Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Bid Receiving Public Works and Government Services Canada/Réception des soumissions Travaux publics et Services gouvernementaux Canada
Pacific Region
401 - 1230 Government Street
Victoria, B.C.
V8W 3X4
Bid Fax: (250) 363-3344

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

Proposal To: Public Works and Government Services Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Proposition aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet
Pneumatic Training Systems

Solicitation No. - N° de l'invitation	**Date**
W0103-198302/A	2019-04-26

Client Reference No. - N° de référence du client
W0103-198302

GETS Reference No. - N° de référence de SEAG
PW-$XLV-591-7720

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
XLV-9-42004 (591)	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2019-06-10

Time Zone
Fuseau horaire
Pacific Daylight Saving Time PDT

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☐ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
Zwarich, Eric	xlv591

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(250) 661-2347 ( )	( ) -

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
National Defence Canada
See herein

Instructions: See Herein

Instructions: Voir aux présentes

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

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
See Herein	

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**

Issuing Office - Bureau de distribution
Public Works and Government Services Canada - Pacific Region
401 - 1230 Government Street
Victoria, B. C.
V8W 3X4

Canada

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement applicable to the Contract

1.2 Requirement

DND has a requirement to procure twelve (12) Pneumatic Trainers to improve training and operational readiness of naval personnel deployed aboard Canadian warships. The equipment will enhance the Naval Fleet Schools' capabilities by offering students a holistic understanding of pneumatic systems, including their subsystems and components, as well as practical training on the principles of Pneumatic control common in naval system operations.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

1.5 epost Connect service

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

The 2003 standard instructions is amended as follows:

Section 08, entitled Transmission by facsimile or by epost Connect, is amended as follows:

subsection 2. is deleted entirely and replaced with the following:

2. epost Connect

   a. Unless specified otherwise in the bid solicitation, bids may be submitted by using the epost Connect service provided by Canada Post Corporation.
      i. PWGSC, National Capital Region: The only acceptable email address to use with epost Connect for responses to bid solicitations issued by PWGSC headquarters is:

         tpsgc.dgareceptiondessoumissions-abbidreceiving.pwgsc@tpsgc-pwgsc.gc.ca

         or, if applicable, the email address identified in the bid solicitation.

      ii. PWGSC regional offices: The only acceptable email address to use with epost Connect for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation.

   b. To submit a bid using epost Connect service, the Bidder must either:
      i. send directly its bid only to the specified PWGSC Bid Receiving Unit, using its own licensing agreement for epost Connect provided by Canada Post Corporation; or
      ii. send as early as possible, and in any case, at least six business days prior to the solicitation closing date and time, (in order to ensure a response), an email that includes the bid solicitation number to the specified PWGSC Bid Receiving Unit requesting to open an epost Connect conversation. Requests to open an epost Connect conversation received after that time may not be answered.

   c. If the Bidder sends an email requesting epost Connect service to the specified Bid Receiving Unit in the bid solicitation, an officer of the Bid Receiving Unit will then initiate an epost Connect conversation. The epost Connect conversation will create an email notification from Canada Post Corporation prompting the Bidder to access and action the message within the conversation. The Bidder will then be able to transmit its bid afterward at any time prior to the solicitation closing date and time.

d. If the Bidder is using its own licensing agreement to send its bid, the Bidder must keep the epost Connect conversation open until at least 30 business days after the solicitation closing date and time.

e. The bid solicitation number should be identified in the epost Connect message field of all electronic transfers.

f. It should be noted that the use of epost Connect service requires a Canadian mailing address. Should a bidder not have a Canadian mailing address, they may use the Bid Receiving Unit address specified in the solicitation in order to register for the epost Connect service.

g. For bids transmitted by epost Connect service, Canada will not be responsible for any failure attributable to the transmission or receipt of the bid including, but not limited to, the following:

   i. receipt of a garbled, corrupted or incomplete bid;
   ii. availability or condition of the epost Connect service;
   iii. incompatibility between the sending and receiving equipment;
   iv. delay in transmission or receipt of the bid;
   v. failure of the Bidder to properly identify the bid;
   vi. illegibility of the bid;
   vii. security of bid data; or,
   viii. inability to create an electronic conversation through the epost Connect service.

h. The Bid Receiving Unit will send an acknowledgement of the receipt of bid document(s) via the epost Connect conversation, regardless of whether the conversation was initiated by the supplier using its own license or the Bid Receiving Unit. This acknowledgement will confirm only the receipt of bid document(s) and will not confirm if the attachments may be opened nor if the content is readable.

i. Bidders must ensure that that they are using the correct email address for the Bid Receiving Unit when initiating a conversation in epost Connect or communicating with the Bid Receiving Unit and should not rely on the accuracy of copying and pasting the email address into the epost Connect system.

A bid transmitted by epost Connect service constitutes the formal bid of the Bidder and must be submitted in accordance with section 05.

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

Address:

Bid Receiving Public Works and Government Services Canada
Pacific Region
401-1230 Government Street
Victoria, BC
V8V 3X4

ePost Connect email:

TPSGC.RPReceptiondessoumissions-PRBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca

Note: Bids will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions 2003, or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

Bid Facsimile number:
(250) 363-3344

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in British Columbia.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders must provide their bid in a single transmission. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications

If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (1 hard copy)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy on electronic media and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:

(a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
(b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573). To assist Canada in reaching its objectives, bidders should:

1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and

2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To

avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with ANNEX "C"– FINANCIAL EVALUATION SHEET and address each of the cost elements.

Bids must be submitted in Canadian currency.

Bidders are requested to insert “$0.00” for any of the cost elements for which it does not intend to charge. If any cost element is left blank, Canada will insert “$0.00” for that element.

3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex “F” Electronic Payment Instruments, to identify which ones are accepted.

If Annex “F” Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

3.1.3 No Conditional Bids

The Bidder’s bid must not be made conditionally. Any condition imposed by the Bidder will render the bid non-responsive and the bid will be given no further consideration.

3.1.4 Substantial Information

Bidders must demonstrate their compliance with the following sections of the bid solicitation by providing substantial information describing completely and in detail how the requirement is met or addressed.

Bidders must provide with their technical bid, a document indicating clearly where the substantial information for each mandatory criterion identified in ANNEX “E” - TECHNICAL EVALUATION CRITERIA.

3.1.5 Mandatory Tender Deliverable Check List

Notwithstanding deliverable requirements specified anywhere else within this bid solicitation and its associated Requirement (Annex A), mandatory deliverables that must be submitted with the Bidder’s tender to be deemed responsive are describe below.

For details and to complete please refer to Annex D

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

a. Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
b. An evaluation team composed of representatives of Canada will evaluate the bids.
c. Where Canada has made a determination that a bid has failed any individual mandatory element of the Solicitation, Canada reserves the right to not proceed further in the evaluation of the bid and may deem the bid non-responsive.

4.1.1 Technical Evaluation

The Technical Bid Evaluation Plan and mandatory technical evaluation criteria are included in ANNEX “E” - TECHNICAL EVALUATION CRITERIA.

4.1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars in accordance with Annex C, Customs duties are included and the Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

4.2 Basis of Selection

To be declared responsive, a bid must:

a. comply with all the requirements of the bid solicitation; and
b. meet all mandatory criteria; and
c. obtain the required minimum of 70 points overall for the technical evaluation criteria which are subject to point rating.
d. The rating is performed on a scale of 100 points.

