) states order and delivery requirements are to be available 24/7, and delivery within 24 hours. There is currently no way to capture these costs, as the requirement for quantities is unknown. This information will allow proponents to understand real estate requirements for stock and storage (based on the City's expectation of emergency requests and frequencies).</p> <p>a) Can the City quantify this requirement by way of known % of stock required to be held at any given time (e.g., 5% of total deployed for each individual equipment SKU)?</p> <p>b) If no to a), is the City able to provide data regarding historical emergency requests and</p>

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	<p>quantities (ideally more than 1 year) so that all proponents are able to trend data and cost this accordingly)?</p> <p>c) If no to a) does the City expect to negotiate emergency supply quantities and delivery schedule during the negotiation phase?</p>
A21.	No to A. No to B. The City expects that experienced suppliers will have a level of understanding and programs in place to support the situations described. The City will work with the successful proponent to determine the level of support in accordance to the services proposed.
Q22.	Given that the City has specified a target installation schedule of up to 1,000 units/month, will the City specify a maximum number of luminaires required to be stored by the Proponent at any given time (e.g., 2 months' worth x 1,000 = 2,000 maximum storage capacity)? This information will allow proponents to understand the real estate requirements for stock and storage for the project. If this information is not provided, it could result in increased costs to the City for excessive storage capacity.
A22.	The City expects proponent to described their capability or other innovative methods to provide the requirements and objectives identified in Part B.
Q23.	If a certain number of luminaires are purchased and stored for Emergency Services and Disaster Response Support as required by the City, but they are not used, will the City purchase these at the established unit prices at the end of the contract?
A23.	Part B, Section 1.2 describes the City's preferred level of service and responsiveness, not specifically based on addition of inventory.
Q24.	<p>Quality Assurance - Returns (Part B, Schedule A, s. 1.3 (b)(ii)) states "The rejected Products will be required to be pick up from the City for return within forty eight (48) hours from notification". Depending on the interpretation of this requirement and their operating hours, this may be impossible.</p> <p>a) Does this statement apply to normal City operational business hours (i.e., forty eight business hours, M-F, excluding stat holidays)?</p> <p>b) If no to a), will the City make the Products available for pick-up 24/7?</p>
A24.	Proponents shall propose their capable level of service.
Q25.	Once the question deadline has closed, will there be an opportunity to request clarification of the answers provided by the City?
A25.	After the deadline, the City will only address question deemed essential to the RFP.
Q26.	If the City responds to questions later than May 28th, will the City extend the submission deadline to allow for a minimum of two weeks between the time answers are received and the closing date?
A26.	There is no minimum timeframe set between question deadline and closing date. Due to a tight project schedule, the City has no interest to further extend the closing date.

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Q27.	<p>Shortlist for Performance Test, (Part B, s. 6.1, (b)(iii)) states "Proponent shall provide (at no cost) to the City:</p> <ul style="list-style-type: none"> - Fully functional system, including: products and accessories; and - Complete commissioning" <p>a) Is the City able to quantify the number of luminaires and control nodes required for the Performance Test evaluation?</p> <p>b) Will the materials be returned if the proponent is not successful? If not, will the value of the materials be reimbursed by the City?</p> <p>c) If the proponent is successful, will the City purchase the products at the price outlined in the Commercial Proposal (both Table 1, 2 and 3)?</p> <p>d) If no to b) and c), is there a cap to the dollar value in materials (supplied at no cost) that the City is willing to accept?</p>
A27.	<p>a) Refer to Q&A No. 3, A2.</p> <p>b) Materials from unsuccessful proponents will be returned. Proponent is responsible for the material pick up from a location designated by City at no cost to the City. The City will not reimburse proponents for damaged items or depreciation of assets.</p> <p>c) No.</p> <p>d) No.</p>
Q28.	<p>It is unclear what is being requested within "Value Added Services and Innovations" (Appendix 2, s. 1.14), given the "no additional cost" statement. There are numerous value-added products available beyond those specified in the RFP that may be leveraged in the future (e.g., additional smart city capabilities such as traffic sensors and associated backhaul), however these have costs that we believe should not be included in the Bid Price. It is therefore assumed that these products and services should not to be included or priced with this submission.</p> <p>a) Can the City clarify or provide examples of what is meant by Value Added Services and Innovations at no additional cost?</p> <p>b) Is it the City's intention that the Proponents describe their solution's future capabilities and potential for additional products without including costs at this time?</p>
A28.	<p>Value added services means services or products available and/or offered to the City over and above the Requirement listed in the RFP, at no additional cost as a result of the award of contract.</p>
Q29.	<p>Part C, Appendix 2, s. 1.14 only has a sub (a), whereas the answer textbox references a sub (a) and (b). Will the City confirm that this is just a section reference error and not a missing section of the questionnaire?</p>
A29.	<p>This is a reference error. There is no (b) in the Part C, Appendix 2, Section 1.14.</p>

