

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**

**Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions  
Travaux publics et Services gouvernementaux  
Canada  
401-1230 Government St.  
Victoria  
BC  
V8W 3X4  
Bid Fax: (250) 363-3344**

## Request For a Standing Offer Demande d'offre à commandes

Regional Individual Standing Offer (RISO)

Offre à commandes individuelle régionale (OCIR)

Canada, as represented by the Minister of Public Works and Government Services Canada, hereby requests a Standing Offer on behalf of the Identified Users herein.

Le Canada, représenté par le ministre des Travaux Publics et Services Gouvernementaux Canada, autorise par la présente, une offre à commandes au nom des utilisateurs identifiés énumérés ci-après.

## Comments - Commentaires

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du**  
**fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada - Pacific  
Region  
800 Burrard Street, 12th floor  
800, rue Burrard, 12e étage  
Vancouver  
British C  
V6Z 0B9

<b>Title - Sujet</b> Electrical Services	
<b>Solicitation No. - N° de l'invitation</b> W0103-125105/B	<b>Date</b> 2013-10-15
<b>Client Reference No. - N° de référence du client</b> W0103-125105	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$PWY-011-7103
<b>File No. - N° de dossier</b> PWY-2-35401 (011)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2013-10-31</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Daylight Saving Time PDT
<b>Delivery Required - Livraison exigée</b> See Herein	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Anderson, Elaine PWY	<b>Buyer Id - Id de l'acheteur</b> pwy011
<b>Telephone No. - N° de téléphone</b> (250)363-3298 ( )	<b>FAX No. - N° de FAX</b> (250)363-0395
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DND - CFB Esquimalt - Victoria, BC	
<b>Security - Sécurité</b> This request for a Standing Offer includes provisions for security. Cette Demande d'offre à commandes comprend des dispositions en matière de sécurité.	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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## REQUEST FOR STANDING OFFER (RFSO)

**THIS REQUEST FOR STANDING OFFER HEREBY CANCELS AND SUPERCEDES  
REQUEST FOR STANDING OFFER W0103-125105/A WHICH CLOSED 5  
SEPTEMBER, 2013 IN IT'S ENTIRETY.**

### IMPORTANT NOTICE TO OFFERORS

#### THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

For further instructions please consult "Special Instruction to Offeror", SI10, "Security related requirements" and "Supplementary Conditions" SC01 "Security related requirements".

### TABLE OF CONTENTS

#### SPECIAL INSTRUCTIONS TO OFFERORS (SI)

- SI01 Introduction
- SI02 Code of Conduct and certifications, related documentations
- SI03 Enquiries During the Solicitation Period
- SI04 Contracting authority / Departemental representative
- SI05 Quantity
- SI06 PWGSC obligations
- SI07 Site Visit
- SI08 Revision of Offer
- SI09 Offer Validity Period
- SI10 Security Related Requirement
- SI11 Web Sites

#### GENERAL INSTRUCTIONS TO OFFERORS (GI)

- GI01 Code of Conduct and Certifications - Offer
- GI02 Completion of the Offer
- GI03 Identity or Legal Capacity of the Offeror
- GI04 Applicable Taxes
- GI05 Capital Development and Redevelopment Charges
- GI06 Listing of Subcontractors and Suppliers
- GI07 Submission of Offer
- GI08 Revision of Offer
- GI09 Rejection of Offer
- GI10 Offer Costs
- GI11 Procurement Business Number
- GI12 Compliance With Applicable Laws
- GI13 Approval of Alternative Materials
- GI14 Performance Evaluation
- GI15 Conflict of Interest-Unfair Advantage

#### STANDING OFFER PARTICULARS (SOP)

- SOP01 General
- SOP02 Period of the Standing Offer
- SOP03 Call-Up Limitation
- SOP04 Call-Up Procedure

**SUPPLEMENTARY CONDITIONS (SC)**

SC01 Security Access Requirements for Canadian Contractors

**CALL-UPS CLAUSES OR RESULTING CONTRACT DOCUMENTS (CD)****APPENDIX 1 - COMPLETE LIST OF EACH INDIVIDUAL WHO ARE CURRENTLY DIRECTORS OF THE OFFEROR****APPENDIX 2 - STATEMENT OF WORK****APPENDIX 3 - PRICE PROPOSAL FORM****APPENDIX 4 - MANDATORY CRITERIA****APPENDIX 5 - PERIODIC REPORTS****APPENDIX 6 - SECURITY REQUIREMENT CHECKLIST (SRCL)****SPECIAL INSTRUCTIONS TO OFFERER'S (SI)****SI01 INTRODUCTION**

1. Public Works and Government Services Canada (PWGSC) is inviting Offerors to submit proposals for Standing Offers. The selected offerors shall provide a range of services as identified in the Statement of Work section of this document.
2. It is PWGSC's intention to authorize up to three [3] Standing Offers, each for a period of approximately 3 years. The combined total dollar value of all Standing Offers is estimated to be \$5,600,000.00 (applicable taxes included). Individual call-ups will vary, up to a maximum of \$60,000.00 (applicable taxes included). Offerors should note that there is no guarantee that the full or any amount of the Standing Offers will be called-up; DND will issue call-ups only when the specific services to be provided under the Standing Offer are needed. Please refer to Section SOP04, CALL-UP PROCEDURE.
3. This procurement is subject to the provisions of the Agreement on Internal Trade (AIT)

**SI02 CODE OF CONDUCT AND CERTIFICATIONS - RELATED DOCUMENTATION**

By submitting an offer, the Offeror certifies that he and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Offer of the General Instructions. The related documentation therein required will assist Canada in confirming that the certifications are true.

**SI03 ENQUIRIES DURING THE SOLICITATION PERIOD**

- 1) Enquiries regarding this offer must be submitted in writing to the Contracting Officer named on the Request for Standing Offer (RFSO). Enquiries should be received no later than five [5] calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
- 2) To ensure consistency and quality of the information provided to Offerors, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.

- 3) All enquiries and other communications related to this offer sent throughout the solicitation period are to be directed **ONLY** to the Contracting Officer named on the RFSO - Page 1. Failure to comply with this requirement may result in the offer being declared non-responsive.

#### **SI04 CONTRACTING AUTHORITY / DEPARTMENTAL REPRESENTATIVE**

1. The Contracting Authority for this Request for Standing Offer is:

Elaine Anderson  
Public Works and Government Services Canada  
Acquisitions, Real Property Contracting  
401-1230 Government St.  
Victoria, BC V8W 3X4  
Phone: (250)363-3298; Fax: (250)363-0395  
E-Mail: elaine.anderson@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the establishment of the Standing Offer, its administration, and any contractual issues relating to individual call-ups.

2. A Departmental Representative will be identified at time of each individual Call-Up. The Departmental Representative will be responsible for all matters concerning the technical content of the work under the Call-Up.

#### **SI05 QUANTITY**

The amount of work and estimated expenditure specified in the RFSO are only an approximation of requirements given in good faith. The making of an offer by the Offeror shall not constitute an agreement by Canada. Canada may make one or several call-ups against a standing offer.

#### **SI06 PWGSC OBLIGATION**

A RFSO does not commit PWGSC to authorize the utilization of a standing offer or to pay any cost incurred in the submission of offers, or cost incurred in making necessary studies for the preparation thereof, or to procure or contract for any services. PWGSC reserves the right to reject or authorize for utilization any offer in whole or in part, with or without further discussion or negotiation. Canada reserves the right to cancel or amend the RFSO at any time.

#### **SI07 SITE VISIT**

Because of the large geographical area and some isolated areas covered, a site visit will not be required. The Contractor is advised, however, to familiarize himself with the locations of the various sites so that he is aware of the distances involved. No allowance will be made for travel time except for Aldergrove and Matsqui as specified herein.

#### **SI08 REVISION OF OFFER**

An offer may be revised by letter or facsimile in accordance with "General Instructions to Offerors". The facsimile number for receipt of revisions is (250)363-3344.

## **SI09 OFFER VALIDITY PERIOD**

- 1) The offer cannot be withdrawn for the period of [120] days following the RFSO closing date.
- 2) Canada reserves the right to seek an extension to the offer validity period. Upon notification in writing from Canada, Offerors shall have the option to either accept or reject the proposed extension.
- 3) If the extension referred to in paragraph 1) of SI09 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
- 4) If the extension referred to in paragraph 1) of SI09 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either
  - (a) continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
  - (b) cancel the invitation to tender.
- 5) The provisions expressed herein do not in any manner limit Canada's rights in law or under GI09 "General Instructions to Offerors".

## **SI10 SECURITY REQUIREMENT**

- 1) The Offeror must hold a valid Security Clearance as indicated in section SC01 of the Supplementary Conditions. Failure to comply with this requirement will render the offer non-compliant and no further consideration will be given to the offer.
- 2) The successful offeror's personnel, as well as any subcontractor and its personnel, who are required to perform any part of the work pursuant to the subsequent contract must meet the mandatory security requirement as indicated in section SC01 of the Supplementary Conditions. **Individuals who do not have the required level of security will not be allowed on site.** It is the responsibility of the successful offeror to ensure that the security requirements are met throughout the performance of the contract. Canada will not be held liable or accountable for any delays or additional costs associated with the successful offeror's non-compliance with the mandatory security requirement.
- 3) For additional information on security requirements, offeror's should consult the "Security Requirements for PWGSC Offer Solicitations - Instructions for Offeror" on the Standard Procurement Documents Web site  
<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>

## **SI11 WEB SITES**

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The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Contracts Canada (Buy and Sell) <https://www.achatsetventes-buyandsell.gc.ca/eng/welcome>

Canadian economic sanctions <http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)\_\_\_\_\_

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Certificate of Insurance (form PWGSC-TPSGC 357)\_

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/357.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

Schedules of Wage Rates for Federal Construction Contracts\_\_\_\_

[http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment\\_standards/contracts/schedule/index.shtml](http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml)

PWGSC, Industrial Security Services <Http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html>

PWGSC, Code of Conduct and Certifications

<Http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html>

PWGSC Consent to a Criminal Record Verification (PWGSC-TPSGC 229)

<Http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/229.pdf>

## GENERAL INSTRUCTIONS TO OFFERORS (GI)

### GI01 CODE OF CONDUCT AND CERTIFICATIONS - OFFER

1. Offerors must comply with the Code of Conduct for Procurement. In addition to the Code of Conduct for Procurement, offerors must a) respond to Requests for Standing Offers (RFSO) in an honest, fair and comprehensive manner, b) accurately reflect their capacity to satisfy the requirements stipulated in the RFSO, Standing Offer and resulting contracts, c) submit offers and enter into contracts only if they will fulfill all obligations of the Contract.
2. Offerors further understand that, to ensure fairness, openness and transparency in the procurement process, the commission of certain acts or offences will render them ineligible to be issued a Standing Offer and awarded a contract. Canada will declare non-responsive any offer in respect of which the information herein requested is missing or inaccurate, or in respect of which the information contained in the certifications specified hereinafter is found to be untrue, in any respect, by Canada. If it is determined, after issuance of a Standing Offer, that the Offeror made a false declaration, Canada will have the right to set aside the Standing Offer and to terminate for default any resulting contracts. The Offeror will be required to diligently maintain up-to-date the information herein requested. The Offeror and any of the Offeror's affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the period of any Standing Offer arising from this RFSO and any call-ups made against the Standing Offer.
3. For the purpose of this section, everyone, including but not limited to organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies and subsidiaries, whether partly or wholly-owned, as well as individuals and directors, are Offeror's affiliates if:
  - a. directly or indirectly either one controls or has the power to control the other, or
  - b. third party has the power to control both.

