

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
 Bid Receiving Public Works and Government
 Services Canada/Réception des soumissions Travaux
 publics et Services gouvernementaux Canada
 1713 Bedford Row
 Halifax, N.S./Halifax, (N.É.)
 B3J 1T3
 Bid Fax: (902) 496-5016

SOLICITATION AMENDMENT MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

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

Issuing Office - Bureau de distribution
 Atlantic Region Acquisitions/Région de l'Atlantique
 Acquisitions
 1713 Bedford Row
 Halifax, N.S./Halifax, (N.É.)
 B3J 3C9
 Nova Scot

Title - Sujet Manual Universal Milling Machine	
Solicitation No. - N° de l'invitation W355B-151469/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client W355B-15-1469	Date 2014-10-21
GETS Reference No. - N° de référence de SEAG PW-\$HAL-309-9351	
File No. - N° de dossier HAL-4-73098 (309)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-12-01	Time Zone Fuseau horaire Atlantic Standard Time AST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: MacNeil, Blaine A.	Buyer Id - Id de l'acheteur hal309
Telephone No. - N° de téléphone (902) 496-5180 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
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

Solicitation No. - N° de l'invitation

W355B-151469/A

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

W355B-15-1469

Amd. No. - N° de la modif.

001

File No. - N° du dossier

HAL-4-73098

Buyer ID - Id de l'acheteur

hal309

CCC No./N° CCC - FMS No/ N° VME

Amendment #1

Solicitation text added.

All other terms and conditions remain unchanged.

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There are no security provisions associated with the requirement. Escorts will be provided for the equipment to be delivered and for installation and training as required.

2. Requirement

The Department of National Defence at FMCS Cape Scott have a requirement for the supply, installation, start-up, and training of two (2) Manual Universal Milling Machines.

The full technical requirement is detailed in Annex A, Statement of Requirement.

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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

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 (2014-09-25) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2. Submission of Bids

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

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) 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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

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

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

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (2 hard copies)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

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 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](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). 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

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment (line item detail p. 2). The total amount of Applicable Taxes must be shown separately.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

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.

1.1 Technical Evaluation

The technical evaluation will assess whether all mandatory requirements are met using the information provided with a bid. Canada reserves the right, but is under no obligation to clarify any information or compliance with a mandatory requirement with a bidder.

1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

2. Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

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

The certifications provided by bidders to Canada are subject to verification by Canada at all times. 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 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

1.2 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" [list](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from [Human Resources and Skills Development Canada \(HRSDC\) - Labour's](#) website.

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

1. Security Requirement

There are no security provisions associated with the requirement. Escorts will be provided for the equipment to be delivered and for installation and training as required.

2. Requirement

The Contractor agrees to deliver the items and perform the work detailed in Annex A, Statement of Requirement.

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)(<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2014-09-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Delivery

4.1 Delivery Date

Delivery is mandatory by 31 March 2015. If the goods are not received by this date the contract will be terminated.

4.2 Delivery Terms

Goods must be delivered DDP Incoterms 2000 FMF Cape Scott HMC Dockyard Halifax, NS.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Blaine MacNeil
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Address: 1713 Bedford Row, Halifax, Nova Scotia, B3J 3C9

Telephone: 902-496-5180
Facsimile: 902-496-5016

E-mail address: blaine.macneil@pwgsc.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.

5.2 Project Authority (named upon award of contract)

The Project Authority for the Contract is:

Name:

Title:

Organization:

Address:

Telephone

The Project 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 Project Authority, however the Project 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.

5.3 Contractor's Representative

Name:

Organization:

Telephone:

Facsimile:

E-mail Address:

6. Payment

6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price at 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.

6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

7. Invoicing Instructions

The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

8. Certifications

8.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

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 HRSDC-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 HRSDC will constitute the Contractor in default as per the terms of the Contract.

9. Applicable Laws

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

10. Priority of Documents

If there is a discrepancy between the wording 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 general conditions 2010A (2014-09-25);
- (c) Annex A, Statement of Requirement;
- (d) Annex B, Requirement Check List;
- (e) the line item detail;
- (f) the Contractor's bid dated _____ and any applicable amendments

ANNEX A

STATEMENT OF REQUIREMENT

Fleet Maintenance Facility Cape Scott (FMFCS) have a requirement for the supply, installation, start-up and training of two (2) new Manual Universal Milling Machines suitable for machining ferrous, and non-ferrous metals, plastics and composites to required three dimensional shapes to precise tolerances for surface and underwater vessels; i.e. pump shafts key ways, pipe flange bolt circle, and armament parts. Each machine must be of the same make and model and from the same manufacturer. All specifications and accessories of the unit must be compatible with each unit supplied in this contract. Mandatory Specifications (All dimensions are in Metric units of measure, unless otherwise identified.)