Bids not meeting (choose (a) or (b) or (c) will be declared non-responsive.

The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60 % for the technical merit and 40 % for the price.

To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 60 %.

To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.

For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is $45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		$55,000	$50,000	$45,000
Calculations	**Technical Merit Score**	115/135 x 60=51.11	89/135x60=39.56	92/135x60=40.89
	Pricing Score	45/55x40=32.73	45/50x40=36.00	45/45x40=40.00
Combined Rating		83.84	75.56	80.89
Overall Rating		1st	3rd	2nd

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the Forms for the Integrity Regime website (http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website (https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

There is no security requirement applicable to this Contract.

6.2 Requirement

DND has a requirement to procure twelve (12) Pneumatic Trainers to improve training and operational readiness of naval personnel deployed aboard Canadian warships. The equipment will enhance the Naval Fleet Schools' capabilities by offering students a holistic understanding of pneumatic systems, including their subsystems and components, as well as practical training on the principles of Pneumatic control common in naval system operations.

The Pneumatic Trainers must be in accordance with the requirements detailed in Annex A.

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2010A (2018-06-21), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.3.2 Supplemental General Conditions

4009 (2013-06-27), Professional Services – Medium Complexity, apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to 365 days after contract award inclusive.

6.4.2 Delivery Date

All the deliverables must be received on or before August 19, 2019.

6.4.3 Delivery Location

Goods must be consigned to the destination specified in the Contract and Delivered Duty Paid (DDP – Incoterms 2010)

The following locations are identified in Annex A as delivery locations:

a. Department of National Defence, Canadian Forces Base, Esquimalt, Naval Fleet School (Pacific) Building 92 Fluid Power Laboratory, NADEN, Victoria, BC V9A 7N2, Canada; and,

b. Department of National Defence, Canadian Forces Base, Halifax, Naval Fleet School (Atlantic), Building S-37, Halifax, NS B3K 5X5, Canada.

6.4.3 Preparation for Delivery

Preparation for delivery and packaging are to be to the highest manufacturer's standard for the mode of transportation utilized, to ensure safe arrival at final destination.

6.4.4 Shipping Instructions – Delivered Duty Paid (DDP)

Goods must be consigned and delivered to the destination specified in the contract:

Incoterms 2000 "DDP Delivered Duty Paid" – Victoria, BC and Halifax, NS.

6.4.5 Failure to keep the Contracting Authority informed

As the delivery date is an essential part of this contract, except for excusable delays notified in accordance with Article 06 (Time of Essence) of 2010A, failure to communicate any changes to the delivery schedule specified in this contract will prejudice Canada and will, at Canada's discretion, entail either:

a. Contract Termination in accordance with General Conditions 2010A Article 06 (Time of the Essence) and Article 23 subsection 4, (Default by the Contractor), and the Contractor will be liable to Canada for all losses and damages suffered by Canada because of the default or occurrence upon which the notice was based, including any increase in the cost incurred by Canada in procuring the Work from another source; or
b. Consideration for Contract Amendment. Delivery date(s) will not be extended without consideration being provided by the Contractor in the form of adjustment to the price, warranty, and/or services provided.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Eric Zwarich
Supply Team Leader
Public Works and Government Services Canada
Acquisitions, Marine
1230 Government Street, Suite 401 Victoria, BC V8W 3X4 Canada
Telephone: 250-661-2347
Facsimile: 250-363-3960
E-mail: Eric.Zwarich@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Technical Authority

The Technical Authority will be identified in the Contract:

Name: TBD
Title: TBD
Organization: TBD
Address: TBD
Telephone: TBD
Facsimile: TBD
E-mail: TBD

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Contractor's Representative

Contact for:	Name	Telephone	Email
Contracting issues			
Technical issues			
Invoicing issues			

For details and to complete please refer to Annex D

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B for a cost of $ _____. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Multiple Payments

SACC Manual clause H1001C (2008-05-12), Multiple Payments.

6.6.3 SACC Manual Clauses

C0100C 2010-01-11 Discretionary Audit – Commercial Goods and/or Services

C6000C 2017-08-17 Limitation of Price

6.6.4 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

(a) Direct Deposit (Domestic and International);
(b) Electronic Data Interchange (EDI);
(c) Wire Transfer (International Only);

6.7 Invoicing Instructions

The Contractor must submit invoices in accordance with the section of the General Conditions titled Invoice Submission.

Invoice is to be made out to:

TBD

Electronic copy of the invoice is to be sent for verification to:

PAC.MARINE@pwgsc-tpsgc.gc.ca Attention: Eric Zwarich

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in_____.

6.10 Priority of Documents

If there is a discrepancy between the wordings of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

(a) The Articles of Agreement;
(b) the supplemental general conditions 4009 (2013-06-27), Professional Services – Medium Complexity;
(c) The general conditions 2010A (2018-06-21), General Conditions - Goods (Medium Complexity);
(d) Annex A, Requirement;
(e) Annex B, Basis of Payment;
(f) The Contractor's bid dated _____.

6.11 *SACC Manual* Clauses

A9062C (2011-05-16), Canadian Forces Site Regulations

B1501C (2018-06-21), Electrical Equipment

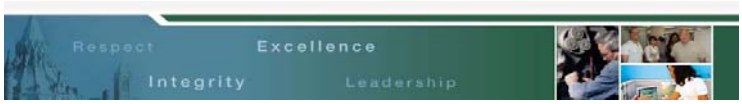
B7500C (2006-06-16), Excess Goods

6.12 Insurance – No Specific Requirement

G1005C (2016-01-28), Insurance – No Specific Requirement

ANNEX A – REQUIREMENT

(Requirement begins on next page and consists of 17 pages)



STATEMENT OF WORK

PROJECT PROPEL

NTDC

Pneumatic Trainers (with Manifold)

Technology Enabled Learning

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada
Canada

CONTENTS

LIST OF APPENDICES:

1.0 SCOPE

1.1 Purpose.

1.1.1 The purpose of this Statement of Work (SOW) is to describe the requirements and work effort required from the Contractor by the Department of National Defence (DND) for the supply of items and its installation hook-up and the necessary support to meet the requirements for the acquisition of these items, **Pneumatic Trainers** (also called "Pneumatic Training Systems").

1.2 Background

1.2.1 Several critical systems on board Her Majesty's Canadian Ships are fundamentally hydraulic in function, Pneumatic Trainers are a major part of that function. Expert knowledge and competency in the practical application and repair of Pneumatic systems and its fundamentals of operations is essential to maintaining the capability and reliability of a Canadian Warship.
The Naval Training Development Centres (NTDC) require improvement of schools' capabilities and output in providing the instructor and students an up to date training platform that integrates an instructional package, hands-on exercises, as identified by DND **QSP** (Quality Standard and Plan) in the operation of various Pneumatic systems.

The Naval Training Development Centre (Pacific) at Canadian Forces Base, NADEN, running the current Maritime Technology Trade training program now requires the acquisition of Pneumatic Trainers to adequately instruct Naval personnel Pneumatic System Maintenance, Repair and Operations through simulating a full system, allowing for training on the operation, removal, testing and troubleshooting of various Pneumatic Systems used in today's Navy Systems Operations.

The practical experience and skill set acquisition from such learning creates the value for the readiness of our Naval Technicians deployed for duty on board any of Her Majesty's Canadian Ships (HMCS). This acquisition will leverage process efficiencies that will improve the quality of our Marine Technician Specialists regarding fundamental knowledge of Pneumatic Systems.