Indicia of control, include, but are not limited to, interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees, or a business entity created following the acts or convictions specified in this section which has the same or similar management, ownership, or principal employees, as the case may be.
4. Offerors who are incorporated, including those submitting offers as a joint venture, must provide with their offer or promptly thereafter a complete list of names of all individuals who are currently directors of the Offeror. Offerors submitting offers as sole proprietorship, including those submitting offers as a joint venture, must provide with their offer or promptly thereafter the name of the owner. Offerors submitting offers as societies, firms, or partnerships do not need to provide lists of names. If the required names have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply will render the offer non-responsive. Providing the required names is a mandatory requirement for a Standing Offer to be issued.

Canada may, at any time, request that an Offeror provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form - PWGSC-TPSGC 229) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the offer being declared non-responsive.

5. The Offeror must diligently maintain an up-to-date list of names by informing Canada in writing of any change occurring during the validity period of the offer as well as during the period of any Standing Offer arising from this RFSO and any call-ups made against the Standing Offer. The Offeror must also, when so requested, provide Canada with the corresponding Consent Forms.
6. By submitting an offer, the Offeror certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Offeror, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties.
7. By submitting an offer, the Offeror certifies that neither the Offeror nor any of the Offeror's affiliates have directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the Standing Offer and any call-ups made against the Standing Offer if the payment of the fee would require the individual to file a return under section 5 of the Lobbying Act.
8. By submitting an offer, the Offeror certifies that no one convicted under any of the provisions under a) or b) are to receive any benefit under a Standing Offer arising from this RFSO and any call-ups made against the Standing Offer. In addition, the Offeror certifies that except for those offences where a criminal pardon or a record suspension has been obtained or capacities restored by the Governor in Council, neither the Offeror nor any of the Offeror's affiliates has ever been convicted of an offence under any of the following provisions:
- Paragraph
- a. 80(1)(d) (False entry, certificate or return), subsection 80(2) (Fraud against Her Majesty) or section 154.01 (Fraud against Her Majesty) of the Financial Administration Act, or
  - b. section 121 (Frauds on the government and Contractor subscribing to election fund), section 124 (Selling or Purchasing Office), section 380 (Fraud) for fraud committed against Her Majesty or section 418 (Selling defective stores to Her Majesty) of the Criminal Code of Canada, or
  - c. section 462.31 (Laundering proceeds of crime) or sections 467.11 to 467.13 (Participation in activities of criminal organization) of the Criminal Code of Canada, or
  - d. section 45 (Conspiracies, agreements or arrangements between competitors), 46 (Foreign directives) 47 (Bid rigging), 49 (Agreements or arrangements of federal financial institutions), 52 (False or misleading representation), 53 (Deceptive notice of winning a prize) under the Competition Act, or
  - e. section 239 (False or deceptive statements) of the Income Tax Act, or
  - f. section 327 (False or deceptive statements) of the Excise Tax Act, or
  - g. section 3 (Bribing a foreign public official) of the Corruption of Foreign Public Officials Act, or
  - h. section 5 (Trafficking in substance), section 6 (Importing and exporting), or section 7 (Production of substance) of the Controlled Drugs and Substance Act.
9. In circumstances where a criminal pardon or a record suspension has been obtained, or capacities have been restored by the Governor in Council, the Offeror must provide with its offer or promptly thereafter a copy of confirming documentation from an official source. If such documentation has not been received by the time the evaluation of offers is completed,



Canada will inform the Offeror of a time frame within which to provide the information.  
 Failure to comply will render the offer non-responsive

10. Offerors understand that Canada may contract outside of the present solicitation process with a supplier who has been convicted of an offense enumerated under c) to h) of the paragraph hereinabove, or who is affiliated with someone who has been convicted of an offense enumerated under c) to h) of the paragraph hereinabove, when required to do so by law or legal proceedings, or when Canada considers it necessary to the public interest for reasons which include, but are not limited to:

Only one person is capable of performing the contract;

- Emergency;
- National security;
- Health and safety;
- Economic harm.

Canada reserves the right to impose additional conditions or measures to ensure the integrity of the procurement process.

## GI02 COMPLETION OF OFFER

- 1) The offer shall be
  - a) Submitted in accordance with the instructions contained in the RFSO;
  - b) correctly completed in all respects;
  - c) signed by a duly authorized representative of the Offeror; and
  - d) accompanied by any other document or documents specified elsewhere in the RFSO where it is stipulated that said documents are to accompany the offer.
- 2) Any alteration to the pre-printed or pre-typed sections of the Price Proposal Form, or any condition or qualification placed upon the offer shall be cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the Price Proposal Form by the Offeror shall be initialled by the person or persons signing the offer. Initials shall be original(s). Alterations, corrections, changes or erasures that are not initialled shall be deemed void and without effect.
- 3) Unless otherwise noted elsewhere in the RFSO, **facsimile copies of bids are not acceptable.**

## GI03 IDENTITY OR LEGAL CAPACITY OF THE OFFEROR

In order to confirm the authority of the person or persons signing the offer or to establish the legal capacity under which the Offeror proposes to enter into Contract, any Offeror who carries on business in other than its own personal name shall, if requested by Canada, provide satisfactory proof of

- (a) such signing authority; and

(b) the legal capacity under which it carries on business;

prior to contract award. Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this offer on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership.

#### **GI04 APPLICABLE TAXES**

"Applicable Taxes" means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.

#### **GI05 CAPITAL DEVELOPMENT AND REDEVELOPMENT CHARGES**

Building permits fees (if applicable) will be applied to call-ups. The Offeror shall not include any monies in the offer amount for special municipal development, redevelopment or other fees or charges which a municipal authority may seek as a prerequisite to the issuance of building permits.

#### **GI06 LISTING OF SUBCONTRACTORS AND SUPPLIERS**

Notwithstanding any list of Subcontractors that the Offeror may be required to submit as part of the offer, the Offeror shall, within forty-eight (48) hours of receipt of a notice to do so, submit all information requested in the said notice including the names of Subcontractors and Suppliers for the part or parts of the Work listed. Failure to do so shall result in the disqualification of its offer.

#### **GI07 SUBMISSION OF OFFER**

1) Canada requests that offerors provide their offer as follows:

Front page of tender package  
Appendix 1: List of Bidders Board of Directors  
Appendix 3: Price Proposal Form  
Appendix 4: Mandatory Criteria

2) Canada requests that offerors follow the format instructions described below in the preparation of their offer.

- (a) use 216 mm x 279 mm (8.5 x 11 inch) paper;
- (b) use a numbering system that corresponds to that of the Request for Standing Offers;

3) Offerors must submit their financial offer in accordance with Appendix 3 - Price Proposal Form. The total amount of applicable taxes are to be shown separately, if applicable. The offer envelope shall be addressed and submitted to the office designated on the Front Page "Request for Standing Offer" for the receipt of the offers. The offer must be received on or before the date and time set for solicitation closing. Prior to submitting the offer, the Offeror shall ensure that the following information is clearly printed or typed on the face of the offer envelope:

- (a) Solicitation Number;
- (b) Name of Offeror;
- (c) Return address; and
- (d) Closing Date and Time.

The offer shall be in Canadian currency. Exchange rate fluctuation protection is not offered. Any request for exchange rate fluctuation protection shall not be considered.

- 4) Timely and correct delivery of offers is the sole responsibility of the Offeror.

#### **GI08 REVISION OF OFFER**

- 1) An offer submitted in accordance with these instructions may be revised by letter or facsimile provided the revision is received at the office designated for the receipt of offers, on or before the date and time set for the closing of the solicitation. The letter or facsimile shall on the Offeror's letterhead or bear a signature that identifies the Offeror.
- 2) A revision to an offer that includes unit prices must clearly identify the change(s) in the unit price(s) and the specific item(s) to which each change applies.

#### **GI09 REJECTION OF OFFER**

- 1. Canada may accept any offer, whether it is the lowest or not, or may reject any or all offers.
- 2. Without limiting the generality of paragraph 1. of GI09, Canada may reject an offer if any of the following circumstances is present:
  - a. the Offeror's bidding privileges are suspended or are in the process of being suspended;
  - b. The Offeror's bidding privileges of any employee or subcontractor included as part of the offer are suspended or are in the process of being suspended, which suspension pending suspension would render that employee or subcontractor ineligible to make an offer on the Work, or the portion of the Work the employee or subcontractor is to perform;
  - c. the Offeror is bankrupt, or where for whatever reason, its activities are rendered inoperable for an extended period;
  - d. evidence, satisfactory to Canada, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Offeror, any of its employees or any subcontractor included as part of its offer;
  - e. evidence satisfactory to Canada that based on past conduct or behavior, the Offeror, a sub-contractor or a person who is to perform the Work is unsuitable or has conducted himself/herself improperly;

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- f. with respect to current or prior transactions with Canada
- i. Canada has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Offeror, any of its employees or any subcontractor included as part of its offer; or
- ii. Canada determines that the Offeror's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement offered on.
- being
3. In assessing the Offeror's performance on other contracts pursuant to subparagraph 2.f.i & ii. GI09, Canada may consider, but not be limited to, such matters as:
- a. the quality of workmanship in performing the Work;
- b. the timeliness of completion of the Work;
- c. the overall management of the Work and its effect on the level of effort demanded of the department and its representative; and
- d. the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
4. Without limiting the generality of paragraphs 1., 2. and 3. of GI09, Canada may reject any offer based on an unfavourable assessment of the
- a. adequacy of the offer price to permit the work to be carried out and, in the case of an providing prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that price applies;
- b. Offeror's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
- c. Offeror's performance on other contracts.
5. When Canada intends to reject an offer pursuant to a provision of paragraphs 1., 2., 3. or 4. Of GI09, other than subparagraph 2.a. of GI09, the Contracting Authority will inform the Offeror and provide the Offeror ten (10) days within which to make representations, before making a final decision on the offer rejection.
6. Canada may waive informalities and minor irregularities in offers received if Canada determines that the variation of the offer from the exact requirements set out in the Offer Documents can be corrected or waived without being prejudicial to other Bidders

## GI10 OFFER COSTS

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No payment will be made for costs incurred in the preparation and submission of an offer in response to the offer solicitation. Costs associated with preparing and submitting an offer, as well as any costs incurred by the Offeror associated with the evaluation of the offer, are the sole responsibility of the Offeror.

**GI11 PROCUREMENT BUSINESS NUMBER**

Offerors are required to have a Procurement Business Number (PBN) before contract award. Offerors may register for a PBN in the Supplier Registration Information system on the Contracts Canada Web site. For non-Internet registration, Offerors may contact the nearest Supplier Registration Agent.