Canada reserves the right to verify that all of the mandatory specifications are met prior to the award of contract. This verification shall include technical information from a submitted Machine Tool Manufacturers brochure. Technical information that cannot be verified from the submitted brochure must have an accompanying letter signed by a Professional Engineer employed by the Machine Tool Manufacture verifying the technical information.

Specifications found not to be meet this requirement will result in a non-compliant bid, and if found after contract award may result in termination of contract.

1.0) Machine Tool Specifications:

1.1.) Over-arm:

A.) Motorized over-arm ram:

1.) The arm slide shall have dovetails with adjustable gib, locking bolts; traverse position controlled by hand wheeled rack and pinion. Affixed to the arm slide will be the removable vertical machining head driven by the speed change gearbox with speed controls and motor,

2.) Horizontal travel: Minimum: 550mm,

B.) Vertical Head:

1.) Spindle type: ISO 40 complete with (c/w) manual draw-bar,

2.) Head swivel, left and right: Minimum: 45 degrees,

- 3.) Vertical spindle motor horsepower (HP): Minimum: 5,
- 4.) Speeds:
 - a.) Number of speed steps: Minimum: 12,
 - b.) Minimum: 42 Revolutions per Minute (RPM),
 - c.) Maximum: 1960 RPM,
- 5.) Manual quill feed:
 - a.) Travel: Minimum: 100mm,
 - b.) Type of control: hand wheel and manual feed lever,
- 6.) Horizontal spindle bearing supports: Minimum: 2,
- 7.) Material used in manufacture: Cast Iron, Minimum grade: Meehanite ASTM Number 40 or equivalent Cast Iron,
- 8.) Ram slide shall be induction hardened to a Rockwell C Scale rating of 48 to 50 to a minimum depth of 2mm, **Certification documentation required with bid,**

1.2.) Machine Table:

A.) Machine table:

- 1.) Size:
 - a.) Length: Minimum: 1500mm,
 - b.) Width: Minimum: 350mm,
 - c.) T-slots: Minimum: 5 X 16H7 size,
- 2.) Traverse:
 - a.) Longitudinal (X axis): Minimum: 1150mm,
 - b.) Cross (Y axis): Minimum: 400mm,
 - c.) Travel control:
 - 1.) Manual: 0.000 inch graduated dial hand wheel,
 - 2.) Power: Lever,
 - 3.) Feeds:

- a.) Machining, Variable: Minimum range: 10 to 1208mm,
- b.) Rapid traverse: Minimum: 1208mm,
- 4.) Table swivel: left and right: Minimum: 45 degrees,
- 5.) Material used in manufacture: Cast Iron, Minimum grade: Meehanite ASTM Number 40 or equivalent Cast Iron,
- 6.) Table slide shall be induction hardened to a Rockwell C Scale rating of 48 to 50 to a minimum depth of 2mm, **Certification documentation required with bid,**

1.3.) Knee:

A.) Travel:

- 1.) Vertical (Y axis): Minimum: 500mm,
- 2.) Full travel vertical distance to overarm: Minimum: 155mm,
- 3.) Manual: 0.000 inch graduated dial hand crank,
- 4.) Power: Lever,

B.) Feed

- 1.) Machining, Variable: Minimum range: 5 to 604mm,
- 2.) Rapid traverse: Minimum: 604mm,

C.) Drive motor HP for table and knee feed: Minimum: 2.5,

D.) Material used in manufacture: Cast Iron, Minimum grade: Meehanite ASTM Number 40 or equivalent Cast Iron,

E.) Knee slide shall be induction hardened to a Rockwell C Scale rating of 48 to 50 to a minimum depth of 2mm, **Certification documentation required with bid,**

F.) Hand pump machine slides lubrication system,

1.4.) Column and Base:

A.) The column and base shall be an integral casting housing the horizontal spindle, drive shafting, drive belts, drive motor, gearbox, mount for pendant machine controller, coolant system, reservoir, pump, piping and mount for the main electrical panel. The column and base casting shall be free standing and have hardened and ground ways to locate and provide sliding surfaces for the Overarm and Knee.

1.) Material used in manufacture: Cast Iron, Minimum grade: Meehanite ASTM Number 40 or equivalent Cast Iron,

2.) Column and base slides shall be induction hardened to a Rockwell C Scale rating of 48 to 50 to a minimum depth of 2mm,
Certification documentation required with bid,

B.) Horizontal Spindle:

1.) Spindle type: ISO 40 complete with (c/w) manual draw-bar,

2.) Milling arbor: one (1) inch diameter c/w spacers, bearing sleeves and arbor nut,

3.) Horsepower: Minimum: 7.5,

4.) Speeds:

a.) Number of speed steps: Minimum: 12,

b.) Minimum: 48 RPM,

c.) Maximum: 2160 RPM,

5.) Drive: V-belts, Minimum number: 4,

C.) Coolant pump system: Minimum HP: 1/8,

D.) Pendant control: The pendant control panel shall be on a swivel fitting affixed to the overhead pendant arm also with a swivel affixed to the machine column. This arrangement will allow the machine operator to be able to move the panel to any position in front of the machine. The control panel shall have the same full electrical control of machine operation as main electrical panel excluding the main disconnection switch,

2.0.) Accessories:

NOTE: All standard equipment and accessories required shall be completely compatible with each other and each Manual Universal Milling Machine specified herein.