1.3 Intended Use

1.3.1 *The Department of National Defence (DND) has a requirement to procure Twelve(12) of the Pneumatic Training Systems(i.e. Pneumatic Trainer) that will enable practical learning and skills acquisition by The Royal Canadian Naval personnel for readiness of duty to be deployed for any of Her Majesty's Canadian Ship (HMCS) operation.*

Six(6) of the Pneumatic Training Systems(i.e. Pneumatic Trainer) are required at The Naval Fleet School Pacific, CFB Esquimalt(Naden, Bldg. N92, Engineering Division), Victoria British Columbia, V9A 7N2, while the other Six(6) of the Pneumatic Training Systems are required at The Naval Fleet School Atlantic CFB Halifax (Stadacona, Bldg. S-37, Engineering Division), Nova Scotia, B3K 3C8.
These Equipment will be used to offer students hands-on (practical) training on the principle of Pneumatic Control used in industrial applications, explaining the components of Pneumatic Control System and their applications as is in today's Naval Systems Operations.

These Pneumatics Trainers are fabricated from high grade steel, durable and of good quality materials suitable for their intended use. Acquisition of these equipment will also enhance our Naval Fleet Schools' capabilities to support Royal Canadian Navy operational deployment requirements.

2.0 APPLICABLE DOCUMENTS

2.1 References

2.1.1 The following references are provided with the Request for Proposal. Where mentioned, the following Standards must be used for the preparation of deliverables to the extent specified in this SOW:

2.1.1.1 DND Specifications, Standards, and Publications:

REFERENCE	PROMULGATION	REFERENCE TITLE
QSP-USQ - *Electrical Specialist – AB (NQual)* ***PO 012 - EO 012.03 (Maintain Field Devices)***	2018-03-10	PO 012 MAINTAIN SHIPBOARD ELECTRICAL SYSTEMS
QSP- *USQ – Mechanical Specialist – LS (NQual)* ***PO 003 - EO 003.03 – Troubleshoot Control Systems***	2018-03-10	PO 003 SERVICE ELECTRONIC CONTROL SYSTEMS
QSP- *USQ – Electrical Specialist – LS (NQual)* ***PO 003 - EO 003.04 - Repair Control System***	2018-03-10	PO 003 SERVICE ELECTRONIC CONTROL SYSTEMS
QSP- *USQ – Electrical Specialist – LS (NQual)* ***PO 004 - EO 004.03 - Troubleshoot Field Devices***	2018-03-10	PO 004 MAINTAIN FIELD DEVICES

Please see **Teaching Requirement under General Requirement 3.0.**

2.2 Order of Precedence

2.2.1 In the event of a conflict between the content in this Statement of Work (SOW) and the referenced documents, the content of this SOW takes precedence to inform the Request for Proposal to the Bidder.

3.0 GENERAL REQUIREMENTS

3.1 Scope of Work

3.1.1 The Contractor must supply the PNEUMATIC TRAINERS that meet all the requirements identified within this SOW.

3.1.2 The Contractor must supply the following:

3.1.2.1 **Requirements –** The Deliverables are hereby described in detail including the description of the required goods, applicable specification/data and the specific delivery location(s) to satisfy Need**.**

a) Supply, deliver and un-load by vendor's equipment (ready-to-install) **twelve (12) Pneumatic Trainers** (i.e. Pneumatic Training Systems) , the Equipment**,** that meet all technical requirement and operational teaching requirements and standards stated under this Section – **Six (6) of the Units shall be supplied to each of the specified** delivery locations in the Canadian Forces Base (CFB), Esquimalt, Naden Bld N92, Victoria BC and Canadian Forces Base (CFB), Halifax, Stadacona S-37, Nova Scotia (each equipment to be accompanied with its training manual, student/ Instructor's courseware/handbook, Job sheets/Work order, student lab material and textbooks)**;**
b) Install only **Six (6) of the Equipment at each of the specified** delivery locations in the Canadian Forces Base (CFB), Esquimalt, Victoria BC and CFB Halifax, Nova Scotia respectively.
c) Provide for and conduct **On-site support / operational** (operate and maintain) training of Client User (DND) system instructors as listed in the deliverables table below.
d) All equipment is expected to be supported by the Supplier with a 2 years running spares at no additional cost to (DND).
e) Functional and Teaching Requirements are Attachments under this general section 3.0 containing comprehensive requirements as outlined;
   ATTACHMENTS UNDER THIS GENERAL SECTION 3.0:
   1. PLS SEE TECHNICAL SPECIFICATION OF REQUIREMENT (TSOR) ATTACHMENT.
   2. PLS SEE TEACHING REQUIREMENT ATTACHMENT.

f) The delivery deadline for the desired equipment is August 19, 2019.

3.2 Tasks

3.2.1 The Contractor must deliver all goods in line with all the requirements to the 'specified locations for delivery at Destinations' which are at:

(a) Department of National Defence, Canadian Forces Base, Esquimalt, Naval Fleet School (Pacific) Naden, Bldg. N92 Fluid Power Laboratory, Victoria, BC V9A 7N2, Canada; and,
(b) Department of National Defence, Canadian Forces Base, Halifax, Naval Fleet School (Atlantic), Stadacona Bldg. S- 37, Halifax, NS B3K 5X5, Canada.

3.2.2 The Contractor must unpack the **Pneumatic Trainers** *(The Equipment, Pneumatic Training Systems)* and remove all packaging material from DND premises.

3.2.3 The Contractor must perform the installation of all **twelve (12) Pneumatic Trainers** (with reference to 3.1.2.1) at the Client-User (DND) premises at *the locations as specified above in 3.2.1* and as designated by the Project Authority, and, Contractor must ensure before delivery that all electrical products provided are certified and approved for safe/operational use in accordance with the Canadian Electrical Code Part 1 by a certified organization accredited by the Standards Council of Canada.

3.2.4 The Contractor must provide 12 hardcopies (paper format copies) and 2 electronic copies of the User and System Manuals in English and French. 6 hardcopies/1 e-copy CD Rom for each location.

3.2.5 The Contractor must maintain their Plan or Schedule to meet/satisfy the required delivery date and other deliverables as specified for the requirements, showing (timelines) dates for

(i) The Equipment (Pneumatic Trainers) delivery;
(ii) Installation of all the Equipment delivered;
(iii) On-site training of DND instructors' to acquire the competence/capability to operate equipment.

The plan or schedule submitted by the Contractor with respect to meeting the Equipment delivery and installation/On-site training [(i) & (ii)/(iii) as above] requirements shall be used to evaluate the contractor's delivery capability competence at the technical stage and implemented in the commercial evaluation /award selection of the responsive bid for award in the 60:40 selection on the basis of technical merit and financial offer(cost) combined ratio respectively (i.e. 60% of the points shall be for technical merit and 40% of the points to the cost).

3.3 Constraints

3.3.1 The Pneumatic Trainer equipment 'On-site' instructor or operator training to be offered by Vendor or contractor must take place as quoted by the contractor and as a deliverable/part of the firm requirements, at the Canadian Forces Base Esquimalt/Halifax locations identified as destinations by the Project Authority, and as in this statement of work, to completely have satisfied all requirements (as Complete delivery).
3.3.2 Instructor training must occur between Monday and Friday from 0730 hrs to 1930 hrs.
3.3.3 The Contractor or their resources must provide their own meals, accommodations and travel to and from the training sites.
.