**GI12 COMPLIANCE WITH APPLICABLE LAWS**

- 1) By submission of an offer, the Offeror certifies that the Offeror has the legal capacity to enter into a contract and is in possession of all valid licences, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the offer and entry into any ensuing call-up for the performance of the work.
- 2) For the purpose of validating the certification in paragraph 1) of GI12, a Offeror shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the request.
- 3) Failure to comply with the requirements of paragraph 2) of GI12 shall result in disqualification of the offer.

**GI13 APPROVAL OF ALTERNATIVE MATERIALS**

When materials are specified by trade names or trademarks, or by manufacturers' or suppliers' names, the offer shall be based on use of the named materials. During the solicitation period, alternative materials may be considered provided full technical data is received in writing by the Contracting Officer at least ten (10) calendar days prior to the solicitation closing date. If the alternative materials are approved for the purposes of the offer, an addendum to the offer documents shall be issued.

**GI14 PERFORMANCE EVALUATION**

- 1) Offerors shall take note that the performance of the Offeror during and upon completion of the work shall be evaluated by Canada. The evaluation shall be based on the quality of workmanship; timeliness of completion of the work; project management, contract management and management of health and safety. Should the Contractor's performance be considered unsatisfactory, the Contractor's bidding privileges on future work may be suspended indefinitely.

**GI15 CONFLICT OF INTEREST - UNFAIR ADVANTAGE**

- 1) In order to protect the integrity of the procurement process, offerors are advised that Canada may reject an offer in the following circumstances:

- (a) if the Offeror, any of its subcontractors, any of their respective employees or former employees was involved in any manner in the preparation of the offer solicitation or in any situation of conflict of interest or appearance of conflict of interest;
  - (b) if the Offeror, any of its subcontractors, any of their respective employees or former employees had access to information related to the offer solicitation that was not available to other offerors and that would, in Canada's opinion, give or appear to give the Offeror an unfair advantage.
- 2) The experience acquired by a offeror who is providing or has provided the goods and services described in the offer solicitation (or similar goods or services) will not, in itself, be considered by Canada as conferring an unfair advantage or creating a conflict of interest. This offeror remains however subject to the criteria established above.
- 3) Where Canada intends to reject an offer under this section, the Contracting Authority will inform the Offeror and provide the Offeror an opportunity to make representations before making a final decision. Offerors who are in doubt about a particular situation should contact the Contracting Authority before offer closing. By submitting an offer, the Offeror represents that it does not consider itself to be in conflict of interest nor to have an unfair advantage. The Offeror acknowledges that it is within Canada's sole discretion to determine whether a conflict of interest, unfair advantage or an appearance of conflict of interest or unfair advantage exists.

## **STANDING OFFER PARTICULARS**

### **SOP01 GENERAL**

1. The Offeror acknowledges that a standing offer is not a contract and that the issuance of a Standing Offer and Call-up Authority does not oblige or commit Canada to procure or contract for any services listed in the Standing Offer.
2. The Offeror offers to provide and deliver to Canada the services described in the Standing Offer, in accordance with the pricing set out in the Request for Standing Offer if, and when the Contracting Authority may request such services, in accordance with the conditions listed at subsection 3 below.
3. The Offeror understands and agrees that:
  - a) a call-up against the Standing Offer will form a contract only for those services which have been called-up, provided that such call-up is made in accordance with the provisions of the Standing Offer;
  - b) Canada's liability is limited to that which arises from call-ups against the Standing Offer made within the period specified in the Standing Offer;
  - c) Canada has the right to procure the services specified in the Standing Offer by means of any other contract, standing offer or contracting method;
  - d) the Standing Offer cannot be assigned or transferred in whole or in part;
  - e) the Standing Offer may be set aside by Canada at any time.

### **SOP02 PERIOD OF THE STANDING OFFER**

The period for placing call-ups against the Standing Offer shall be from the date of offer to 30 September, 2016.

### **SOP03 CALL-UP LIMITATION**

Each call-up against the Standing Offer will have a maximum limitation of expenditure of \$60,000.00 (Applicable taxes included).

### **SOP04 CALL-UP PROCEDURE**

1. Services will be called-up as follows:
  - a) The Departmental Representative will establish the scope of services to be performed. For each individual Call-Up, offerors will be considered using a computerized distribution system. This system will track all call-ups assigned to each offeror and will maintain a running total of the dollar value of business distributed. The system will contain for each offeror an ideal business distribution percentage which has been established as follows; 50%

of the business for the top ranked offeror, 30% for the 2nd ranked offeror and 20% for the 3rd ranked offeror.

- b) For each individual call-up the Offeror will be provided the scope of work and will submit an offer to the Departmental Representative in accordance with the unit rates established under the Standing Offer. The Contractor's offer shall include all of the work as specified including; mobilizing, sub-trades, materials, labour, tools, administration fees and supervision as offered in the RFSO including building permits as per local regulations.
2. The Offeror will be authorized in writing by the Contracting Authority to proceed with the work by issuance of a Call-up against the Standing Offer using form 942.
3. Any proposed changes to the scope of work are to be discussed with the Departmental Representative but any resulting changes can only be authorized by an amendment issued by the Contracting Authority.



## SUPPLEMENTARY CONDITIONS (SC)

### SC01 SECURITY ACCESS REQUIREMENTS FOR CANADIAN CONTRACTORS

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC)
2. The Contractor/Offeror personnel requiring access to sensitive work site(s) must **EACH** hold a valid **RELIABILITY STATUS**, granted or approved by CISD/PWGSC.
3. Subcontracts which contain security requirements are **NOT** to be awarded without the prior written permission of CISD/PWGSC.
4. The Contractor/Offeror must comply with the provisions of the:
  - (a) Security Requirements Check List and security guide (if applicable), attached at Annex 6; \_
  - (b) Industrial Security Manual (Latest Edition)

## CALL-UPS CLAUSES OR RESULTING CONTRACT DOCUMENTS (CD)

- 1) The following are the call-up's contract documents:
  - (a) The call up against the Standing Offer, including any annexes;
  - (b) General Conditions and clauses :
 

GC1 General Provisions	R2810D	(2013-04-25);
GC2 Administration of the Contract	R2820D	(2012-07-16);
GC3 Execution and Control of the Work	R2830D	(2010-01-11);
GC4 Protective Measures	R2840D	(2008-05-12);
GC5 Terms of Payment	R2550D	(2010-01-11);
GC6 Delays and Changes in the Work	R2860D	(2013-04-25);
GC7 Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8 Dispute Resolution	R2884D	(2008-05-12);
GC9 Insurance	R2590D	(2011-05-16);
Fair Wages and Hours of Labour - Labour Conditions	R2940D	(2012-07-16);
Allowable Costs for Contract Changes Under GC6.4.1	R2950D	(2007-05-25);
Schedules of Wage Rates for Federal Construction Contracts;		
  - (c) Supplementary Conditions  
Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
- 2) The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site:  
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
- 3) Schedules of Wage Rates for Federal Construction Contracts is included by reference and may be accessed from the Web site:  
[http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment\\_standards/contracts/schedule/index.shtml](http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml).
- 4) The language of the contract documents is the language of the Price Proposal Form submitted.

CCC No./N° CCC - FMS No/ N° VME

## APPENDIX 2 - SCOPE OF WORK

**REQUIREMENT:** Request for Regional Individual Standing Offer to provide all labour, material, tools, equipment, supervision and transportation required for various electrical services, installation and maintenance to be performed by qualified electricians and indentured apprentices of BC as and when requested by Base Construction Engineering Officer, CFB Esquimalt or his authorized representative in accordance with the specifications herein.

Work will utilize inside and outside electrical trades. Scope of work anticipated requires a **MANDATORY** "A" contractor's license. Projects will be located in the lower Vancouver Island areas, Aldergrove and Matsqui areas. This indicates but is not limited to:

(Area 01) Esquimalt:	Dockyard, Naden, Work Point Barracks
(Area 02) Metchosin:	Albert Head, Rocky Point
(Area 03) Colwood:	Belmont Park
(Area 04) Saanich:	Heals Range, Patricia Bay, Vanalman
(Area 05) Victoria:	Bay Street Armoury
(Area 06) Malahat 1	

Aldergrove and Matsqui, BC

**Site Visit:** Because of the large geographical area and some isolated areas covered, a site visit will not be required. The Contractor is advised, however, to familiarize himself with the locations of the various sites so that he is aware of the distances involved. No allowance will be made for travel time except for Aldergrove and Matsqui as specified herein. .

Only qualified electricians and indentured apprentices are to be provided for projects. DND and/or PWGSC reserve the right to require proof of journeyman status or statement of qualifications from any person performing work under this standing offer. NO SUBCONTRACTING OF THE PRICIPAL TRADE UNDER THIS AGREEMENT SHALL BE PERMITTED without the express written permission of the Contracting Authority (PWGSC). Permission to subcontract the principal work shall only be considered under exceptional circumstances on a case by case basis. The Offeror shall not be authorized to subcontract to any contractor holding any part of the same Standing Offer.

### SECTION 01005 - GENERAL INSTRUCTIONS

#### 1. Workmanship

.1 All work shall be done by qualified tradespeople or an indentured apprentice under the direct supervision of a qualified tradesperson.

.2 The work site shall be left in a neat and clean condition each night.

#### 2. Contractor's Access to and Use of Site

.1 Use of the site limited to the work areas indicated for work and storage.

.2 Access directly to and from the site as indicated, via the Dockyard Main Gate, subject to:

a. Traffic regulations established by DND. Via main gate at all locations.

b. Security regulations established by DND.

.3 All contractors, sub-contractors, and supplier employees will be required to obtain passes or identification (ID) cards from the Base Identification Unit located at the main Dockyard gate based on the following:

a. Persons requiring access not exceeding three (3) days duration: Obtain a daily pass each time of access and hand in to Commissionaire at the end of the day.

.1 Time duration to obtain: 15 minutes.

b. Persons requiring access not exceeding two (2) weeks duration: Obtain a temporary identification card from the Identification Unit.

.1 Time duration to obtain: 30 minutes.

c. Persons requiring access for a period exceeding two (2) weeks: Applications to be completed by individuals and submitted through the Contractor to the Contract Co-ordinator. Allow one (1) week processing time. Contractor/employee will be contacted to arrange time for photographic session and signature.

.1 Time duration: 30 minutes per person.

d. Upon award of the contract, the Contractor shall provide a typewritten list to the Contract Co-ordinator of all employees, sub-contractors, and employees and supplies requiring access to the contract work area. The list shall be updated promptly as changes of employees are made.

e. All identification cards are to be returned to Commissionaires upon termination of employment, completion of work, or expiry of card.

f. The Base Security Officer may request interviews with employees and retains the right to deny access to the Base to persons on the basis of security risk.

.4 Do not unreasonably encumber site with materials or equipment.

.5 Move products or equipment which interfere with operations of Contract Co-ordinator, other Contractors, or building occupant as directed by Engineer.

.6 Use of DND facility is not permitted unless approved in writing by the Contract Co-ordinator.