All accessories, quantity: (qty.) one (1) unless otherwise designated.

2.1.) Longer machine table minimum: 1850 mm length,

2.2.) Motor brake on vertical and horizontal axis,

2.3.) AC auto feed motor for over-arm,

2.4.) Precision ball screw replacing lead screw feed on "X" axis,

2.5.) Precision ball screw replacing lead screw feed on "Y" axis,

2.6.) Compressed air draw bar for vertical spindle,

2.7.) Auto way lubrication unit,

2.8.) Chip tray,

2.9.) 3-Axis Digital Read Out (DRO) (installed c/w manuals), Scale accuracy: 20µm, Heidenhain model: ND 780, Scale length:

a.) "X" axis: 1240mm,

b.) "Y" axis: 470mm,

c.) "Z" axis: 620mm,

2.10.) Universal Dividing head, manufacturer: Yuasa®, model: 550-032 with the following:

a.) Center height: 133 mm,

b.) Dividing plates minimum number: three (3) to divide from 15 to 49 divisions,

c.) Change gear set c/w rack and bobbins, minimum number gears: 12 with 24 to 100 teeth,

d.) Bison universal 3 jaw chuck, 6 inch diameter, c/w reversible jaws, chuck wrench and mounting plate,

e.) Bison independent 4jaw chuck, 6 inch diameter, c/w reversible jaws, chuck wrench and mounting plate,

f.) Head stock driving plate,

g.) Head stock taper: Browne & Sharpe (BS) # 10, c/w 60 degree, center,

h.) Tailstock c/w 60 degree center, center height to match head stock,

i.) Operating handbook and test certificate,

2.11.) Horizontal/vertical rotary table, manufacturer: Yuasa®, model: 550-052 with the following:

a.) T-slotted table diameter: 300mm,

b.) Center height: 195mm,

c.) Dividing plates minimum number: two (2) to divide from 2 to 100 divisions,

d.) Rotary table center taper: Morse Taper (MT) # 4, c/w 60 degree, center,

f.) Tailstock c/w 60 degree center, center height to match head stock,

g.) Operating handbook and test certificate,

2.12.) Bison, fifteen (15) piece collect set with ISO 40 taper adapter and collects ranging from 1/8 to 1 inch diameter c/w collect wrench and case, Bison ER40, KAR # KR171-4140

2.13.) NMTB40, ISO 40 taper adapter c/w Jacobs® JT3 taper adapter,

2.14.) Llambrich® Drill Chuck, ball bearing type, 1/32 to 1/2 inch diameter capacity, c/w key, Llambrich® model CBB-16-J3,

2.15.) NMTB40, ISO 40 taper adapter with Morse Taper (MT) 2 receiver,

2.16.) NMTB40, ISO 40 taper adapter with MT 3 receiver,

2.17.) NMTB40, ISO 40 taper adapter with MT 4 receiver,

2.18.) NMTB40, ISO 40 taper adapter for 1 inch diameter shell end mill c/w bolt, washer and wrench,

2.19.) NMTB40, ISO 40 taper adapter for 1¼ inch diameter shell end mill c/w bolt, washer and wrench,

2.20.) NMTB40, ISO 40 taper adapter for 1½ inch diameter shell end mill c/w bolt, washer and wrench,

2.21.) KAR precision vise: jaws: width-6in., opening-8 inch, depth-1 7/8 inch, KAR #: KR 301-436 c/w vise handle,

2.22.) KAR Swivel base for KAR #: KR 301-436 precision vise, KAR #: KR 301-437, and

2.23.) Tool kit, required for daily operation of the machine.

3.0) Delivery, Installation and Commissioning:

Fleet Maintenance Facility Cape Scott (FMFCS) requires a "Turn Key" installation. All work is to be done during normal work week (Monday

through Friday) and business hours (8:00 hrs. to 16:00 hrs.). The following is a description of this service with FMFCS and the Contractor responsibilities:

3.1.) Fleet Maintenance Facility Cape Scott (FMFCS) responsibilities:

a.) FMFCS have the installation area cleared of all non-essential material,

b.) FMFCS will provide riggers, crane operator and outside crane (19,800 lb. capacity) using the equipment manufactures accepted lifting procedure. If the load weight exceeds the outside crane capacity, FMFCS will supply a mobile crane with the required lifting capacity, FMFCS will lift the machine from the delivery vehicle and move it to a temporary location outside the building and then into the building,

c.) FMFCS shall use an inside gantry crane (20,000 lb. capacity) and follow the manufactures accepted lifting procedure for movement of the equipment into a temporary location in Building D200,

d.) FMFCS will provide lift and moving from that temporary location to the machine's final location in the Building D200, Machining Services Shop, this will also include lifting and moving of the machine and moving back into the machine's final position after the contractor completes the necessary floor work (core drilling, placing machine anchors, running conduit and services);