3.4 **Client (DND) Support**

3.4.1 Client, DND, will provide a suitable instructional space for the contractor to deliver training on site at CFB Esquimalt and CFB Halifax locations at their scheduled dates.

4.0 ACCEPTANCE PROCESS AND CRITERIA

4.1 General

4.1.1 Acceptance ensures that each **Pneumatic Trainer** Equipment has been produced and verified in accordance with all the requirements of the Contract.

4.1.2 The Contractor must provide at point of receipt for acceptance, all source documents with all other necessary documentation for operation and maintenance of equipment.

5.0 DELIVERABLES

Delivery Table (based on the final SOW Deliverables):

Item	Item Description	Quantity	UNIT	Delivery date	Delivery location
1	**Supply Pneumatic Trainer to meet requirements.**	6	PC	August 19 2019	CFB Esquimalt (NFS) Pacific(P)
2	**Supply Pneumatic Trainer to meet requirements.**	6	PC	August 19 2019	CFB Halifax (NFS) Atlantic(A)
3	**Install delivered Equipment on site (Plug and Play)**	12	PC	August 19 2019	CFB (P/A)
4	**On-site operational training (Train DND instructors for competence and capability to operate and handle the supplied Equipment;** must occur within 2-5 business days after final delivery and installation; (No Additional Cost to DND).	2	DAYS	As scheduled and agreed	CFB (P/A)

5.1 IMPORTANT NOTES:

5.1.1 Instructional/Teaching Requirements:

- The Pneumatic Trainer equipment must SATISFY the 'Maintain fluid systems-Pneumatic' teaching requirements as specified from the applicable QSP references and ATTACHMENTS UNDER SECTION 3.0.

e Learning Formats:* The courseware shall be made available in the following e-learning format for computer based approach use: *STAND-ALONE*, AVAILABLE ON CD-ROM. This format runs on a web browser and *does not require any management system.

[3.0 (1)]Technical Specification of Requirements (TSOR's)

Pneumatic Training Systems\SOW

GENERAL REQUIREMENTS

Scope of Work

Contents

1.0 **Operating Conditions**

The DND requires initial **Twelve (12) pcs of Pneumatic Training Systems** (that is, Pneumatic Trainers). These Training Systems will provide the trainee with a fundamental understanding of Pneumatics and Electro-pneumatics, Logic elements, Logic diagram, Pneumatic System maintenance, Repairs and Operations through simulating a full system, allowing for training on the operation, removal, testing and troubleshooting of various Pneumatic, electro-pneumatic with PLC (Programmable Logic Controller) Systems tool (designed with Ladder Logic by the Contractor). A comprehensive Pneumatic Training System will introduce students to hands-on (practical) training on the principle of Pneumatic Control used in industrial applications, explaining the components of Pneumatic Control Systems and their applications as is in today's Naval Systems operations. Pneumatic Training System Trainers when monitored electronically shall act independently; DND Communication Security protocol requires units to act as a **Stand-Alone System <u>ONLY</u> - Any Computer Device Or Network; Including But Not Limited To Personal Computers (PC), Laptops, Tablet PC's Or Others That Do Not Connect To Any Network, Either Through A Wired, Wireless Or Remote Access Connection.** (<u>Networking functionality must be completely removed</u>). Equipment shall also be able to perform simulation operations (automatic/manual/jog mode) with fault finding functionality (fault finding is intended as a guide only and shall not be developed to cover all possible faults or in which order or sequence they could be encountered while operating the system). For introduction of system function faults in order to troubleshoot the Pneumatic Trainer, '<u>Instructor will install common faulty/defective components into system developed and provided by Contractor</u>'. The trainer must have the capability to simulate a fault on the pneumatically operated components, electrically operated valves, and electrically operated sensors. The trainer must also have the capability to maintain Programmable Logic Controllers (PLC), to include but not limited to:

- 1.0.1 Uploading/downloading PLC programs (Ladder Logic);
- 1.0.2 Inspecting DIP switches settings;
- 1.0.3 Testing PLC Control System operations, to include but limited to:
- 1.0.4 (Ladder Logic) System operations; and
- 1.0.5 (Ladder Logic) Network programming.
- 1.0.6 Basics fundamental understanding of (Ladder Logic) network programming and system operations to include but limited to:

1.0.7 Programming flow charts;
1.0.8 Programming symbology; and
1.0.9 (Ladder Logic) projects/labs utilizing generic preprogrammed codes; Sequentially ordered from basic to more advanced projects;
1.1.0 Each project shall be incrementally more complex as follows but not limited to:
1.1.1 Filling and draining of a tank (Air);
1.1.2 Input/output signals (Generic);
1.1.3 Basic operation of a slider valve (Generic);
1.1.4 **Note:** 10/15 (min/max) projects/labs for each example mentioned above (1.1.1 to 1.1.3) - **(provided by Contractor).**

2.0 **Standard Requirements (functional):**

2.1 The supplied units must be designed in DUAL back-to-back CONFIGURATION and made from standard industrial components with portability in mind. Robust base construction stable for trainees to safely work concurrently. The trolley or bench shall have wheels (heavy duty casters with brakes) for ease of movement. The System component work area shall have two large metal assembly panels or boards (perforated) upon which components are securely mounted using a sturdy quick connect and securing system, so they can be trained-on and operated simultaneously. The Pneumatic and Electro-Pneumatic circuits are made with Pneumatic hoses and laboratory cables, and a miniature air compressor shall supply compressed air **to both Back to Back Work Stations Unit Systems**. The trolley or bench shall have drawer(s) for storage and ease of functional use and storage of the various components not immediately in use.

2.2 The units must use North American standard 110/120 volt 50/60 hertz power.

2.3 Safety Relief pressure valves (shut-off valves) must be incorporated in the design for each unit.

2.4 All components of the Electronic Pneumatic System must meet industrial safety standards, ISO9001.

2.5 Each unit must include the following components:

2.5.1 single-acting cylinder (2),
2.5.2 Double-acting cylinder with end position damping (4).
2.5.3 double-acting cylinder with end position damping and 2 limit switches (NO contacts)(4)
2.5.4 maintenance unit (4)
2.5.5 8-way distributor block with manual slider valve (4)
2.5.6 3/2-way valve with push-button, locked at rest position (4)
2.5.7 3/2-way valve with mushroom-type button, locked at rest position (2)
2.5.8 3/2-way valve with push-button, open at rest position (2)
2.5.9 3/2-way valve with tipping roller lever, locked at rest position (4)
2.5.10 3/2-way valve with roller lever, locked at rest position (8)
2.5.11 3/2-way valve, pressurised on one side (2)
2.5.12 3/2 delay valve, locked at rest position (2)
2.5.13 5/2-way valve with hand lever, locked at rest position (2)
2.5.14 5/2-way valve dual-pressurised (6)
2.5.15 5/2-way valve, pressurised on one side (2)
2.5.16 5/3-way valve with spring-centred mid position, all connections locked (2)
2.5.17 one-way restrictor, adjustable (4)
2.5.18 quick-vent valve with sound absorber (2)
2.5.19 dual pressure valve (10)