.7 Park vehicles where directed by the Contract Co-ordinator.

### 3. Reporting to Engineer

.1 The Contractor prior to commencement of any site work shall report the schedule of work to the Contract Co-ordinator , Building 575, Dockyard.

.2 Calls from the Contract Co-ordinator shall be answered by the Contractor within two (2) hours.

### 4. Safety Requirements

.1 Observe and enforce construction safety measures required by Canadian Construction Safety Code, Provincial Government, Workers' Compensation Board, and municipal statutes and authorities.

a. The Contractor must ensure compliance on his part and on the part of all his sub-contractors with the standards of part II, Canada Labour Code and the Occupational Health and Safety Regulations, as well as compliance with the Workers' Compensation Act and any regulations thereunder the said Act having to do with the prevention of accidents, the prevention of diseases, and the provision of safe working conditions including proper safety equipment, lighting, and ventilation. In the event of conflict between the Workers' Compensation Act and regulations, and the Canada Labour Code, Part II, and Occupational Health and Safety Regulations, the most stringent provision applies.

## **5. Schedule of Work**

.1 Work on buildings will commence within twenty-four (24) hours of notification by the Contract Co-ordinator and shall be completed not later than seven (7) working days after commencement of work unless otherwise specified by requisition.

## **6. Control and Procedures**

.1 The following will be adhered to throughout the duration of this contract:

a. The Contractor on award of the contract will be advised by the Contract Co-ordinator those who are authorized to request service under this contract.

b. When service is required, the Contract Co-ordinator will advise the Contractor a site visit will be made to determine the extent of work required.

c. Prior to commencing work, the Contractor or his authorized representative will report to the Contract Co-ordinator and will be responsible to pick up keys.

d. Inspections shall be carried out during and at the end of all jobs. Deficiencies noted will be made good immediately after notification by the Contract Co-ordinator.

e. The Contractor shall prepare and forward one (1) original and copy of the invoice for each requisition. As-built drawings and a copy of the electrical permit will accompany each invoice. Invoices will be processed only when as-built and electrical permits have been delivered to BCEO Contracts. Invoices will be addressed as below:

ATTENTION: INVOICE SECTION

BCEO Contracts

Building 575, Room 228

CFB Esquimalt - Dockyard

PO Box 17000, Stn Forces

Victoria, BC V9A 7N2

## **7. Setting Out of Work**

.1 Assume full responsibility for and execute complete layout of work to locations.

## **8. Alterations, Repairs to Existing Building**

.1 Execute work with least possible interference or disturbance to occupants, public and normal use of premises. Arrange with Contract Co-ordinator to facilitate execution of work.

.2 Where security has been reduced by work of contract, provide temporary means to maintain security. Obtain approval of measures by Contract Co-ordinator.

.3 Provide barriers and/or warning to protect public and occupants in accordance with safety requirements.

## **9. Power and Water Supply**

.1 DND can provide, free of charge, temporary electric power for construction purposes.

.2 Contract Co-ordinator will determine delivery points and quantitative limits. Contract Co-ordinator's written permission is required before any connection is made. Connect to existing power supply in accordance with Canadian Electrical Code.

.3 Provide at no cost to DND all equipment and temporary lines to bring these services to project site.

.4 Supply of temporary services by DND is subject to DND requirements and may be discontinued by DND site representative at any time without notice.

## **10. Material and Equipment**

.1 Use new material and equipment unless otherwise specified.

.2 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.

.3 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.

## **11. Clean Up**

.1 The Contractor shall clean and tidy up daily. All debris and the like shall be removed from the site at completion of each day's work. On completion of the job, the site shall be left clean and tidy to the complete satisfaction of the Contract Co-ordinator.

.2 On completion of the work in each area, remove all surplus materials, tools and equipment and leave the site in a clean and tidy condition to the complete satisfaction of the Contract Co-ordinator.

.3 The Contract Co-ordinator or his representative will direct disposal of all surplus material and equipment.

## **SECTION 01546 - FIRE SAFETY REQUIREMENTS**

### **1. Fire Safety Plan**

.1 Contractors and their personnel will be familiar with this section and its requirements.

### **2. Reporting Fires**

.1 Know the location of nearest fire alarm box and telephone, including the emergency phone number.

.2 Report immediately all fire incidents to the Fire department as follows:

a. Activate nearest fire alarm box or

b. Telephone 911 on Base.

.3 Person activating fire alarm box shall remain at the box to direct Fire Department to scene of fire.

.4 When reporting a fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

### **3. Interior and Exterior Fire Protection and Alarm Systems**

.1 Fire protection and alarm systems shall not be:

a. Obstructed.

b. Shut-off.

c. Left inactive at the end of a working day or shift without notification and authorization from the Fire Chief or his representative.

### **4. Fire Extinguisher**

.1 The Contractor shall supply a fire extinguisher to protect, in an emergency, the work in progress and the Contractor's physical plant on site.

### **5. Blockage of Roadways**

.1 The Fire chief shall be advised of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by the Fire Chief, erecting of barricades and the digging of trenches.

### **6. Smoking Precautions**

.1 Although smoking is not permitted in hazardous areas, or in buildings, care must still be exercised in the use of smoking materials in non-restricted areas.

### **7. Rubbish and Waste Materials**

.1 Rubbish and waste materials are to be kept to a minimum.

.2 The burning of rubbish is prohibited unless approved by the Fire Chief.

.3 Removal:

a. All rubbish shall be removed from the worksite at the end of the work day or shift as directed.

### **8. Questions and/or Clarification**

.1 Any questions or clarification on Fire Safety in addition to the above requirements shall be directed to and cleared through the Fire Chief.

### **9. Fire Inspections**

.1 The Base/Station Fire Chief shall be allowed unrestricted access to the worksite.

.2 The Contractor shall co-operate with the Fire Chief during routine inspections of the work site.

.3 The Contractor shall immediately remedy all unsafe fire situations observed by the Fire Chief.

## **SECTION 16010 - ELECTRICAL - GENERAL REQUIREMENTS**

### **1. General**



.1 This Section covers items common to Sections of Division 16. This Section supplements Requirements of Division 1.

## **2. Codes and Standards**

.1 Do complete installation in accordance with CSA C22.1 Latest Edition, except where specified otherwise.

.2 Abbreviations for electrical terms: to CSA Z85-1983.

## **3. Care, Operation and Start-Up.**

.1 Instruct Contract Co-ordinator in the operation , care and maintenance of equipment.

## **4. Voltage Ratings**

.1 Operating Voltages: to CAN3-C235-83.

.2 Motors, electrical heating, control and distribution devices and equipment to operate satisfactorily at 60 Hz within normal operating limits established by above standard. Equipment to operate in extreme operating conditions established in above standard without damage to equipment.

## **5. Permits, Fees and Inspection**

.1 Submit to BC Safety Engineering Service Division Electrical Safety Branch necessary number of drawings and specifications for examination and approval prior to commencement of work.

.2 Apply for Permits and pay associated fees.

.3 Contract Co-ordinator will provide Contract drawings and specifications required by BC Safety Engineering Safety Branch Division Electrical Safety Branch at no cost.

.4 Notify Contract Co-ordinator of changes required by BC Safety Engineering Service Division Electrical Safety Branch prior to making changes.

.5 Furnish Certificates of Acceptance from BC Safety Engineering Service Division Electrical Safety Branch on completion of work to Contract Co-ordinator.

## **6. Materials and Equipment**

.1 Provide materials and equipment in accordance with Section 01600 - Material and Equipment.

.2 Equipment and material to be CSA certified. Where there is no alternative to supplying equipment which is not CSA certified, obtain special approval from Electrical Inspection Department.

.3 Factory assemble control panels and component assemblies.

## **7. Electrical Motors, Equipment and Controls**

.1 Control wiring and conduit is specified in division 16 except for conduit, wiring and connections below 50 V which area related to control systems specified in Division 15 and shown on Mechanical drawings.

## **8. Finishes**

.1 Shop finish metal enclosure surfaces by application of rust resistant primer inside and outside, and at least two coats of finish enamel.

a. Paint outdoor electrical equipment "electrical green" finish to EEMAC Y1-1-1955.

b. Paint indoor switchgear and distribution enclosures light grey to EEMAC 2Y-1-1958.

.2 Clean and touch up surfaces of shop-painted equipment scratched or marred during shipment or installation, to match original paint.

.3 Clean and prime exposed non-galvanized hangars, racks and fastenings to prevent rusting.

## 9. Equipment Identification

.1 Identify electrical equipment with nameplates as follows:

.2 Nameplates:

a. Lamicoid 3 mm thick plastic engraving sheet, black face, white core, mechanically attached with self-tapping screws.

### Nameplate Sizes

Size 1	10x50 mm	1 line	3 mm high letters
Size 2	12x70 mm	1 line	5 mm high letters
Size 3	12x70 mm	2 lines	3 mm high letters
Size 4	20x90 mm	1 line	8 mm high letters
Size 5	20x90 mm	2 lines	5 mm high letters
Size 6	25x100 mm	1 line	12 mm high letters
Size 7	15x100 mm	2 lines	6 mm high letters

.3 Wording on nameplates to be approved by Engineer prior to manufacture.

.4 Allow for average of twenty-five (25) letters per nameplate.

.5 Identification to be in English.

.6 Nameplates for terminal cabinets and junction boxes to indicate system and/or voltage characteristics.

.7 Disconnects, starters and contractors: indicate equipment being controlled by voltage.

.8 Terminal cabinets and pull boxes: indicate system and voltage.

.9 Transformers; indicate capacity, primary and secondary voltages.

## 10. Wiring Identification

.1 Identify wiring with permanent indelible identifying markings, either numbered or coloured plastic tapes, on both ends of phase conductors of feeders and branch circuit wiring.

.2 Maintain phase sequence and colour coding throughout.

.3 Colour code: to CSA C22.1 Latest Edition.

.4 Use colour coded wires in communication cables, matched throughout system.

## 11. Wiring Terminations

.1 Lugs, terminals, screws used for termination of wiring to be suitable for either copper or aluminum conductors.

## 12. Manufacturers CSA Labels

.1 Visible and legible after equipment is installed.

## 13. Warning Signs

.1 As specified and to meet requirements of Electrical Inspection Department and Contract Co-ordinator.

.2 Decal signs, minimum size 175 x 250 mm.

**14. Location of Outlets**

- .1 Locate outlets in accordance with Section 01005 - General Instructions.
- .2 Do not install outlets back-to-back in wall; allow minimum 150 mm horizontal clearance between boxes.
- .3 Change location of outlets at no extra cost or credit, providing distance does not exceed 3000 mm, and information is given before installation.
- .4 Locate light switches on latch side of doors. Locate disconnect devices in mechanical and elevator machine rooms on latch side of floor.