3.2.) Contractors responsibilities:

NOTE: All journeypersons in the Industrial Electrician and in the Industrial Mechanic (Millwright) trades employed by the contractor to work on this installation of the equipment must have a current Certificate of Qualification (Red Seal) in their respective trades from the Nova Scotia Department of Labour and Advanced Education.

a.) Delivery to Building D200 Fleet Maintenance Facility Cape Scott (FMFCS), CFB Halifax, Nova Scotia B3K 5X5,

b.) A Hazard assessment and contractor health and safety plan must be submitted to Fleet Maintenance Facility Cape Scott (FMFCS) Project manager prior to work beginning,

c.) Give all notices, obtain all permits and approvals, and pay all necessary fees in order to carry out the specified work,

d.) The contractor shall be responsible for disposing of all waste materials and debris, generated by the contractor, this responsibility includes all shipping pallets, crate covers and crate contents (bracing, shipping insulation etc.),

e.) The installation shall include unpacking, delivery inspection, cleaning, levelling, all electrical connections etc. (this will require core drilling for electrical, compressed air etc. (all other services required by the machine) and securing the machine to shop floor with chemical anchors (contractor's responsibility to supply and install as per manufacturer's instructions c/w levelling pads and hold down clamps and studs/nuts). Supply and install electrical wiring to FMFCS specified 600 Volt, 3 Phase electrical control panel. The contractor shall supply, install and connect all necessary transformers, wiring, conduits, electrical control panel circuit breakers, accessory piping: compressed air, water lines etc. as required by the machine,

f.) Installation shall be as per Canadian Electrical Code (CEC),

g.) After the contractors and FMFCS final acceptance of the installation, start up and maintenance and operator training shall commence,

h.) Maintenance training must be provided for a minimum of one (1) day at our facility in FMFCS, Halifax, Nova Scotia. The dates of this service will be scheduled by DND in accordance with delivery.

1.) Operator training must be provided for a minimum of two (2) days per machine at our facility in FMFCS, Halifax, Nova Scotia. The dates of this service will be scheduled by DND in accordance with acceptance of the installation. This training is to be provided by the equipment manufactures trained technician, Field Service Representative (FSR), and

j.) Supply FMFCS with two (2) copies of operation, material and maintenance manuals. Contents of these binders shall contain at a minimum: equipment and material specifications, warranties, guarantees, calibration and commissioning documentation along with any copies of any permits and inspection certificates. The vendor shall also provide as-built, marked-up drawings on clean set of prints provided to the owner at total completion of the work. They must also supply copies of all drawings, calculations and certifications to FMFCS Industrial Engineering Manager or his/her designated representative.

4.0 Documentation Required:

4.1.) Manufacturers original hard copy equipment manuals containing:

- a.) Installation manual,
- b.) Operating manual,
- c.) Maintenance manual,

- d.) Parts list,
- e.) Electrical circuit diagrams,
- f.) Machine accuracies and test documentation,

This information is to be shipped to FMFCS Industrial Engineering Officer or his/her designated representative within 30 days after the acceptance of the contract to purchase. Photocopies will not be acceptable, quantity: two (2).

Note: In addition to 4.1.), if it is the manufacturer's normal procedure is to supply digital documentation as well, the following information must accompany the equipment:

4.2.) Digital documentation manual set on CD-ROM complete/with (c/w):

- a.) Installation manual,
- b.) Operating manual,
- c.) Maintenance manual,
- d.) Parts list,
- e.) Electrical circuit diagrams,

f.) A letter of permission to reprint manuals or partial sections from the supplied CD-ROMs must be sent to the FMFCS Industrial Engineering Officer or his/her designated representative. This letter shall be in the form of an email.

5.0.) Electrical Certification

5.1.) The equipment shall be certified by an acceptable Electrical Certification Organization. The following Certification Organizations are acceptable. The electrical control must bear a label from one of these organizations in order to be recognized as approved. Identify which Organization shall be used:

- a.) Canadian Standards Association (CSA),
- b.) QPS Evaluation Services
- c.) Intertek Testing Services,
- d.) Underwriters Laboratories of Canada (ULC),
- e.) Underwriters Laboratories Inc. (UL),

- f.) Met Laboratories Inc. (MET),
- g.) TUV Rheinland of North America,
- h.) Quality Auditing Institute (QAI),
- i.) TUV America Inc.
- j.) Nemko Canada Inc.
- k.) Curtis-Straus LLC
- l.) Labtest Certification
- m.) NSF International
- n.) Omni-Test Laboratories
- o.) FM Approvals
- p.) Entella Canada