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Q30.	In Part C, Appendix 3, some of the numbers are inconsistent with the textbox section references. Specifically ss. 1.6, 1.7(a), and 1.8(a). Will the City confirm that this is just a section reference error and not a missing section of the commercial proposal pricing?
A30.	Part C, Appendix 3, Section 1.6 and 1.7 has reference errors in each box provided below. Essentially the boxes are spaces provided for the response of the question above.
Q31.	<p>There are several references to different streetlight control system architectures throughout the RFP, but predominantly Mesh Networks (e.g., Schedule C Items: GEN-2, GEN-8, NTC-1, NTC-9, CS-6). There are multiple platforms/architectures that can deliver similar (or potentially better) coverage and communication than mesh.</p> <p>a) Is the City only considering a mesh network at this time, or are other proven smart streetlighting networks acceptable (e.g., star typology), as long as they meet the technical requirements of the RFP?</p>
A31.	Preference is for using proven technology that meets the technical requirements of the RFP.
Q32.	Will the trial equipment be returned?
A32.	Refer to A27.
Q33.	just to get clarity on timelines, could you help me with a tentative schedule for Webex presentation after we submit our proposal by 11th June?
A33.	Tentative schedule for Webex demo is mid-July.
Q34.	<p>Re: PS20200107 RFP - Part B - Schedule C spreadsheet</p> <p>TQ-19 states that the cloud solution must be hosted in Canada. Can you please clarify if the City of Vancouver's intention or expectation also extends to the following?</p> <ul style="list-style-type: none"> • Can the data pass through any services in the USA at all? Cellular network equipment? Any pass-through servers? • Can foreign (outside of Canada) based employees access the data at all for support purposes?
A34.	Yes, as long as there is no PII data. As far as street light assets are concerned, we do not anticipate any personally identifiable data to be stored and if this is confirmed during the Privacy review, then data may pass through the US and be supported by foreign based staff.