**15. Mounting Heights**

- .1 Mounting height of equipment is from finished floor to centreline of equipment unless specified or indicated otherwise.
- .2 If mounting height of equipment is not specified or indicated, verify before proceeding with installation.
- .3 Install electrical equipment at following heights unless indicated otherwise.
  - a. Local switches: 1400 mm.
  - b. Wall receptacles:
    - .1 General: 300 mm.
    - .2 Above top of continuous baseboard heater: 200 mm.
    - .3 Above top of counters or backsplashes: 200 mm.
  - c. Panelboards: as required by code or as indicated.
  - d. Telephone and interphone outlets: 300 mm.
  - e. Wall mounted telephone and interphone outlets: 1500 mm.
  - f. Fire alarm stations: 1350 mm.
  - g. Fire alarm bells: 2100 mm.
  - h. Television outlets: 300 mm.
  - i. Wall mounted speakers: 2100 mm.
  - j. Clocks: 2100 mm.
  - k. Door bell pushbuttons: 1500 mm.

**16. Conduit and Cable Installation**

- .1 Install conduit and sleeves prior to pouring of concrete. Sleeves through concrete: sized for free passage of conduit and protruding 50 mm.
- .2 If plastic sleeves are used in fire rated walls or floors, remove before conduit installation.
- .3 Install cables, conduits and fittings to be embedded or plastered over, neatly and close to building structure so furring can be kept to a minimum.

**17. Field Quality Control**

- .1 Conduit and pay for following tests:
  - a. Power distribution system including phasing, voltage, grounding and load balancing.
  - b. Circuits originating from branch distribution panels.
  - c. Lighting and its control.
  - d. Motors, heaters and associated control equipment including sequenced operation of systems where applicable.

e. Systems: fire alarm system, communications, as required.

.2 Furnish manufacturer's certificate or letter confirming that entire installation as it pertains to each system has been installed to manufacturer's instructions.

.3 Insulation resistance testing.

a. Megger circuits, feeders and equipment up to 350 V with a 500 V instrument.

b. Megger 350-600 V circuits, feeders and equipment with a 1000 V instrument.

c. Check resistance to ground before energizing.

d. Carry out tests in presence of Contract Co-ordinator.

e. Provide instruments, meters, equipment and personnel required to conduct tests during and at conclusion of project.

f. Submit test results for Contract Co-ordinator's review.

## **18. Co-ordination of Protection Devices**

.1 Ensure circuit protective devices such as overcurrent trips, relays and fuses are installed to required values and settings.

## **19. Lockout Policy**

.1 Ensure all employees adhere to Base Construction Engineering Operating Procedures "Lockout Policy" available on request from BCEO Engineer.

## **20. Confined Space**

.1 Ensure all employees adhere to Confined Space BCEO Standing Operating Procedure available on request from BCEO Engineer and WCB Regulations.

## **21. Dig Permits**

.1 BCEO Dig Permits are required before any evacuation is started.

# **SECTION 16111 - CONDUITS, CONDUIT FASTENINGS, & CONDUIT FITTINGS**

## **General**

### **1. Location of Conduits**

Drawings do not indicate all conduit runs. Those indicated are in diagrammatic form only.

## **Products**

### **1. Conduits**

Rigid hot dipped galvanized steel threaded conduit.

Epoxy coated conduit: with zinc coating and corrosion resistant epoxy finish inside and outside.

Electrical metallic tubing (EMT): with steel couplings.

Rigid PVC conduit.

Flexible steel conduit and liquid-tight flexible metal conduit.

### **2. Conduit Fastenings**

One hole steel straps to secure surface conduits 50 mm and steel straps for conduits larger than 50 mm.

Beam clamps to secure conduits to exposed steel work.

Channel type supports for two or more conduits at 2M o.c.

6 mm dia. threaded rods to support suspended channels.

### 3. Conduit Fittings

Fittings: manufactured for use with conduit specified. Coating: same as conduit.

Factory "ells" where 90o bends are required for 1" and larger conduits.

Steel connectors and couplings for EMT. Set-screws are acceptable.

### 4. Fish Cord

Polypropylene.

Installation

1. Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass.

Conceal conduits except in unfinished areas.

Use rigid hot dipped galvanized steel threaded conduit where specified.

Use electrical metallic tubing (EMT) except where noted.

Use rigid PVC conduit underground.

Use flexible metal conduit for connection to motors in dry areas and for work in moveable metal partitions.

Use liquid-tight flexible metal conduit for connection to motors or vibrating equipment in damp, wet, or corrosive locations.

Use explosion-proof flexible connection for connection to explosion-proof motors.

Install conduit sealing fittings in hazardous areas. Fill with compound.

Bend conduit cold. Replace conduit if kinked or flattened more than 1/10th of its original diameter.

Mechanically bend steel conduit over 3/4" dia.

Field threads on rigid conduit must be of sufficient length to draw conduits up tight.

Install fish cord in empty conduits.

Run two 1" spare conduits up to ceiling space, and two 1" spare conduits down to ceiling space for each flush panel. Terminate these conduits in 6" x 6" x 4" junction boxes in ceiling space or in case of an exposed concrete slab, terminate each conduit in surface-type box.

Where conduits become blocked, remove and replace blocked section. Do not use liquids to clean out conduits.

Dry conduits out before installing wire.

#### Surface Conduits

Run parallel or perpendicular to building lines.

Locate conduits behind infrared or gas-fired heaters in 1.5M clearance.

Run conduits in flanged portion of structural steel.

Group conduits wherever possible on surface channels.

Do not pass conduits through structural members except as indicated.

Do not locate conduits less than 75 mm parallel to steam or hot water lines, with minimum 25 mm at crossovers.

#### Concealed Conduits

Do not install horizontal runs in masonry walls.

Do not install conduits in terrazzo or concrete toppings.

#### Conduits in Cast-in-Place Concrete

Locate to suit reinforcing steel. Install in centre one-third of slab.

Protect conduits from damage where they stub out of concrete.

Install sleeves where conduits pass through slab or wall.

Where conduits pass through waterproof membrane, provide oversized sleeve before membrane is installed. Use cold mastic between sleeve and conduit.

Do not place conduits in slabs in which slab thickness is less than four (4) times conduit diameter.

Encase conduits completely in concrete with minimum 25 mm concrete cover.

Organize conduits in slab to minimize crossovers.

#### Conduits in Cast-in-Place Slabs on Grade

Run conduits 1" or larger below slab and encased in 75 mm concrete envelope. Provide 50 mm of sand over concrete envelope below floor slab.

#### Concrete Underground

Slope conduits to provide drainage.

## SECTION 16122 - WIRES AND CABLES 0 - 1000 V

### General

#### 1. Product Data

Submit product data in accordance with Section 01340 - Shop Drawings, Product Data, Samples and Mockups.

### Products

#### 1. Building Wires

Conductors: stranded for 8 AWG and larger. Minimum size: 12 AWG.

Copper conductors: size as indicated with 600 V insulation of chemically cross-linked thermosetting polyethylene material rated RW90 for use on 120/208 and lower voltage systems and 1000 V insulation for use on higher voltage systems.

#### 2. Teck Cable

Conductors: copper, size as indicated.

Insulation: Chemically cross-linked thermosetting polyethylene rated type RW90 1000 V.

Inner jacket: polyvinyl chloride material.

Armour: interlocking galvanized steel.

Overall Covering: thermoplastic polyvinyl chloride material.

#### Fastenings:

One hold straps to secure surface cables 50 mm and smaller. Two hole steel straps for cables larger than 50 mm;

Channel type supports for two or more cables at 2000 mm centres;

6 mm dia. threaded rods to support suspended channels.

Connectors: watertight approved for TECK cable.

#### Execution

##### 1. Installation of Building Wires

Copper conductors only shall be used.

Drops to lighting fixtures may use Type AC90 armoured cable provided that the maximum length does not exceed 1500 mm.

T90 insulation shall be used for installation in lighting fixtures.

Mechanical set-screw connectors and all-weather electrical tape shall be used for joints in conductors sized #8 AWG and larger; vibration proof expanding spring type wire connectors may be used for #10 AWG and smaller wire.

All wiring shall be colour codes.

Lighting circuits shall be separated from appliance and receptacle branch circuits.

## SECTION 16132 - OUTLET BOXES, CONDUIT BOXES, AND FITTINGS

### General References

1. CSA C22.1 - 2002 Canadian Electrical Code, Part 1.

### Products

#### 1. Outlet and Conduit Boxes

Size boxes in accordance with CSA C22.1.

4" square or larger outlet boxes as required for special devices.

Gang boxes where wiring devices are grouped.

Blank cover plates for boxes without wiring devices.

347 V outlet boxes for 347 V switching devices.

Combination boxes with barriers where outlets for more than one system are grouped.

#### 2. Sheet Steel Outlet Boxes

Electro-galvanized steel single- and multi-gang flush device boxes for flush installation, minimum size 3" x 2" x 1½" square outlet boxes when more than one conduit enters one side with extension and plaster rings as required.

4" square or octagonal outlet boxes for lighting fixture outlets.

4" square outlet boxes with extension and plaster rings for flush mounting devices in finished plaster or tile walls.

#### 3. Masonry Boxes

Electro-galvanized steel masonry single- and multi-gang boxes for devices flush mounted in exposed block walls.

#### 4. Concrete Boxes

Electro-galvanized sheet steel concrete type boxes for flush mount in concrete with matching extension and plaster rings as required.

**5. Floor Boxes**

Concrete-tight electro-galvanized sheet steel floor boxes with adjustable finishing rings to suit floor finish with brass faceplate. Device mounting plate to accommodate short- or long-ear duplex receptacles.

Minimum depth: 28 mm for receptacles; 73 mm for communication equipment.

Adjustable watertight concrete-tight cast floor boxes with openings drilled and tapped for ½" and ¾" conduit. Minimum size: 73 mm deep.

**6. Conduit Boxes**

Cast FS boxes with factory threaded hubs and mounting feet for surface wiring of switches and receptacles.

**7. Outlet Boxes for Non-metallic Sheathed Cable**

Electro-galvanized, sectional, screw ganging steel boxes, minimum size 3" x 2" x 2½" with two double clamps to take non-metallic sheathed cables.

**8. Fittings**

Bushing and connectors with nylon insulated throats.

Knock-out fillers to prevent entry of debris.

Conduit outlet bodies for conduit up to 1¼" and pull boxes for larger conduits.

Double locknuts and insulated bushings on sheet metal boxes.

**Execution****1. Installation**

Support boxes independently of connecting conduits.

Fill boxes with paper, sponges, or foam, or similar approved material to prevent entry of debris during construction. Remove upon completion of work.

For flush installations, mount outlets flush with finished wall using plaster rings to permit wall finish to come within 6 mm of opening.

Provide correct size of openings in boxes for conduit, mineral insulated and armoured cable connections.

Reducing washers are not allowed.

**SECTION 16141 - WIRING DEVICES****General****1. Shop Drawings and Product Data**

Provide shop drawings and product data as requested and in accordance with Section 01340.

**Products****1. Switches**

15A, 120V, single pole three way or four way switches.

Manually operated general purpose a/c switches with the following features:

Terminal holes approved for No. 10 AWG wire;

Silver alloy contacts;

Urea or melamine mounding for parts subject to carbon tracking;



Suitable for back and side wiring;

Ivory toggle.

Toggle operated fully rated for tungsten filament and fluorescent lamps, and up to 80% of rated capacity of motor loads.