2.5.20 3/2-way valve with pressure sequence actuator (pressure input valve) (2)
2.5.21 pressure reducing valve with drain (2)
2.5.22 device for pulling load (2)
2.5.23 sequencer for 4 steps (2)
2.5.24 manometer, 0...10bar (6)
2.5.25 PLC with programming software (Ladder Logic) (2)
2.5.26 set of laboratory cables (2)
2.5.27 set of hoses (2) (Pneumatic hoses: 4/2mm)
2.5.28 Compressor (Tank: 20/24L (min/max), maximum pressure: 8 bar.
2.5.29 PLC with display (input: 8 minimum, outputs: 4 minimum EEPROM) (2).
2.5.30 System dryer(1)

2.5.32 **Electro-pneumatic experiments' components-**

2.5.32.1 2x 3/2-way solenoid valve with spring return, locked at rest position
2.5.32.2 6x 5/2-way solenoid valve with spring return, locked at rest position
2.5.32.3 6x 5/2-way solenoid valve, impulse
2.5.32.4 6x relay board, 4 changeover contacts
2.5.32.5 4x electric limit switch (roller touch contact, can be used as NC contact and NO contact)
2.5.32.6 2x proximity switch, inductive (NO contact)
2.5.32.7 2x proximity switch, capacitive, with LED (NO contact)
2.5.32.8 2x proximity switch, optical, with LED (NO contact)
2.5.32.9 4x signal board (1x touch contact, locking, 2x touch contact, non-locking)
2.5.32.11 2x pressure switch
2.5.32.12 2x signalling unit and distributor
2.5.32.13 2x potentiometers.

2.6 The Pneumatic Training Systems units must include the following **manuals,** training literature, software, and documentation and common faulty/defective for all pneumatically operated components, electrically operated valves, and electrically operated sensors:

2.6.1 Pneumatic Training Systems (Instructional Manual on CD-ROM)
2.6.2 Textbook- Pneumatic Handbook (Student Instructional Manuals).

2.7 **Physical features**

2.7.1 Equipment unit must be engineered with portability in mind. Profile metal plate. Compact Ergonomic design. Pneumatic bench fabrication is a sturdy welded steel frame mounted on four heavy duty casters with brake and having two assembly panels (2 assembly panels, L x H : 1000mmx700mm (minimum dimensions) mounted on top for all components. Equipment unit dimension L x W x H: 1530mmx750mmx1540mm (maximum dimensions)
2.7.2 Easy, self-explanatory and accurate quick-lock system to mount and remove components effortlessly on work surface areas.

2.8 **Electrical Requirement:**

2.8.1 Leak proof safety measures, sturdy piping and robust construction
2.8.2 ***Enhanced electrical safety considerations*** **-** The entire system must be supplied to DND-Naval Fleet Schools' destinations with Canadian Standards Association (CSA) certified;
2.8.3 Connected via National Electrical Manufacturers Association (NEMA) standard plugs/connectors (cannot require permanent wired connections to power sources)

2.8.4 The Pneumatic Training System units must be supplied and installed ready to run (Plug n Play) on 110/120 Volt, single Phase, 50/60 Hz power;
2.8.5 Running current 3.1 amps. Inrush current 13 amps
2.8.6 Require "Voltage warning" and "Do Not Operate" signs or Mimic panels for additional safety instructions.
2.8.7 Require power cord (3.048m to 4.572m) via National Electrical Manufacturers Association (NEMA) for flexibility of use.

2.9 **Equipment Certifications:** ISO 9001, 14001, CSA etc.

2.10 **Safety and Operation Labeling**

2.10.1 Mimic Charts for Circuit Operation Ease.
2.10.2 Any pinch points, hazard areas, operator safety concerns, and moving components are clearly labeled in English.
2.10.3 Operating instruction labels are clearly identified and printed in English.

3.0 **Quality**

3.1 **Performance Guarantee**

3.1.1 Compressed clean, dry air supply at 7-8 Kg/cm2 (@8bar maximum), required service.
3.1.2 The supplier will have to guarantee Equipment performance shall be fit-for-purpose, meeting all general requirements as stated in this Technical Requirements section.
3.1.3 If the Pneumatic Training Systems (Equipment) do not meet the specified performance, the supplier will take the necessary remedial action to achieve the specified performance at no cost to the purchaser.
3.1.4 The Equipment must be designed and constructed to be free from defects in manufacturing and workmanship, as well as environmentally safe.

4.0 **Packaging**

4.1 All machines, components, and accessories including the Pneumatic benches must be packaged, crated, or boxed to ensure no damage is sustained by equipment during the transport, loading, unloading, or general handling of equipment prior to the final installation. All equipment must be supplied with no defects/damages.

5.0 **Installation and On-Site equipment operational Training AT Destinations**

5.1 Units must be supplied Plug and Play at Destinations (respective Naval Fleet Schools Atlantic/Pacific), **Six (6)** units installed at each destination specified.
5.2 On-site operational Training for unit handling must be conducted <u>within 2-5 business days</u> of final delivery and installation to acquaint DND Student Instructors scheduled to attend with the safe operational and preventive maintenance capabilities, and acquaint them with circuit setup, design functionalities and operability for teaching the courseware associated with the equipment. Two (2) days on-site training is considered adequate starting 8am to 4pm daily (business hours).

6.0 **Warranty/ 2yrs Running or operational Spares**

6.1 All Equipment supplied shall be covered by its manufacturer's warranty from defects in design, materials and workmanship. Supplier shall quote applicable warranty period and coverage. The warranty shall be the manufacturer's standard commercial warranty, which shall conform to all the requirements of the contract.

Acceptance of the manufacturer's standard commercial warranty shall not minimize the rights of the Government under clauses in the contract, and in any conflict that arises between the terms and conditions of the contract and manufacturer's warranty, the terms and conditions of the contract shall take precedence. The warranty period shall commence from the date of acceptance.

6.2 **All Equipment is expected to be supported by the Supplier with a minimum of 2 years guarantee running spares (at no additional cost to DND, the purchaser,** to cater for incidental breakdowns at start-up/commissioning and along operational usage at early stages of equipment life without downtime, and as guarantee for quality *(Estimated no of hours 2,072 hours/year of equipment usage maximum).*

Annex A_ General Sec 3.0(2) _Teaching Requirements _Pneumatic.

PO 012 MAINTAIN SHIPBOARD ELECTRICAL SYSTEMS

EO 012.03 Maintain Field Devices

1. Performance. Maintain Field Devices

2. Standard. The trainee, adhering to equipment and personal safety precautions, shall independently maintain valves:

   a. Maintain Field Devices, to include:

      (1) Investigating/troubleshooting; and
      (2) Identifying component faults.

   b. Repairing Field Devices, to include:

      (1) Gathering resources;
      (2) Disassembling components;
      (3) Repairing components; and
      (4) Assembling components.

   c. In order to troubleshoot the Pneumatic Trainer when faults occur from the systems function, the Instructor will install faulty/defective components into system developed and provided by Contractor. The Trainer must have the capability to be fitted with faulty/defective componentry for all pneumatically operated components, electrically operated valves, and electrically operated sensors.

3. Instructional Methods.

   a. Interactive lecture; and
   b. Demonstration – performance.

PART III – ENABLING CHECK NOTES

Trainees will work **in pairs** at a Pneumatics Training Systems Trainer in order to troubleshoot the Pneumatic Trainer Systems when faults occur from system functions.

4. The Trainer must have the capability to be fitted with common faulty/defective componentry for all pneumatically operated components, electrically operated valves, and electrically operated sensors.