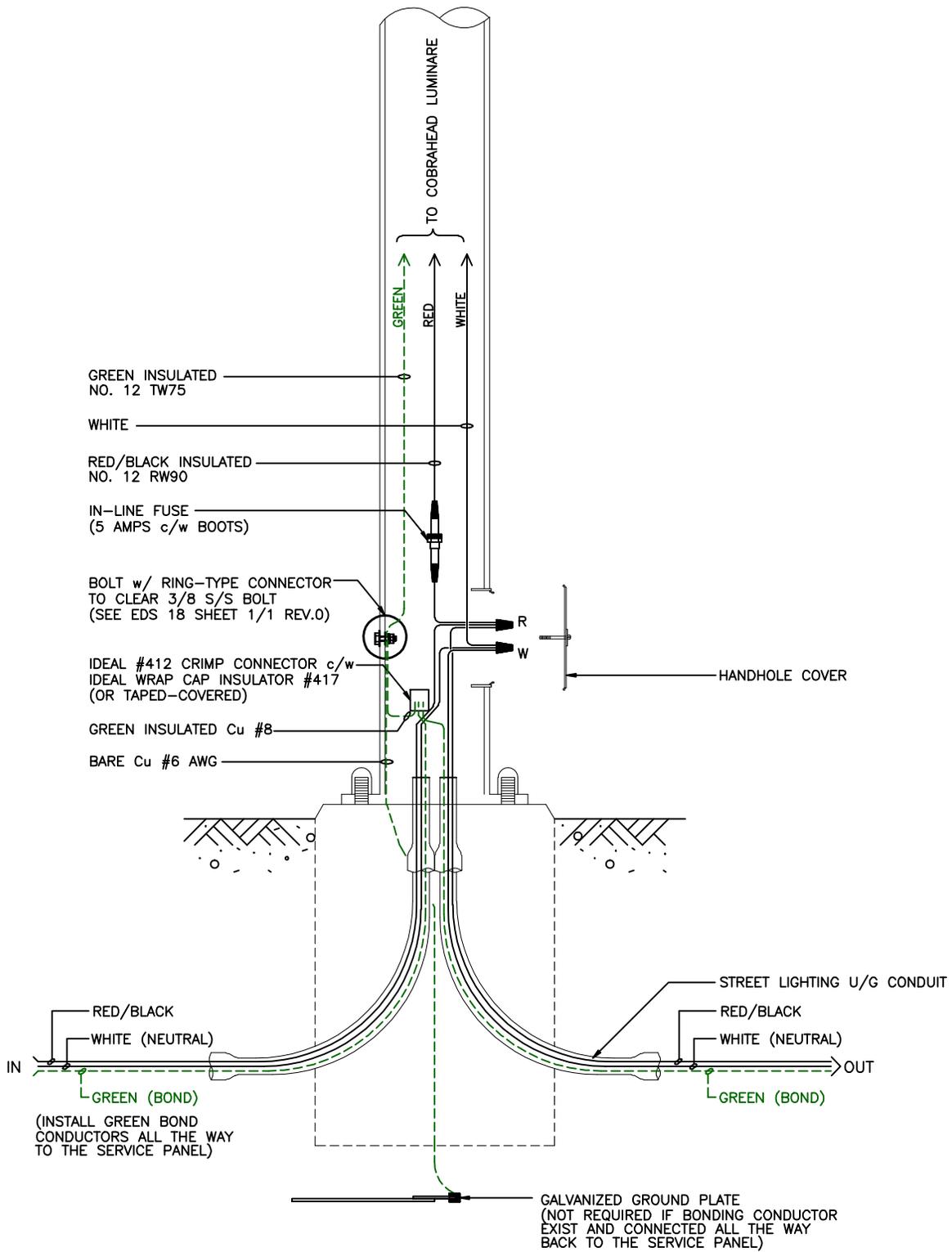
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Q35.	<p>Re: PS20200107 RFP - Part B - Schedule C spreadsheet</p> <p>TQ-51 States "Are all application data available for CRUD operations via methods shown In TQ-84".</p> <p>We did not find any reference or item related to TQ-84. Please advise.</p>
A35.	<p>TQ-84 was erroneously referenced. TQ-51 question shall read:</p> <p><i>Are all application data available for CRUD operations. if City wants to:</i></p> <ol style="list-style-type: none"> <i>1. City pulls from Vendor real-time using RESTful API (GeoJSON, JSON, XML)</i> <i>2. Vendor pushes to City via RESTful API (GeoJSON, JSON, XML)</i> <i>3. Scheduled Vendor sFTP transfer to City (GeoJSON, JSON, XML)</i> <i>4. Scheduled City sFTP transfer to Vendor (GeoJSON, JSON, XML)</i>
Q36.	<p>In the excel spreadsheet, in tab "TS requirements" Questions TQ-31 & TQ-51, both refer to questions TQ-84, but questions stop at TQ-54? Please can you clarify?</p>
A36.	<p>Refer to response A35 re: TQ-51.</p> <p>TQ-31 does not refer to TQ-84. TQ-32 does (since TQ-84 was erroneously referenced), TQ-32 question shall read:</p> <p><i>The City prefers that all data from SaaS Applications are replicated to the City's Data Hub.</i></p> <p><i>Describe if the City has the option to have a nightly / configurable data replication in useable format through CRUD operations if City wants to:</i></p> <ol style="list-style-type: none"> <i>1. City pulls from Vendor real-time using RESTful API (GeoJSON, JSON, XML)</i> <i>2. Vendor pushes to City via RESTful API (GeoJSON, JSON, XML)</i> <i>3. Scheduled Vendor sFTP transfer to City (GeoJSON, JSON, XML)</i> <i>4. Scheduled City sFTP transfer to Vendor (GeoJSON, JSON, XML)</i>

Attached drawing, PS20200107 - LDS-1.4 - for QA4

END OF Q&A No. 4



NO.	REVISION	BY	CHECK	DATE
1	INSTALLATION OF BONDING CONDUCTOR OR GALVANIZED GROUND PLATE PROCEDURE	MCM	GB	JUL'06

ELECTRICAL DESIGN – CITY OF VANCOUVER



COV BRANCH	
DRAWN BY: RA/AL	DESIGN BY: MCM
DRAWING CHECKED: MCM	DESIGN CHECKED: AB/GB
REFERENCES:	

TYPICAL WIRING CONNECTION STREET LIGHTING ONLY

SCALE:	N.T.S.
DATE:	SEPT. 04
DRAWING NUMBER:	LDS-1.4
SHEET: 39 OF 44	REVISION:1....