Switches of one manufacturer throughout project.

Acceptable materials: to CMB #16141.

## 2. Receptacles

Duplex receptacles, CSA type 5-15 R, 125V, 15A, U-ground, with following features:

Ivory urea moulded housing;

Suitable for No. 10 AWG for back and side wiring;

Break-off links for use as split receptacles;

8 back wired entrances, 4 side wiring screws;

Triple wipe contacts and riveted grounding contacts.

Single receptacles, CSA type 5-15 R, 125V, 12A, U-ground, with following features:

Ivory urea moulded housing;

Suitable for No. 10 AWG for back and side wiring;

4 back wired entrances, 2 side wiring screws.

Other receptacles with ampacity and voltage as indicated.

Receptacles of one manufacturer throughout project.

Acceptable materials: to CMB #16141.

## 3. Special Wiring Devices

Special wiring devices:

Clock hanger outlets, 15A, 125V, 3-wire, grounding type, suitable for No. 10 AWG for installation in flush outlet box.

Use ground fault receptacles or receptacles protected by ground fault breaker.

Pilot lights as indicated with neon type 0.04W, 125V lamp and red plastic jewel flush type.

## 4. Cover Plates

Cover plates for wiring devices.

Cover plates from one manufacturer throughout project.

Sheet steel utility box cover for wiring devices installed in surface-mounted outlet box.

Stainless steel 1 mm thick cover plates for wiring devices mounted in flush-mounted outlet box.

Cast cover plates for wiring devices mounted in surface-mounted FS type conduit boxes.

Weatherproof double lift spring-loaded cast aluminum cover plates complete with gaskets for duplex receptacles as indicated.

Weatherproof spring-loaded cast aluminum cover plates complete with gaskets for single receptacles or switches.

## Execution

### 1. Installation

Switches:

Install single throw switches with handle in "UP" position when switch closed;  
 Install switches in gang type outlet box when more than one switch is required in one location;  
 Mount toggle switches at height specified in Section 16010, Electrical - General Requirements, or as indicated.

#### Receptacles:

Install receptacles in gang type outlet box when more than one receptacle is required in one location;  
 Mount receptacles at height specified in Section 16010, Electrical - General Requirements, or as indicated;

Where split receptacle has one portion switched, mount vertically and switch upper portion.

#### Cover Plates:

Protect stainless steel cover plate finish with paper or plastic film until painting and other work is finished;  
 Install suitable common cover where wiring devices are grouped.  
 Do not use cover plates meant for flush outlet on surface-mounted boxes.

## SECTION 16191 - FASTENINGS AND SUPPORTS

### General

#### 1. Related Work

Fastenings and supports: Section 01600.

### Product

#### 1. Support Channels

U-shape, size 41 x 41 mm, 2.5 mm thick, surface-mounted or suspended.

### Execution

#### 1. Installation

Secure equipment to hollow or solid masonry, tile, and plaster surfaces with lead anchors.

Secure equipment to poured concrete with expandable inserts.

Secure surface-mounted equipment with twist clip fasteners to inverted T-bar ceilings. Ensure that T-bars are adequately supported to carry weight of equipment specified before installation.

Support equipment, conduit, or cables using clips, spring-loaded bolts, cable clamps designed as accessories to basic channel members.

Fasten exposed conduit or cables to building construction or support system using straps:

One-hole steel straps to secure surface conduits and cables 50 mm and smaller;

Two-hole steel straps for conduits and cables larger than 50 mm;

Beam clamps to secure conduit to exposed steel work.

Suspended support systems:

Support individual cable or conduit runs with 6 mm dia. threaded rods and spring clips;

Support two or more cables or conduits on channels supported by 6 mm dia. threaded rod hangers where direct fastening to building construction is impractical.

For surface mounting of two or more conduits, use channels at 2 M o.c. spacing.

Provide metal brackets, frames, hangers, clamps, and related types of support structures where indicated or as required to support conduit and cable runs.

Ensure adequate support for raceways and cables dropped vertically to equipment where there is no wall support.

Do not use wire lashing or perforated strap to support or secure raceways and cables.

Do not use supports or equipment installed for other trades for conduit or cable support except with permission of other trades and approval of Contract Co-ordinator.

Install fastenings and supports as required for each type of equipment, cables, and conduits, and in accordance with manufacturer's installation recommendations.

## **SECTION 16519 - EXIT LIGHTS**

### **General**

#### **1. Product Data**

Submit product data in accordance with Section 01340 - Shop Drawings, Product Data, Samples, and Mockups.

### **Products**

#### **1. Exit Lights**

Housing: extruded aluminum frame satin aluminum finish.

Face and back plates: extruded aluminum faceplate with red LED illuminated letters.

Letters: 150 mm high x 19 mm wide, red on extruded aluminum faceplate, reading EXIT.

Exit light fixtures must be capable of accepting only #RLB-C or #RLB-D lamps.

### **Execution**

#### **1. Installation**

Install exit lights as indicated, in accordance with latest edition of National Building Code of Canada.

Connect fixtures to exit light circuits as indicated.

## **SECTION 16536 - UNIT EQUIPMENT FOR EMERGENCY LIGHTING**

### **General**

#### **1. Product Data**

Submit product data in accordance with Section 01340 - Shop Drawings, Product Data, Samples, and Mockups.

Data to indicate system components, mounting method, source of power, and special attachments.

#### **2. Warranty**

For batteries, the twelve (12) month warranty period prescribed in sub-section GC 32.1 of General Conditions, is extended to one hundred twenty (120) months with a no-charge replacement during the first lustrum and a pro-rate charge on the second lustrum.

### **Products**

#### **1. Equipment**

Supply voltage: 120V, a/c.

Output voltage: 12V, d/c.

Operating time: 30 minutes.

Battery: sealed, maintenance free.

Charger: solid state, multi-rate, voltage/current regulated, inverse temperature compensated, short circuit protected.

Solid state transfer.

Low voltage disconnect: solid state, modular, operates at 80% battery output voltage.

Signal lights: solid state, life expectancy 100,000 hours minimum, for "AC Power On" and "High Charge".

Lamp heads: integral on unit, 360o horizontal and 180o vertical adjustment. Lamp type: tungsten-halogen, 12W, glare free.

Cabinet: suitable for direct or shelf-mounting to wall and complete with knockouts for conduit.

Removable or hinged front panel for easy access to batteries.

Auxiliary equipment:

battery disconnect device;

a/c input and d/c output terminal blocks inside cabinet;

Cord and single twist-lock plug connection for a/c.

## **Execution**

### **1. Installation**

Install unit equipment and remove mounted fixtures as indicated.

Direct heads as indicated.

Connect exit lights to unit equipment as indicated.

## **SECTION 16721 - FIRE ALARM SYSTEMS**

### **General**

#### **1. References**

CAN/ULC-S524 M86 installation of Fire Alarm Systems.

ULC-S525-1978 Audible Signal Appliances, Fire Alarm.

CAN/ULC-S527-M87 Control Units, Fire Alarm.

ULC-S528-1978 Manually Actuated Signalling Boxes, Fire Alarm.

CAN/ULC-S529-M87 Smoke Detectors, Fire Alarm.

ULC-S530-1978 Heat Actuated Fire Detectors, Fire Alarm.

CAN/ULC-S531-M87 Smoke Alarms.

CAN-ULC-S536-M86 Inspection and Testing of Fire Alarm Systems.

CAN/ULC-S537-M86 Verification of Fire Alarm Systems.

DFC No. 310(M)-1979 Computer Systems.

DFC No. 410(M)-1979 Fire Alarm Systems.

NBC 1995 National Building Code of Canada.

#### **2. Description of System**

System includes:

Control panel to carry out fire alarm and protection functions including receiving alarm signals, initiating general alarm, supervising system continuously, actuating zone annunciators, and initiating trouble signals and subsequent alarm features;

Trouble signal devices;

Power supply facilities;

Manual alarm stations;

Automatic alarm initiating devices;

Audible signal devices;

End-of-line devices;

Annunciators;

Visual alarm signal devices;

Ancillary devices.

### 3. Requirements of Regulatory Agencies

To Canadian Forces Fire Marshal approval.

### 4. Shop Drawings

Submit shop drawings in accordance with Section 01340 - Shop Drawings, Product Data, Samples, and Mockups.

Include:

layout of equipment;

zoning; and

complete wiring diagram including schematics of modules.

### 5. Operation and Maintenance Data

Provide operation and maintenance data for Fire Alarm System for incorporation into Manual specified in Section 01730 - Operation and Maintenance Manual.

Include:

operation and maintenance instructions for complete fire alarm system to permit effective operation and maintenance;

technical data - illustrated parts lists with parts catalogue numbers;

copy of approved shop drawings.

### 6. Maintenance Materials

Provide maintenance materials in accordance with Section 01731 - Maintenance Materials, Special Tools, and Spare Parts.

Include:

six (6) spare glass rods for manual pull box stations.

### 7. Maintenance

Provide one year's free maintenance with two inspections by manufacturer during year. Inspection tests to conform to ULC-S536. Submit inspection report to Contract Co-ordinator.

### 8. Training

Arrange and pay for on-site lectures and demonstrations by fire alarm equipment manufacturer to train operational personnel in use and maintenance of fire alarm system.

## Products

### 1. Materials

Equipment and devices: ULC listed and labelled, and supplied by single manufacturer.

Power supply: to CAN.ULC-S524.

Audible signal devices: to ULC-S525.

Control unit: to CAN/ULC-S527.

Manual fire alarm stations: to ULC-S528.

Thermal detectors: to ULC-S530.

Smoke detectors: to CAN/ULC-S529.

Smoke alarm: to CAN/ULC-S531.

### 2. System Operation

Single stage operation. Operation of any alarm initiating device to:

cause audible signal devices to sound throughout building;

transmit signals to Base Firehall via MSC300 Telephone Modem;

cause zone of alarm device to be indicated on control panel;

cause air conditioning and ventilating fans to shut down to function so as to provide required control of smoke movement;

cause fire doors and smoke control doors if normally held open to close automatically; and

override trouble signal.

Capability to program smoke detector status change confirmation on any or all zones in accordance with CAN/ULC-S527, Appendix C.

### 3. Control Panels

Alarm received with trouble and alarm indications.

Spare zones: compatible with smoke detectors and open circuit devices.

Space for future modules.

Latching-type supervisory receiver circuits. Discrete indication for both off-normal and trouble.

## Components:

Non-coded alarm receiver panel with trouble and alarm indications.

Audible signal control panel with control circuits complete with terminals for wiring and plug-in modules for signals up to 2.0A load with trouble indication.

Common control and power units:

Control panel containing following indications and controls:

"Power on" LED (green) to monitor primary source of power to system;

"Power trouble" indication;

"Ground trouble" indication.

"Remote annunciator trouble" indication

"System trouble" indication.

"System trouble" buzzer and silence switch c/w trouble resound feature.

System re-set switch.

"LED test" switch if applicable.

"Alarm silence" switch to silence signals manually. If new alarm occurs after signals have been silenced, signals to resound.

Bell disconnect switch to allow for silent testing of system.

Fan shutdown bypass switch with trouble indicator.