5. Predetermined faults **(developed and provided by the contractor)** will serve as training aids in order to support and facilitate the intent of the courseware. Faulty/defective

componentry shall be identified repaired, tested and placed back into Trainer operation in order to prove successful completion of repairs by trainees.

Note: Faulty/defective components developed and provided by Contractor.

6. Teaching Points.

Teaching Point	Sub Teaching Points	Instructional **Technique** (Time in min)			Method	Refs	Comments
		T	D	P			
TP1 Troubleshoot Pneumatic components, to include:							
a. Investigating faults, by: (1) Investigating proper system configuration.					D		
b. Identifying faults, by: (1) Electro pneumatic valve; (2) Inspecting pressure sensing temperature control valve; (3) Inspecting variable position pneumatic controlled valve; (4) Inspecting dual pressure relief valve; (5) Inspecting pressure/temperature relief valve; and (6) Inspecting regulator (7) Inspecting position sensors (sliders): see below for detail There are limitless examples for pneumatically operated position sensor usage. When a continuous readout of position is desired, a simple switch will not suffice, in this case there are more complicated positions sensors shall be used such as potentiometers. Potentiometers give voltage values which can relay a voltage drop over a range					IL/DP		Use of exploded schematic for basic pneumatic control system types to show internal make-up of flow animations.

of positions which will indicate the actual position of pneumatic slider valves for any given position.						
TP 2 Repair valves, to include:						
a. Gathering resources, by: (1) Adhering to proper lock-out/tag-out procedures; (2) Mustering tools required; (3) Mustering appropriate PPE; (4) Utilizing appropriate documentation; and (5) Reviewing all Safety and Environmental concerns with regards to pneumatics systems.				DP		
b. Disassembling components, by: (1) Disassembling pressure regulating valves; (2) Disassembling electro pneumatic valve; (3) Disassembling variable position pneumatic controlled valve; (4) Disassembling dual pressure relief valve; (5) Disassembling; pressure/temperature relief valve; and (6) Disassembling regulator.				DP		
c. Repairing components, by: (1) Repairing pressure regulating valves; (2) Repairing electro pneumatic valve; (3) Repairing HP air double seated valve; (4) Repairing pressure sensing temperature control valve; (5) Repairing variable position pneumatic controlled valve; (6) Repairing dual pressure relief valve; (7) Repairing pressure/temperature relief valve; and (8) Repairing regulator.						
d. Assembling components, by: (1) Assembling pressure regulating valves; (2) Assembling electro pneumatic valve;						

(3) Assembling HP air double seated valve; (4) Assembling pressure sensing temperature control valve; (5) Assembling variable position pneumatic controlled valve; (6) Assembling dual pressure relief valve; (7) Assembling regulator.						
TP 3 Test Valves, to include: **NOTE:** TP 3 is intended for clarification regarding trainee instruction in relation to the full intent of DND pneumatics training courseware.						
a. Verifying operation, by: (1) Testing pressure regulating valves; (2) Testing electro pneumatic valve; (3) Testing HP air double seated valve; (4) Testing pressure sensing temperature control valve; (5) Testing variable position pneumatic controlled valve; (6) Testing dual pressure relief valve; (7) Testing pressure/temperature relief valve; and (8) Testing regulator.				IL / DP	A53	
b. Returning to operation, by: (1) Ensuring system is fully re-assembled; (2) De-isolate the system components; (3) Ensuring tools and PPE are properly stowed; (4) Ensuring Lock-out/Tag-out is completed; and (5) Inform superiors that the system is fully restored.						

PO 004 Maintain Field Devices

EO 004.03 Troubleshoot Field Devices

4. Performance. Troubleshoot Field Devices

5. Standard. The trainee, adhering to equipment and personal safety precautions, shall independently maintain valves:

    c. Troubleshooting Field Devices, to include:

        (3) Investigating/troubleshooting; and
        (4) Identifying component faults.

    d. Repairing Field Devices, to include:

        (5) Gathering resources;
        (6) Disassembling components;
        (7) Repairing components; and
        (8) Assembling components.

6. Instructional Methods.

    c. Interactive lecture; and
    d. Demonstration – performance.

EO 003.04 Repairing Control System

7. Performance. Troubleshoot Control Systems

8. Standard. The trainee, adhering to equipment and personal safety precautions, shall independently maintain Control Systems:

    a. TP3: Maintain Programmable Logic Controllers, to include but not limited to:

        i. Uploading/downloading PLC programs (Ladder Logic);
        ii. Inspecting DIP switches settings.

    b. Testing PLC Control System, to include but not limited to:

        i. (Ladder Logic) System operations; and
        ii. Network programming.

9. Instructional Methods.

a. Interactive lecture; and
b. Demonstration – performance.

12. Troubleshooting programmable logic controllers (PLCs)

a. Applying a detailed knowledge of PLC controllers, to include but not limited to:

b. Basics fundamental understanding of network programming and system operation to include but limited to:
i. Programming flow charts;
ii. Programming symbology; and
iii. Ladder Logic projects/labs utilizing generic preprogrammed codes; Sequentially ordered from basic to more advanced projects:

NOTE: Each project shall be incrementally more complex as follows but not limited to:
iv. Filling and draining a tank;
v. Generic input/output signals;
vi. Basic operation of a generic slider valve
vii. 10/15 (min/max) projects/labs for each example mentioned above (iv/vi); **(Provided by Contractor).**

c. Functionality;

d. PLC machinery/component interface;

e. Process of a scan cycle.

PART III – ENABLING CHECK NOTES

13. Trainees will work **in pairs** at a Pneumatics Training Systems Trainer in order to troubleshoot the Pneumatic Trainer Systems when faults occur from system functions.

14. The Trainer must have the capability to be fitted with faulty/defective componentry for all pneumatically operated components, electrically operated valves, and electrically operated sensors.

15. Predetermined Ladder Logic faults **(developed and provided by the contractor)** will serve as training aids in order to support and facilitate the intent of the courseware. Common faulty/defective componentry shall be identified repaired, tested and placed back into Trainer operation in order to prove successful completion of repairs by trainees.

Note: Faulty/defective components developed and provided by Contractor in accordance with EO 003.04 Repairing Control System.

ANNEX B – BASIS OF PAYMENT

Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at the bid submission stage.

B1. Contract Price

ITEM	DESCRIPTION	Unit Price	Quantity	Extended Price
A	**Pneumatic Training Systems – HALIFAX -** in accordance with Annex A; including all associated costs; expressed as a per training unit cost.	$	6	$
B	**Pneumatic Training System - ESQUIMALT** in accordance with Annex A; including all associated costs. expressed as a per training unit cost.	$	6	$
C	Delivery DDP with Contractor unloading at Halifax, NS location as detailed in Annex A. For 6 Units	$	1	$
D	Delivery DDP with Contractor unloading at Esquimalt, BC location as detailed in Annex A. For 6 Units	$	1	$
E	The Contractor offers ___ (to be filled by the contracting officer) additional year (s) of Warranty with the same terms and conditions as SACC Manual Clause 2010A section 09 for a total of ___ (to be filled by the contracting officer) year (s) of Warranty.	$	1 min.	$
F	TOTAL CONTRACT PRICE: Sum of Extended Price for rows A + B + C + D + E=			$

DELIVERY OFFERED:

Halifax, NS: _____

Esquimalt, BC: _____

ANNEX C – FINANCIAL EVALUATION SHEET

Bidder's Instructions
The bidder must enter their pricing in the pricing schedule below. Bidders are requested to insert "$0.00" for any of the cost elements for which it does not intend to charge. If any cost element is left blank, Canada will insert "$0.00" for that element..