NOTE: Labels from all Organizations above (with the exception of CSA and ULC), must be accompanied by a small "c" at the eight o'clock position or Canadian Standard number to indicate the product has been certified to the Canadian Standard.,

5.2.) Electrical equipment that is not certified by one of the above agencies can only be accepted if the equipment is "field" inspected under the Special Inspection Programs and labelled (complete with verification documentation). This inspection must take place before equipment delivery. Identify which Organization shall be used:

- a.) Canadian Standards Association (CSA)
- b.) QPS Evaluation Services
- c.) Electrical Safety Authority (ESA)
- d.) Quality Auditing Services (QAI)
- e.) Intertek Testing Services
- f.) MET Laboratories Inc. (MET)
- g.) TUV America Inc.
- h.) Underwriters Laboratories of Canada (ULC)

6.0 WARRANTY

The equipment shall be guaranteed to be free from manufacturing and operational defects for a period of twelve (12) months from the date it was set-to-work by the contractor's representative and accepted as operationally satisfactory by the FMFCS Industrial Engineering Manager or his/her designated representative. The installation work and materials shall be guaranteed for a period of twelve (12) months from the date it was set-to-work by the contractor's representative and accepted as operationally satisfactory by the FMFCS Industrial Engineering Manager or his/her designated representative. The contractor shall be responsible for the provision of labour, parts, and field service at their own expense during the term of the warranty period and shall make good all defects within ten (10) days of being informed by Industrial Engineering Manager or his/her designated representative that it is required. All other warranties over and above those specified service herein shall be considered valid.

ANNEX B

REQUIREMENT CHECK LIST

Fleet Maintenance Facility Cape Scott (FMFCS) have a requirement for the supply, installation, start-up and training of two (2) new Manual Universal Milling Machines suitable for machining ferrous, and non-ferrous metals, plastics and composites to required three dimensional shapes to precise tolerances for surface and underwater vessels; i.e. pump shafts key ways, pipe flange bolt circle, and armament parts. Each machine must be of the same make and model and from the same manufacturer. All specifications and accessories of the unit must be compatible with each unit supplied in this contract.

Mandatory Specifications (All dimensions are in Metric units of measure, unless otherwise identified.)

Canada reserves the right to verify that all of the mandatory specifications are met prior to the award of contract. This verification shall include technical information from a submitted Machine Tool Manufacturers brochure. **Technical information that cannot be verified from the submitted brochure must have an accompanying letter signed by a Professional Engineer employed by the Machine Tool Manufacturer verifying the technical information.**

Specifications found not to meet this requirement will result in a non-compliant bid, and if found after contract award may result in termination of contract.

State compliance Yes or No and provide technical information.

**Compliant
Yes/No**

1.0) Machine Tool Specifications:

1.1.) Over-arm:

A.) Motorized over-arm ram:

- 1.) The arm slide shall have dovetails with adjustable gib, locking bolts, traverse position controlled by hand wheeled rack and pinion. Affixed to the arm slide will be the removable vertical machining head driven by the speed change gearbox with speed controls and motor,

- 2.) Horizontal travel: Minimum: 550mm,

	Compliant Yes/No
B.) Vertical Head:	
1.) Spindle type: ISO 40 complete with (c/w) manual draw-bar,	_____
2.) Head swivel, left and right,: Minimum: 45 degrees,	_____
3.) Vertical spindle motor horsepower (HP): Minimum: 5,	_____
4.) Speeds:	
a.) Number of speed steps: Minimum: 12,	_____
b.) Minimum: 42 Revolutions per Minute (RPM),	_____
c.) Maximum: 1960 RPM,	_____
5.) Manual quill feed:	
a.) Travel: Minimum: 100mm,	_____
b.) Type of control: hand wheel and manual feed lever,	_____
6.) Horizontal spindle bearing supports: Minimum: 2,	_____
7.) Material used in manufacture: Cast Iron, Minimum grade: Meehanite ASTM Number 40 or equivalent Cast Iron,	_____
8.) Ram slide shall be induction hardened to a Rockwell C Scale rating of 48 to 50 to a minimum depth of 2mm, Certification documentation required with bid,	_____

1.2.) Machine Table:

A.) Machine table:	
1.) Size:	
a.) Length: Minimum: 1500mm,	_____

b.) Width: Minimum: 350mm, _____

c.)T-slots: Minimum: 5 X 16H7 size, _____

**Compliant
Yes/No**

2.) Traverse:

a.) Longitudinal (X axis): Minimum: 1150mm, _____

b.) Cross (Y axis): Minimum: 400mm, _____

c.)Travel control:

1.) Manual: 0.000 inch graduated dial hand wheel, _____

2.) Power: Lever, _____

3.) Feeds:

a.) Machining, Variable: Minimum range: 10 to 1208mm, _____

b.) Rapid traverse: Minimum: 1208mm, _____

4.) Table swivel: left and right: Minimum: 45 degrees, _____

5.) Material used in manufacture: Cast Iron, Minimum grade:
Meehanite ASTM Number 40 or equivalent Cast Iron, _____