Master power supply panel to provide 24V d/c to system from 120V a/c, 60 Hz input.

Fire Department connections:

Fire Department relay with N/O alarm contacts and N/C trouble contacts.

Fire Department by-pass switch c/w indicator for trouble at panel. NOTE: Trouble signal must transmit when Fire Department by-pass switch is initiated.

Auxiliary relays: plug-in type, dust cover, supervised against unauthorized removal by common trouble circuit and c/w individual by-pass switch.

Contacts: 2.0A, 120V a/c, for functions such as release of door holders or initiation of fan shut-down.

Contact terminal size: capable of accepting 22-12 AWG wire.

#### 4. Power Supply

120V, a/c, 60 Hz input, 24V d/c output from rectifier to operate alarm and signal circuits, with stand-by power of gell cell batteries minimum expected life of four (4) years, sized in accordance with NBC.

#### Manual Alarm Sections

Manual alarm stations: pull lever, glass rod, wall-mounted type, non-coded single pole normally open contact for single stage, bilingual signage.

#### 6. Automatic Alarm Initiating Devices

Heat detectors, fixed temperature, non-restorable, rated 88oC per minute.

Thermal fire detectors, combination fixed temperature and rate of rise, non-restorable fixed temperature element, self-restoring rate of rise, fixed temperature 57oC, rate of rise 8.3oC per minute.

Smoke detector: ionization type.

Twist lock plug-in type with fixed base.

Wire-in base assembly with integral red alarm LED.

#### 7. Audible Signal Devices

Bells: vibrating type, gongs of special alloy steel, 24V d/c, 250 mm, 98 db.

Horns: 114 db, weatherproof, mounting, 24V d/c.

#### 8. End-of-Line Devices

End-of-line devices to control supervisory current in alarm circuits and signalling circuits, sized to ensure correct supervisory current for each circuit. Open, short, or ground fault in any circuit will alter supervisory current in that circuit, producing audible and visible alarm at main control panel.

#### 9. Remove Annunciator Panels

LED type with designation cards to indicate zone.

LED's to annunciate alarm and trouble.  
 Wired in multiple with main control panel.  
 Supervised, including trouble signal for open circuit.  
 LED test button.

#### 10. As-Built Diagram

Fire alarm system riser diagram: in glazed frame, min. size 600mm x 600mm.

### Execution

#### 1. Installation

Install systems in accordance with CAN/ULC-S524.

Install main control panel and connect to a/c power supply, d/c standby power.

Locate and install manual alarm stations and connect to alarm circuit wiring.

Locate and install detectors and connect to alarm circuit wiring. Do not mount detectors within 1M of air outlets. Maintain at least 600mm radius clear space on ceiling, below and around detectors. Locate duct type detectors in straight portions of ducts.

Connect alarm circuits to main control panel.

Locate and install bells and connect to signalling circuits.

Connect signalling circuits to main control panel.

Install end-of-line devices at end of alarm and signalling circuits.

Install remote annunciator panels and connect to annunciator circuit wiring.

Locate and install door releasing devices.

Locate and install remove relay units to control fan shut down.

Sprinkler system: wire alarm and supervisory switches and connect to control panel.

Connect fire suppression systems to control panel.

#### 2. Field Quality Control

Perform tests in accordance with Section 16010 - Electrical General Requirements, and CAN/ULC-S537.

Fire alarm system:

Test each device and alarm circuit to ensure manual stations, thermal and smoke detectors, sprinkler system, Halon system, transit alarm to control panel, and actuate first stage alarm, general alarm, ancillary devices.

Check annunciator panels to ensure zones are shown correctly.

Simulate grounds and breaks on alarm and signalling circuits to ensure proper operation of trouble signals.

#### 3. Active Alarm Systems

The responsibility for the operation of active fire alarm systems in Base buildings lies with the BCEO Electrical Fire Alarm Maintenance Section.

The policy for any group or individuals who plan to perform work on an active fire alarm system in a Base building is as follows:

The BCEO Electrical Fire Alarm Maintenance Section shall be informed of the building to be worked on and scope of work at least twenty-four (24) hours prior to commencing.



The BCEO Electrical Fire Alarm Maintenance Section shall at that time determine if their attendance will be required for building or zone deactivation and inform the group or individual of the requirement. If a building is to have its fire alarm system deactivated, it is the responsibility of the group/individual working on the system to supply and post the required "Out of Service" notices. If a zone is to be deactivated in a building, it is the responsibility of the group/individual working on that zone to ensure all break glass stations in that zone are marked unserviceable. Immediately prior to any work commencing on a Base fire alarm system, the Base Firehall Watch Room shall be informed of the building, account number, and area to be affected by: the BCEO Electrical Fire Alarm Maintenance Section if they deactivate the system; the group/individual working on the system if they have received permission from the BCEO Electrical Fire Alarm Maintenance Section to work without assistance. Upon completion of any work on a Base building fire alarm system, the group/individual performing the work shall contact the BCEO Electrical Fire Alarm Maintenance Section for testing and reactivation of system. Immediately preceding reactivation of the fire alarm system, the BCEO Electrical Fire Alarm Maintenance Section shall inform the Base Firehall Watch Room of the reactivation. Upon reactivation of a fire alarm system, the BCEO Electrical Fire Alarm Maintenance Section shall send a single test alarm to the Firehall Watch Room to ensure system readiness before leaving the building. Upon completion of reactivation and testing, the group/individual that performed work on the fire alarm system shall remove all "Out of Service" signs.

## **SECTION 16811 - MOTOR STARTERS TO 600V**

### **General**

#### **1. Shop Drawings and Product Data**

Submit shop drawings and product data in accordance with Section 01730.

Indicate:

mounting method and dimensions;  
starter size and type;  
layout of identified internal and front panel components;  
enclosure types;  
wiring diagram for each type of starter;  
interconnection diagrams.

#### **2. Operation and maintenance data**

Provide data for incorporation into maintenance manual specified in Sections 01730 and 16010.

Provide listed spare parts for each different size and type of starter:

2 contacts, stationary;  
2 contacts, moveable;  
1 contact, auxiliary;  
1 control transformer;  
1 operating coil;  
2 fuses;

4 indicating lamps.

## Products

### 1. Materials

Starters: EEMAC E14-1.

Half-size starters not acceptable.

### 2. Manual Motor Starters

Manual motor starters of size, type, rating, and enclosure type as indicated with components as follows:  
switching mechanism, quick make and break;  
overload heater(s), manual reset, trip indicating handle.

Accessories:

Toggle switch: heavy duty, labelled as indicated;

Indicating light: heavy duty, type and colour as indicated;

Locking tab to permit padlocking in "ON" or "OFF" position.

### 3. Full Voltage Magnetic Starters

Magnetic and combination magnetic starters of size, type, rating, and enclosure type as indicated with components as follows:\

Contactors solenoid operated, rapid action type;

Motor overload protective device in each phase, manually reset from outside enclosure;

Power and control terminals.

Wiring and schematic diagram inside starter enclosure in visible location.

Identify each wire and terminal for external connections, within starter, with permanent number marking identical to diagram.

Combination type starters to include circuit breaker with operating lever on outside of enclosure to control circuit breaker and provision for:

Locking in "OFF" position with up to three (3) padlocks;

Locking in "ON" position;

Independent locking of enclosure door;

Provision for preventing switching to "ON" position while enclosure door open.

Accessories:

Push button or selector switches: Heavy duty, labelled as indicated.

Indicating lights: heavy duty type and colour as indicated.

One N/O and one N/O spare auxiliary contacts unless otherwise indicated.

### 4. Control Transformer

Single phase, dry type, control transformer with primary voltages indicated and 120V secondary, complete with secondary fuse installed with starter as indicated.

Size control transformer for control circuit load plus 20% spare capacity.

### 5. Finishes

Apply finishes to enclosure in accordance with Section 16010.

## 6. Equipment Identification

Provide equipment identification in accordance with Section 16.

Manual starter designation label, white plate, black letters, size 1, engraved as indicated.

Magnetic starter designation label, white plate, black letters, size 1, engraved as indicated.

## Execution

### 1. Installation

Install starters, connect power, and control as indicated.

Ensure correct fuses and overload devices elements installed.

### 2. Tests

Perform tests in accordance with Section 16010 and manufacturer's instructions.

Operate switches; contractors to verify correct functioning.

Perform starting and stopping sequences of contactors and relays.

Check that sequence controls, interlocking with other separate related starters, equipment, control devices, operate as indicated.

## APPENDIX 3 - PRICE PROPOSAL FORM

Each item specified in the Unit Price Schedule includes wages, traveling time and costs, allowances, supervision, liabilities as employer, insurance, and the use of all tools, tackle, etc., overhead, profit and all other liabilities whatsoever.

.2 Unspecified Material shall be reimbursed at net cost, as supported by invoices, plus Markup as established in the Price Schedule of this Offer. "Net Cost" means all amounts reasonably and properly paid by the Offeror in respect of materials required for and used in the Work, and includes packing, handling and delivery charges, less any trade discounts received by the Offeror. The Offeror's Markup on Unspecified Material covers overheads, profit, and all other expenses whatsoever.

.3 The prices inserted in the Price Schedule of this Offer include all applicable federal, provincial, and municipal taxes.

.1 However, they do not include any amount for the Goods and Services Tax Goods and Services Tax (GST) or Harmonized Sales Tax (HST). The appropriate GST/HST amounts will be paid by Canada to the Offeror in addition to the amounts paid against the amount of the contract. The Offeror shall make appropriate remittances to Revenue Canada in accordance with the legislation.

.2 Payment by Canada for the Offeror's own special equipment not covered by the Unit Price Schedule and required at the job site will be no greater than the local going rental rate for such equipment or the rate published by the local construction association for such equipment, whichever is the lower.

### .3 Pricing

The hourly rates requested in the offer and acceptance for specific types of service shall be the total cost to perform the work including but not limited to:

- .1 labour including supervision, allowances and liability insurance;
- .2 travel time;
- .3 transportation/vehicle expenses;
- .4 tools and tackle;
- .5 overhead and profit;
- .6 any other incidental expenses other than supply of materials and

replacement parts relating to the delivery of labour.

## 4. PRICES

The Offeror agrees that the following are the prices referred to above:

#### 4.1 Unit Price Schedules - Rates

##### Years 1 & 2

**Call out Rates:** All inclusive firm call out rates shall be based only on direct travel from contractor's plant to the sites of work specified below and direct return to contractors plant (direct return trip). Full rates shall be charged only once for each call out.

Call out rates DO NOT include productive labour, See next table. If call out rates do not apply, please fill in rate as zero (0).