C.1 Pricing Schedule- Table 1

ITEM	DESCRIPTION	Unit Price	Quantity	Extended Price
A	**Pneumatic Training System** in accordance with Annex A; expressed as a per training unit cost.	$	12	$
B	The Contractor offers ___ (bidders are to fill the blank space as necessary) additional year (s) of Warranty with the same terms and conditions as SACC Manual Clause 2010A section 09 for a total of ___ (bidders are to fill the blank space as necessary) year (s) of Warranty.	$	1 min.	$
C	Cost of Setting up and testing units at Halifax Location, as per Annex A. Per unit cost value	$	6	$
D	Cost of Setting up and testing units at Esquimalt Location, as per Annex A.	$	6	$
E	Cost of Training DND staff at Halifax Location, as per Annex A, expressed as per unit cost.	$	6	$
F	Cost of Training DND staff at Esquimalt Location, as per Annex A, expressed as per unit cost.	$	6	$
G	Delivery DDP with Contractor unloading at destination, Halifax, NS location as detailed in Annex A. For 6 Units expressed as a single cost.	$	1	$
H	Delivery DDP with Contractor unloading at destination, Esquimalt, BC location as detailed in Annex A. For 6 Units expressed as a single cost.	$	1	$
I	TOTAL EVALUATED PRICE: Sum of Extended Price for rows A + B + C + D + E + F + G + H =			$

DELIVERY OFFERED:

Halifax, NS: _____

Esquimalt, BC: _____

C.2 Basis of Payment Calculations

The following will be the method used to determine values entered into Annex B – Basis of Payment by the Contracting Authority prior to Contract award:

Basis of payment table B1-Item A Unit Price

[Unit Price for Rows A + C +E] = Unit Price of Table B1-Item A

_____+ _____ + _____ = _____

Basis of payment table B1-Item B Unit Price

[Unit Price for Rows A + D + F] = Unit Price B1-Item B

_____ + _____ + _____ + = _____

Basis of payment table B1-Item C

[Extended Price for Row G] = B1-Item C

= _____

Basis of payment table B1-Item D

[Extended Price for Row H] = B1-Item D

= _____

Basis of payment table B1-Item E

[Extended Price for Row B] = B1-Item E

= _____

ANNEX D – TENDER DELIVERABLES

D1.1 Mandatory Tender Deliverables Checklist

Notwithstanding deliverable requirements specified anywhere else within this bid solicitation and its associated Requirement (Annex A), mandatory deliverables that must be submitted with the Bidder's tender to be deemed responsive, are summarized below.

The Bidder must submit a completed Annex E.

The following are mandatory and the Bidder's submission will be evaluated against the requirement as defined herein. The Bidder must be determined to be compliant on each item to be considered responsive. Bidders should include all substantiating information required to substantiate Annex E with their Technical Bid Submission.

No	Solicitation Part	Reference	Description	Document provided
1	Front page	Front page	Request for Proposal document part 1 page 1 completed and signed;	☐
2	3	Article 3.1 Section I	Technical Bid Submission	☐
3	3	Article 3.1 Section II, Annex C	Financial Bid Evaluation Sheet, completed	☐

D1.2 Supporting Deliverable Requirements

If the following information which supports the bid is not submitted with the Bid; it may be requested by the Contracting Authority, and it must be provided within 48 hours of the written request:

No	Solicitation Part	Reference	Description	Condition	Document provided
1	Part 6	6.9	Applicable Laws (if applicable)	48 hours of written request	☐
2	6	Articles 6.5.3, Annex D	Contractor's Representatives, table completed	48 hours of written request	☐
3	Annex F	3.1.5.2	Electronic Payment Instruments	48 hours of written request	☐
4	Annex G	5.1.1	Integrity Provisions – List of Names, completed	48 hours of written request	☐

D.1.3 Contractor's Representatives

The bidder is to complete table below and submit with their bid.

Contact for:	Name	Telephone	Email
Contracting issues			
Technical issues			
Invoicing issues			

ANNEX E - TECHNICAL EVALUATION CRITERIA

E-1 GENERAL

E-1.1 The general requirement for the Bidder's Technical Bid is stated at Part 3 of the Bid Solicitation.

E-1.2 The Evaluation Procedure is stated at Part 4 of the Bid Solicitation. The evaluation procedure indicates the composition of the evaluation team. This Annex gives the detailed Evaluation Criteria and Scoring Procedure.

E-1.3 In order that a complete technical evaluation of the Bid can be conducted, the Bid must be compliant with all of the bid deliverable requirements, which are summarized under Part 3 of the Bid Solicitation. It is the Bidder's responsibility to clearly demonstrate their capabilities and capacity to complete all of the Work and other requirements stated in the Bid Solicitation, the Statement of Work and other attachments. Bidders should describe their capabilities, how they will comply with mandatory requirements, and how they will deliver any other requested goods and/or services.

E-1.4 It is requested at Article 3.1 that the Bidder present topics in the order of these evaluation criteria and under the same headings and numbering scheme. Alternatively, the Bidder should include in their Technical Bid an applicability matrix wherein they identify, by page number, where each of the criteria is addressed in their Bid.

E2 MANDATORY TECHNICAL CRITERIA

E-2.1 The Mandatory Technical Criteria are detailed in **Table E-1 Mandatory Criteria.** Mandatory Criteria will be assigned either a Pass or Fail by the evaluation team. Any Bid which fails to comply with any Mandatory Criterion will be declared non-responsive. Some (or all) of the Mandatory Criteria may also be point rated, for their technical merit, in accordance with **Table E-2 – Point-Rated Technical Criteria.**

E-2.2 The Bidder should provide, as part of its Technical Proposal, all documents essential to clearly demonstrate compliance with each technical mandatory requirement, including, without limitation, photographs, maps, drawings, calculations, Original Equipment Manufacturer (OEM) specifications, documents, purchase orders (less cost data), job or Quality Control or Quality Assurance record sheets, personnel resumes, current trade certificates and, other such evidence.

E-2.3 The Bidder should provide, as part of its Technical Proposal, a Bidder filled out **Table – E-1 Mandatory Criteria** providing references by page and section, to their Technical Proposal where each requirement is addressed.

E-3 POINT-RATED TECHNICAL CRITERIA

E-3.1 The Point-Rated Technical Criteria are detailed in **Table E-2 – Point-Rated Technical Criteria.**

E-3.2 Point rating of Criteria, for their technical merit, will be conducted in accordance with Scoring Procedure given under Part 4 of the bid solicitation

E-3.3 The Bidder should provide, as part of its Technical Proposal, a Bidder filled out **Table E-2 – Point-Rated Technical Criteria** providing references by page and section, to their Technical Proposal where each requirement is addressed.

Table E-1 -- Mandatory Criteria

The Mandatory Technical Criteria are detailed herein. Mandatory Criteria will be assigned either a Pass or Fail by the evaluation team. Any Bid which fails to comply with any Mandatory Criterion will be declared non-responsive. Some (or all) of the Mandatory Criteria may also be point rated, for their technical merit, in accordance with Part 2 – Point-Rated Technical Criteria.

The Bidder should provide, as part of its Technical Proposal, all documents essential to clearly demonstrate compliance with each technical mandatory requirement, including, without limitation, photographs, maps, drawings, calculations, Original Equipment Manufacturer (OEM) specifications, documents, purchase orders (less cost data), job or Quality Control or Quality Assurance record sheets, personnel resumes, current trade certificates and, other such evidence.