6.) Table slide shall be induction hardened to a Rockwell
C Scale rating of 48 to 50 to a minimum depth of 2mm,
Certification documentation required with bid, _____

1.3.) Knee:

A.) Travel:

1.) Vertical (Y axis): Minimum: 500mm, _____

2.) Full travel vertical distance to overarm:

Minimum: 155mm, _____

3.) Manual: 0.000 inch graduated dial hand crank, _____

4.) Power: Lever, _____

**Compliant
Yes/No**

B.) Feed

1.) Machining, Variable: Minimum range: 5 to 604mm, _____

2.) Rapid traverse: Minimum: 604mm, _____

C.) Drive motor HP for table and knee feed: Minimum: 2.5, _____

D.) Material used in manufacture: Cast Iron, Minimum grade:
Meehanite ASTM Number 40 or equivalent Cast Iron, _____

E.) Knee slide shall be induction hardened to a Rockwell
C Scale rating of 48 to 50 to a minimum depth of 2mm,
Certification documentation required with bid, _____

F.) Hand pump machine slides lubrication system, _____

1.4.) Column and Base:

A.) The column and base shall be an integral casting housing the
horizontal spindle, drive shafting, drive belts, drive motor,
gearbox, mount for pendant machine controller, coolant system,
reservoir, pump, piping and mount for the main electrical panel.
The column and base casting shall be free standing and have
hardened and ground ways to locate and provide sliding
surfaces for the Overarm and Knee. _____

1.) Material used in manufacture: Cast Iron, Minimum
grade: Meehanite ASTM Number 40 or equivalent
Cast Iron, _____

2.) Column and base slides shall be induction hardened to a
Rockwell C Scale rating of 48 to 50 to a minimum depth

of 2mm, **Certification documentation required with bid,** _____

B.) Horizontal Spindle:

1.) Spindle type: ISO 40 complete with (c/w) manual
draw-bar, _____

**Compliant
Yes/No**

2.) Milling arbor: one (1) inch diameter c/w spacers, bearing
sleeves and arbor nut, _____

3.) Horsepower: Minimum: 7.5, _____

4.) Speeds:

a.) Number of speed steps: Minimum: 12, _____

b.) Minimum: 48 RPM, _____

c.) Maximum: 2160 RPM, _____

5.) Drive: V-belts, Minimum number: 4, _____

C.) Coolant pump system: Minimum HP: ½, _____

D.) Pendant control: The pendant control panel shall be on a
swivel fitting affixed to the overhead pendant arm also with
a swivel affixed to the machine column. This arrangement
will allow the machine operator to be able to move the panel to
any position in front of the machine. The control panel shall
have the same full electrical control of machine operation as
main electrical panel excluding the main disconnection switch, _____

2.0.) Accessories:

NOTE: All standard equipment and accessories required shall be completely compatible with
each other and each Manual Universal Milling Machine specified herein.

All accessories, quantity: (qty.) one (1) unless otherwise designated.

2.1.) Longer machine table...minimum: 1850 mm length , _____

2.2.) Motor brake on vertical and horizontal axis, _____

2.3.)	AC auto feed motor for over-arm,	_____
2.4.)	Precision ball screw replacing lead screw feed on "X" axis,	_____
2.5.)	Precision ball screw replacing lead screw feed on "Y" axis,	_____
2.6.)	Compressed air draw bar for vertical spindle,	_____
		Compliant
		Yes/No
2.7.)	Auto way lubrication unit,	_____
2.8.)	Chip tray,	_____
2.9.)	3-Axis Digital Read Out (DRO) (installed c/w manuals), Scale accuracy: 20μm, Heidenhain model: ND 780, Scale length:	
a.)	"X" axis: 1240mm,	_____
b.)	"Y" axis: 470mm,	_____
c.)	"Z" axis: 620mm,	_____
2.10.)	Universal Dividing head, manufacturer: Yuasa®, model: 550-032 with the following:	
a.)	Center height: 133 mm,	_____
b.)	Dividing plates minimum number: three (3) to divide from 15 to 49 divisions,	_____
c.)	Change gear set c/w rack and bobbins, minimum number gears: 12 with 24 to 100 teeth,	_____
d.)	Bison universal 3 jaw chuck, 6 inch diameter, c/w reversible jaws, chuck wrench and mounting plate,	_____
e.)	Bison independent 4jaw chuck, 6 inch diameter, c/w reversible jaws, chuck wrench and mounting plate,	_____
f.)	Head stock driving plate,	_____
g.)	Head stock taper: Browne & Sharpe (BS) # 10, c/w 60 degree, center,	_____
h.)	Tailstock c/w 60 degree center, center height to match head stock,	_____

i.) Operating handbook and test certificate, _____

**Compliant
Yes/No**

2.11.) Horizontal/vertical rotary table, manufacturer: Yuasa®, model: 550-052 with the following:

a.) T-slotted table diameter: 300mm, _____

b.) Center height: 195mm, _____

c.) Dividing plates minimum number: two (2) to divide from 2 to 100 divisions, _____

d.) Rotary table center taper: Morse Taper (MT) # 4, c/w 60 degree, center, _____

f.) Tailstock c/w 60 degree center, center height to match head stock, _____

g.) Operating handbook and test certificate, _____

2.12.) Bison, fifteen (15) piece collect set with ISO 40 taper adapter and collects ranging from 1/8 to 1 inch diameter c/w collect wrench and case, Bison ER40, KAR # KR171-4140 _____