Item	Firm call out rates	Estimated Number of Trips	Unit Price per round trip	Estimated Total Price
1	Matsqui and Aldergrove, BC	6	\$	\$

ETT - Estimated Travel Time (in minutes) is one way from suppliers base to the job site above

Suppliers base is located at: \_\_\_\_\_

Item	Class of Labour, material or plant	Unit	Estimated Hours/ Quantity	Unit Price \$	Estimated total price \$
2	Hourly rate, including travel time and all related expenses.  <b>a) During Regular Hours:</b> 0800 - 1600 hours, Monday through Friday  i) Qualified Journeyman Electrician  ii) Indentured Apprentice  <b>b) Outside Regular Hours:</b> Monday through Sunday, including all day Saturday, Sunday and holidays.  i) Qualified Journeyman Electrician  ii) Indentured Apprentice	    Per hour Per hour   Per hour Per hour	    15,500 9,000   300 100		

3	Contractor's Mark Up on Allowance for unspecified material, replacement parts, required permits and certificates. ( $\$980,000.00 + \text{ \% mark up} =$ )	\$980,000.00	_____ %	\$
4	Rental - Hydraulic Bender - laid down cost + mark up specified ( $\$10,000.00 + \text{ \% mark up} =$ )	\$10,000.00	_____ %	\$
5	Rental - Greenlee Lugger - laid down cost + mark up specified ( $\$10,000.00 + \text{ \% mark up} =$ )	\$10,000.00	_____ %	\$
<b>S ub Total A): Estimated Total Amount 1st &amp; 2nd Year Applicable Taxes Extra</b>				

#### 4.1 Unit Price Schedules - Rates (continued)

##### B) Year 3

**Call out Rates:** All inclusive firm call out rates shall be based only on direct travel from contractor's plant to the sites of work specified below and direct return to contractors plant (direct return trip). Full rates shall be charged only once for each call out.

Call out rates DO NOT include productive labour, See next table. If call out rates do not apply, please fill in rate as zero (0).

Item	Firm call out rates	Estimated Number of Trips	Unit Price per round trip	Estimated Total Price
1	Matsqui and Aldergrove, BC	3	\$	\$

ETT - Estimated Travel Time (in minutes) is one way from suppliers base to the job site above. \_\_\_\_\_

Suppliers base is located at: \_\_\_\_\_

Item	Class of Labour, material or plant	Unit	Estimated Hours/ Quantity	Unit Price \$	Estimated total price \$
2	Hourly rate, including travel time and all related expenses.  <b>a) During Regular Hours:</b> 0800 - 1600 hours, Monday through Friday				

	<div>i) Qualified Journeyman Electrician</div> <div>ii) Indentured Apprentice</div> <div><b>b) Outside Regular Hours:</b> Monday through Sunday, including all day Saturday, Sunday and holidays.</div> <div>i) Qualified Journeyman Electrician</div> <div>ii) Indentured Apprentice</div>	<div>Per hour</div> <div>Per hour</div> <div>Per hour</div> <div>Per hour</div>	<div>7,500</div> <div>4,500</div> <div>150</div> <div>50</div>		
3	Contractor's Mark Up on Allowance for unspecified material, replacement parts, required permits and certificates. (\$490,000.00 +    % mark up =    )	\$490,000.00		_____ %	\$
4	Rental - Hydraulic Bender - laid down cost + mark up specified (\$5,000.00 +    % mark up =    )	\$5,000.00		_____ %	\$
5	Rental - Greenlee Lugger - laid down cost + mark up specified (\$5,000.00 +    % mark up =    )	\$5,000.00		_____ %	\$
S ub Total B): Estimated Total Amount 3rd Year Applicable Taxes Extra					

**TOTAL EVALUATED PRICE:**

Sub Total A 1st & 2nd Year Term	Sub Total B <u>3rd Year</u>	Total Evaluated Price (col.1 + col.2 = col.3)
\$ _____	\$ _____	\$ _____ GST/HST Extra

Cost will be evaluated on the Total Evaluated Price in Column 3. It is anticipated that 3 standing offers will be issued to the lowest compliant offerors.

Travel and Living Expenses - Meals and Accommodations: (For work at Aldergrove and Matsqui locations only)

Solicitation No. - N° de l'invitation

W0103-125105/B

Amd. No. - N° de la modif.

File No. - N° du dossier

PWY-2-35401

Buyer ID - Id de l'acheteur

pw011

Client Ref. No. - N° de réf. du client

W0103-125105

CCC No./N° CCC - FMS No/ N° VME

The Contractor will be reimbursed for the authorized living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for overhead or profit, in accordance with the meal, and incidental expense allowances specified in Appendix C of the Treasury Board Travel Directive, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees". web site:

[Http://www.tbs-sct.gc.ca/pubs\\_pol/hrpubs/tbm\\_113/menu-travel-voyage-eng.asp](http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/tbm_113/menu-travel-voyage-eng.asp)

**All travel must have the prior authorization of the Project Manager.**

SIGNATURE:

\_\_\_\_\_  
Name and title of person authorized to sign on behalf of Bidder (Type or print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**SUPPLIER CONTACTS:** The names, titles and telephone numbers of the Offeror's permanent staff members cleared to receive call-ups from Identified Users:

NAME	TITLE	TELEPHONE NO.	E-MAIL



## APPENDIX 4 - MANDATORY REQUIREMENTS

I/We certify that we have had a minimum of five (5) years experience in providing Electrical Services.

**YES      NO**

I/We certify that we have a Class "A" Contractors licence.

**YES**

**NO**

**A copy of this licence is to be provided with your bid.**

Contractors must be authorized installers of the equipment supplied.

**YES**

**NO**

Contractors installation must be covered by manufacturers warranty.

**YES**

**NO**

Personnel must be BC Certified Class B Electricians.

**YES**

**NO**

We may ask to see the above certificates at a later date.

Solicitation No. - N° de l'invitation

W0103-125105/B

Client Ref. No. - N° de réf. du client

W0103-125105

Amd. No. - N° de la modif.

File No. - N° du dossier

PWY-2-35401

Buyer ID - Id de l'acheteur

pw011

CCC No./N° CCC - FMS No/ N° VME

## APPENDIX 5 - PERIODIC REPORTS

As a requirement of this Request for Standing Offer, a report shall be submitted as follows:

Return to:

Elaine Anderson	(250)363-3298	elaine.anderson@pwgsc-tpsgc.gc.ca
<b>Name</b>	<b>Phone Number</b>	<b>E-mail</b>

At: Public Works and Government Services Canada

401-1230 Government St.

Victoria, BC V8W 3X4

### BI-ANNUAL REPORT ON THE VOLUME OF BUSINESS

SUPPLIER: \_\_\_\_\_

REPORT FOR THE PERIOD ENDING: \_\_\_\_\_

Description of Work	Call up #	Total Billing

NIL REPORT: We have not done any business with the federal government for this period.

PREPARED BY: \_\_\_\_\_

NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

Solicitation No. - N° de l'invitation

**W0103-125105/B**

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

**pw011**

Client Ref. No. - N° de réf. du client

**W0103-125105**

File No. - N° du dossier

**PWY-2-35401**

CCC No./N° CCC - FMS No/ N° VME

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## APPENDIX 6 - SECURITY REQUIREMENTS CHECK LIST (SRCL)

### LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine												2. Branch or Directorate / Direction générale ou Direction													
3. a) Subcontract Number / Numéro du contrat de sous-traitance												3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant													
												Address - adresse													
4. Brief Description of Work / Brève description du travail Electrical/ for CFB Esquimalt																									
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?																									
<input checked="" type="checkbox"/>																				N o		<input type="checkbox"/>		Ye s	
																				N		o		Ou	
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?																									
<input checked="" type="checkbox"/>																				N o n		<input type="checkbox"/>		Ye s Ou i	
																				N		o		Ou	
6. Indicate the type of access required / Indiquer le type d'accès requis																									
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)																									
<input type="checkbox"/>																				No Non		<input type="checkbox"/>		Yes Oui	
																				N		o		Ou	
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.																									
<input type="checkbox"/>																				N o n		<input checked="" type="checkbox"/>		Ye s Ou i	
																				N		o		Ou	

Solicitation No. - N° de l'invitation

W0103-125105/B

Client Ref. No. - N° de réf. du client

W0103-125105

Amd. No. - N° de la modif.

File No. - N° du dossier

PWY-2-35401

Buyer ID - Id de l'acheteur

pwy011

CCC No./N° CCC - FMS No/ N° VME

6. c) Is this a commercial courier or delivery requirement with **no** overnight storage?  
S'agit-il d'un contrat de messagerie ou de livraison commerciale **sans** entreposage de nuit?

X

N  
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7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès

Canada		NATO / OTAN		Foreign / Étranger	
--------	--	-------------	--	--------------------	--

7. b) Release restrictions / Restrictions relatives à la diffusion

No release restrictions		All NATO countries		No release restrictions	
Not releasable					
Restricted to: / Limité à :		Restricted to: / Limité à :		Restricted to: / Limité à :	
Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:	

7. c) Level of information / Niveau d'information

PROTECTED A		NATO UNCLASSIFIED		PROTECTED A	
PROTÉGÉ A		NATO NON CLASSIFIÉ		PROTÉGÉ A	
PROTECTED B		NATO RESTRICTED		PROTECTED B	
PROTÉGÉ B		NATO DIFFUSION RESTREINTE		PROTÉGÉ B	
PROTECTED C		NATO CONFIDENTIAL		PROTECTED C	
PROTÉGÉ C		NATO CONFIDENTIEL		PROTÉGÉ C	
CONFIDENTIAL		NATO SECRET		CONFIDENTIAL	
CONFIDENTIEL		NATO SECRET		CONFIDENTIEL	
SECRET		COSMIC TOP SECRET		SECRET	
SECRET		COSMIC TRÈS SECRET		SECRET	
TOP SECRET				TOP SECRET	
TRÈS SECRET				TRÈS SECRET	
TOP SECRET (SIGINT)				TOP SECRET (SIGINT)	
TRÈS SECRET (SIGINT)				TRÈS SECRET (SIGINT)	

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?  
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS?  
If Yes, indicate the level of sensitivity:  
Dans l'affirmative, indiquer le niveau de sensibilité:

I

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Solicitation No. - N° de l'invitation

W0103-125105/B

Client Ref. No. - N° de réf. du client

W0103-125105

Amd. No. - N° de la modif.

File No. - N° du dossier

PWY-2-35401

Buyer ID - Id de l'acheteur

pw011

CCC No./N° CCC - FMS No/ N° VME

Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

## SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category

Catégorie

PROTECTED

PROTÉGÉ

CLASSIFIED CLASSIFIÉ

NATO

COMSEC

A

B

C

CONFIDENTIAL

CONFIDENTIEL

SECRET

TOP

SECRET

TRÈS SECRET

NATO

RESTRICTED

NATO

DIFFUSION

RESTREINTE

NATO

CONFIDENTIAL

NATO

CONFIDENTIEL

NATO

SECRET

COSMIC

TOP

SECRET

COSMIC

TRÈS SECRET

PROTECTED

PROTÉGÉ

CONFIDENTIAL

CONFIDENTIEL

SECRET

TOP

SECRET

TRÈS

SECRET



Solicitation No. - N° de l'invitation

W0103-125105/B

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

pwy011

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

W0103-125105

PWY-2-35401

A

B

C

Information /Assets

Renseignements / Biens

adfgasdf

Production

IT Media /

Support TI

IT Link /

Lien électronique

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?

La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

**If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".****Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.**

No

Yes

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?

La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

**If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments). Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).**

No

Yes