SN	Elements for MANDATORY TECHNICAL CRITERIA	YES	NO	Remarks/Paged References In Accordance with Contractor Bid
1	The Bid includes a diagram/figure that demonstrates that the Pneumatic Trainers are 110/120 Volt, single Phase, 50/60 Hz input power.			
2	The Bid includes substantiating information which demonstrates how the Pneumatic Trainer will meet the Technical Requirements and relevant QSP references under: • Statement of Work Section 2.0 (Applicable documents), and • Teaching Requirements' ANNEX A of the General Requirements Section 3.0.			
3	The Bid includes substantiating information which demonstrates how the Pneumatic Trainer will meet the functional operating condition to simulate faults and test trainees for troubleshooting skills on faulty components.			
4	**DND Communication Security protocol requires each unit to act as a stand-alone system ONLY, meaning any computer device or network, including but not limited to personal computers (PC), laptops, tablet PC's or others, must not connect to any network, either through a wired, wireless, or remote access connection.** The Bid demonstrates that each unit explicitly acts as a stand-alone system only with a networking functionality or capability completely removed.			
5	The Bid includes substantiating information which demonstrates how the Pneumatic Trainer will perform simulation operations regarding faults identified in: ANNEX A of the General Requirements Section 3.0			

6	The Bid must include a copy of certification that the specified equipment meets the following certification as specified in Annex A 2.8 Electrical Requirement: • Canadian Standards Association (CSA) and/or; • NEMA standards. In the event that certification will be obtained during manufacturing, the bid must include substantiating information which demonstrates how certification will be obtained			
7	The Bid must include substantiating information in form of documentation, schematics, and drawings for which clearly indicates meeting the physical and technical specifications indicated in [3.0 (1)] Technical Specification of Requirements:			

Table E-2 – Point-Rated Technical Criteria

Point rating of Criteria, for their technical merit, will be conducted in accordance with Scoring Procedure given under Part 4 of the bid solicitation. The minimum mandatory required points referenced in Part 4.2 is 70 points, any bid which scores below the mandatory required points will be considered non-compliant.

SN	ELEMENT OF POINTS RATED CRITERIA	SCORE	Weighted Factor	Weighted Score	Remarks/Paged References in Accordance with Contractor Bid
1	All equipment units shall have an electric power cord length of Minimum: 3.048 m And maximum 4.572 m and shall meet ANSI/NEMA standards. Score: 3.048m =(70 pts) 4.572m =(100 pts)		0.10	/10	
2	The Bid demonstrates that the Bidder offers a minimum of a 2 year total warranty in accordance with General Conditions 2010A section 09. Contractor may offer more than a two year warranty Score: ➢ Equal to 2 Years (70 Points) ➢ Greater than 2 Years up to 3 Years (85 Points) ➢ Greater than 3 Years and less than 5 Years (90 Points) ➢ Equal to or greater than 5 Years (100 Points)		0.30	/30	
3	The Bid demonstrates that the bidder offers a minimum of 2 years running or operational spares based on an estimated 2,072 working hrs/yr at no additional cost to DND. Score: ➢ Equal to 2 Years (70 Points) ➢ Greater than 2 years but less than 3 Years (85 Points) ➢ Equal to or Greater than 3 Years (100 Points)		0.15	/15	

4	The Bid demonstrates that Bidder offers components with removable quick connect features. Score: ➢ Bidder indicates in a statement but provides no additional information (70 Points) ➢ Bidder provides substantiating information which clearly describes or demonstrates function of the quick connect feature (100 Points)		0.10	/10	
5	The Bid demonstrates that the Pneumatic Trainers offered includes a sturdy welded steel frame mounted on four heavy duty casters with brakes. Score: ➢ Bidder indicates in a statement but provides no additional substantiating information (70 Points) ➢ Bidder provides substantiating information which clearly describes or demonstrates this requirement (100 Points)		0.15	/15	

6	The Bid includes a Plan or Schedule that demonstrates that the required delivery date and other deliverables as specified for the requirements, showing dates (time-lines) for: (i) Pneumatic Trainers delivery; (ii) Installation of all the Equipment delivered; (iii) On-site training of DND instructors' to acquire the competence/capability to operate equipment. Score: ➢ Plan provided but with limited or information which does not clearly indicate fixed dates for (i) to (iii) =(20 pts), ➢ Plan provided and demonstrates meeting the minimum dates or up to 5 working days earlier for (i) to (iii) = (70 pts) ➢ Plan provided and demonstrates exceeding all dates by greater than 5 working days but less than 10 working days =(85 pts) ➢ Plan provided and demonstrates exceeding all dates by greater than 10 working days = (100 pts)		0.20	/20	
Total wt score= _____ + _____ + _____ + _____ + _____ + _____ 10 30 15 10 15 20				/100	Mandatory minimum allowed number of points is 70.

ANNEX F – ELECTRONIC PAYMENT INSTRUMENTS

ELECTRONIC PAYMENT INSTRUMENTS

As indicated in Part 3, clause 3.1.4, the Bidder must identify which electronic payment instruments they are willing to accept for payment of invoices.

The Bidder accepts any of the following Electronic Payment Instrument(s):

( ) Direct Deposit (Domestic and International);

( ) Electronic Data Interchange (EDI);

( ) Wire Transfer (International Only);

ANNEX G - INTEGRITY VERIFICATION FORM

(List of Names for integrity verification form starts on following page and consists of 2 pages)

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

List of names for integrity verification form

Requirements

Section 17 of the *Ineligibility and Suspension Policy* (the Policy) requires suppliers, regardless of their status under the Policy, to submit a list of names with their bid or offer. The required list differs depending on the bidder or offeror's organizational structure:

- Suppliers including those bidding as joint ventures, whether incorporated or not, must provide a complete list of the names of all current directors.
- Privately owned corporations must provide a list of the owners' names.
- Suppliers bidding as sole proprietors, including sole proprietors bidding as joint ventures, whether incorporated or not, must provide a complete list of the names of all owners.
- Suppliers that are a partnership do not need to provide a list of names.

Suppliers may use this form to provide the required list of names with their bid or offer submission. Failure to submit this information with a bid or offer, where required, will render a bid or offer non-responsive, or the supplier otherwise disqualified for award of a contract or real property agreement. Please refer to Information Bulletin: Required information to submit a bid or offer for additional details.

Supplier information

Supplier's legal name:
Organizational structure: ☐Corporate entity ☐Privately owned corporation ☐Sole proprietor
Supplier's address:
Supplier's procurement business number (optional):
Solicitation or transaction number:

Date of bid, offer submission or closing date of Invitation to Offer (yyyy-mm-dd):

List of names

Name	Title

Declaration

I, (name)_____, (position)_____, of (supplier's name)_____ declare that the information provided in this Form is, to the best of my knowledge and belief, true, accurate and complete. I am aware that failing to provide the list of names will render a bid or offer non-responsive, or I will be otherwise disqualified for award of a contract or real property agreement. I am aware that during the bid or offer evaluation stage, I must, within 10 working days, inform the contracting authority in writing of any changes affecting the list of names submitted. I am also aware that after contract award I must inform the Registrar of Ineligibility and Suspension within 10 working days of any changes to the list of names submitted.

Signature

Please include with your bid or offer.