2.13.) NMTB40, ISO 40 taper adapter c/w Jacobs® JT3 taper adapter, _____

2.14.) Llambrich® Drill Chuck, ball bearing type, 1/32 to 1/2 inch diameter capacity, c/w key, Llambrich® model CBB-16-J3, _____

2.15.) NMTB40, ISO 40 taper adapter with Morse Taper (MT) 2 receiver, _____

2.16.) NMTB40, ISO 40 taper adapter with MT 3 receiver, _____

2.17.) NMTB40, ISO 40 taper adapter with MT 4 receiver, _____

2.18.) NMTB40, ISO 40 taper adapter for 1 inch diameter shell end mill c/w bolt, washer and wrench, _____

2.19.) NMTB40, ISO 40 taper adapter for 1¼ inch diameter shell end mill
c/w bolt, washer and wrench, _____

2.20.) NMTB40, ISO 40 taper adapter for 1½ inch diameter shell end mill
c/w bolt, washer and wrench, _____

**Compliant
Yes/No**

2.21.) KAR precision vise: jaws: width-6in., opening-8 inch,
depth-1 7/8 inch, KAR #: KR 301-436 c/w vise handle, _____

2.22.) KAR Swivel base for KAR #: KR 301-436 precision vise, KAR #:
KR 301-437, and _____

2.23.) Tool kit, required for daily operation of the machine. _____

3.0) Delivery, Installation and Commissioning:

Fleet Maintenance Facility Cape Scott (FMFCS) requires a "Turn Key" installation. All work is to be done during normal work week (Monday through Friday) and business hours (8:00 hrs. to 16:00 hrs.). The following is a description of this service with FMFCS and the Contractor responsibilities:

3.1.) Fleet Maintenance Facility Cape Scott (FMFCS) responsibilities:

a.) FMFCS have the installation area cleared of all non-essential material,

b.) FMFCS will provide riggers, crane operator and outside crane (19,800 lb. capacity) using the equipment manufactures accepted lifting procedure. If the load weight exceeds the outside crane capacity, FMFCS will supply a mobile crane with the required lifting capacity, FMFCS will lift the machine from the delivery vehicle and move it to a temporary location outside the building and then into the building,

c.) FMFCS shall use an inside gantry crane (20,000 lb. capacity) and follow the manufactures accepted lifting procedure for movement of the equipment into a temporary location in Building D200,

d.) FMFCS will provide lift and moving from that temporary location to the machine's final location in the Building D200, Machining Services Shop, this will also include lifting and moving of the machine and moving back into the

machine's final position after the contractor completes the necessary floor work (core drilling, placing machine anchors, running conduit and services);

3.2.) Contractors responsibilities:

NOTE: All journeypersons in the Industrial Electrician and in the Industrial Mechanic (Millwright) trades employed by the contractor to work on this installation of the equipment must have a current Certificate of Qualification (Red Seal) in their respective trades from the Nova Scotia Department of Labour and Advanced Education.

	Compliant Yes/No
a.) Delivery to Building D200 Fleet Maintenance Facility Cape Scott (FMFCS), CFB Halifax, Nova Scotia B3K 5X5,	_____
b.) A Hazard assessment and contractor health and safety plan must be submitted to Fleet Maintenance Facility Cape Scott (FMFCS) Project manager prior to work beginning,	_____
c.) Give all notices, obtain all permits and approvals, and pay all necessary fees in order to carry out the specified work,	_____
d.) The contractor shall be responsible for disposing of all waste materials and debris, generated by the contractor, this responsibility includes all shipping pallets, crate covers and crate contents (bracing, shipping insulation etc.),	_____
e.) The installation shall include unpacking, delivery inspection, cleaning, levelling, all electrical connections etc. (this will require core drilling for electrical, compressed air etc. (all other services required by the machine) and securing the machine to shop floor with chemical anchors (contractor's responsibility to supply and install as per manufacturer's instructions c/w levelling pads and hold down clamps and studs/nuts). Supply and install electrical wiring to FMFCS specified 600 Volt, 3 Phase electrical control panel. The contractor shall supply, install and connect all necessary transformers, wiring, conduits, electrical control panel circuit breakers, accessory piping: compressed air, water lines etc. as required by the machine,	_____

- f.) Installation shall be as per Canadian Electrical Code (CEC), _____
- g.) After the contractors and FMFCS final acceptance of the installation, start up and maintenance and operator training shall commence, _____
- h.) Maintenance training must be provided for a minimum of one (1) day at our facility in FMFCS, Halifax, Nova Scotia. the dates of this service will be scheduled by DND in accordance with delivery, _____

**Compliant
Yes/No**

- 1.) Operator training must be provided for a minimum of two (2) days per machine at our facility in FMFCS, Halifax, Nova Scotia. The dates of this service will be scheduled by DND in accordance with acceptance of the installation. This training is to be provided by the equipment manufactures trained technician, Field Service Representative (FSR), and _____
- j.) Supply FMFCS with two (2) copies of operation, material and maintenance manuals. Contents of these binders shall contain at a minimum: equipment and material specifications. warranties and guarantees. Calibration and commissioning documentation. Copies of any permits and inspection certificates. Shall provide as-built, marked-up drawings on clean set of prints provided to the owner at total completion of the work. Supply copies of all drawings, calculations and certifications to FMFCS Industrial Engineering Manager or his/her designated representative. _____

4.0 Documentation Required:

4.1.) Manufacturers original hard copy equipment manuals containing:

- a.) Installation manual, _____
- b.) Operating manual, _____
- c.) Maintenance manual, _____
- d.) Parts list, _____

e.) Electrical circuit diagrams, _____

f.) Machine accuracies and test documentation, _____

This information is to be shipped to FMFCS Industrial Engineering Officer or his/her designated representative within 30 days after the acceptance of the contract to purchase. Photocopies will not be acceptable, quantity: two (2).

Note: In addition to 4.1.), if it is the manufacturers normal procedure is to supply digital documentation as well, the following information must accompany the equipment:

4.2.) Digital documentation manual set on CD-ROM complete/with (c/w):

a.) Installation manual, _____

b.) Operating manual, _____

c.) Maintenance manual, _____

d.) Parts list, _____

e.) Electrical circuit diagrams, _____

f.) A letter of permission to reprint manuals or partial sections from the supplied CD-ROMs must be sent to the FMFCS Industrial Engineering Officer or his/her designated representative. This letter shall be in the form of an email.

5.0.) Electrical Certification

5.1.) The equipment shall be certified by an acceptable Electrical Certification Organization. The following Certification Organizations are acceptable. The electrical control must bear a label from one of these organizations in order to be recognized as approved. Identify which Organization shall be used:

**Compliant
Yes/No**

a.) Canadian Standards Association (CSA), _____

b.) QPS Evaluation Services _____

c.) Intertek Testing Services,	_____
d.) Underwriters Laboratories of Canada (ULC),	_____
e.) Underwriters Laboratories Inc. (UL),	_____
f.) Met Laboratories Inc. (MET),	_____
g.) TUV Rheinland of North America,	_____
h.) Quality Auditing Institute (QAI),	_____
i.) TUV America Inc.	_____
	Compliant Yes/No
J.) Nemko Canada Inc.	_____
k.) Curtis-Straus LLC	_____
l.) Labtest Certification	_____
m.) NSF International	_____
n.) Omni-Test Laboratories	_____
o.) FM Approvals	_____
p.) Entella Canada	_____

NOTE: Labels from all Organizations above (with the exception of CSA and ULC), must be accompanied by a small "c" at the eight o'clock position or Canadian Standard number to indicate the product has been certified to the Canadian Standard.,

5.2.) Electrical equipment that is not certified by one of the above agencies can only be accepted if the equipment is "field" inspected under the Special Inspection Programs and labelled (complete with verification documentation). This inspection must take place before equipment delivery. Identify which Organization shall be used:

**Compliant
Yes/No**

a.) Canadian Standards Association (CSA)	_____
b.) QPS Evaluation Services	_____
c.) Electrical Safety Authority (ESA)	_____
d.) Quality Auditing Services (QAI)	_____
e.) Intertek Testing Services	_____
f.) MET Laboratories Inc. (MET)	_____
g.) TUV America Inc.	_____
	Compliant Yes/No
h.) Underwriters Laboratories of Canada (ULC)	_____

6.0 WARRANTY

The equipment shall be guaranteed to be free from manufacturing and operational defects for a period of twelve (12) months from the date it was set-to-work by the contractor's representative and accepted as operationally satisfactory by the FMFCS Industrial Engineering Manager or his/her designated representative. The installation work and materials shall be guaranteed for a period of twelve (12) months from the date it was set-to-work by the contractor's representative and accepted as operationally satisfactory by the FMFCS Industrial Engineering Manager or his/her designated representative. The contractor shall be responsible for the provision of labour, parts, and field service at their own expense during the term of the warranty period and shall make good all defects within ten (10) days of being informed by Industrial Engineering Manager or his/her designated representative that it is required. All other warranties over and above those specified service herein shall be considered valid. _____