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Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**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 HANDHELD BACKSCATTER X-RAY	
Solicitation No. - N° de l'invitation 47419-207933/A	Date 2019-08-02
Client Reference No. - N° de référence du client 000347933	
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-873-77549	
File No. - N° de dossier pv873.47419-207933	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-09-17	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Shannahan, Cassandra	Buyer Id - Id de l'acheteur pv873
Telephone No. - N° de téléphone (819) 775-1562 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: CANADA BORDER SERVICES AGENCY Sciences and Engineering 79 BENTLEY AVENUE Ottawa Ontario K2E6T7 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Scientific, Medical and Photographic Division / Division de
l'équipement scientifique, des produits photographiques et
pharmaceutiques
L'Esplanade Laurier
140 O'Connor Street,
East Tower, 7th Floor
Ottawa
Ontario
K1A 0S5

Delivery Required - Livraison exigée See Herein	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

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pv873
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BID SOLICITATION

HANDHELD BACKSCATTER X-RAY (HB X-RAY) IMAGING SYSTEM

FOR

CANADA BORDER SERVICES AGENCY (CBSA)

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PART 1 - GENERAL INFORMATION

1.1 Summary

The Canada Border Services Agency (CBSA) has a requirement for Handheld Backscatter X-Ray systems, hereafter referred to as the "HB X-Ray systems", for use at international airports and at CBSA-controlled land border operations at various locations across Canada.

The Contractor must provide thirteen HB X-Ray systems including delivery of all equipment, image analysis software, three concurrent user licenses for the image analysis software to be used on the HB X-Ray system and on CBSA computer systems, all training and training materials, a one-year warranty including maintenance and support services, and the Operator and Maintenance manuals, as detailed in **Annex A**. The Contractor must also provide the following goods and services, on an as and when requested basis, through the use of Task Authorizations:

- Additional Equipment Maintenance Training, as detailed herein, for up to ten years after contract award;
- material and replacement parts and consumables, for up to ten years after contract award; and
- Technical services, as described herein, for up to ten years after contract award.

The following options for procurement are included:

- An irrevocable option to purchase additional HB X-Ray systems, as detailed in **Annex A** until March 31, 2025;
- An irrevocable option to purchase additional warranty including maintenance and support services for each HB X-Ray system procured, as detailed herein, for three additional one-year periods after expiry of the initial one year all-inclusive warranty; and
- An irrevocable option to purchase additional User Licences for the Image Analysis Software

1.2 Volumetric Data

The following information has been provided to Bidders to assist them in preparing their bids. The inclusion of this information in this bid solicitation does not represent a commitment by Canada that Canada's future usage of the HB X-Ray system will be consistent with this information. It is provided purely for information purposes.

The initial purchase is for thirteen HB X-Ray systems. It is estimated that an additional 40 HB X-Ray systems over the next five years may be required.

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.

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1.4 Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP) and the North American Free Trade Agreement (NAFTA).

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](#) (2019-03-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 180 days

2.1.1 SACC Manual Clauses

[B1000T](#) (2014-06-26) Condition of Material

2.2 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.

Bid Receiving - PWGSC
Place du Portage, Phase III
Core 0B2
Gatineau, Quebec
For couriers: J8X 4A6
For regular mail: K1A 0S5

Note: For bidders choosing to submit using epost Connect for bids closing at the Bid Receiving Unit in the National Capital Region (NCR) the email address is:

tpsgc.dgareceptiondessomissions-abbidreceiving.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.

Telephone: (819) 420-7201
Fax No.: (819) 997-9776

The above address is for the sole purpose of bid submission. No other communications are to be forwarded to this address.

No bids should be sent directly to the PWGSC Contracting Authority.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 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 and distributed 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 Ontario, Canada.

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.

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion.

Suggestions that do not restrict the level of competition nor favor a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least 10 calendar days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

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 service has the capacity to receive multiple documents, up to 1GB per individual attachment.

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

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

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

- Section I: Technical Bid (one hard copy) and three soft copies on flash drive or portable hard-drive. All soft copies of documents must be in searchable .pdf format.
- Section II: Financial Bid (one hard copy) and one soft copy on flash drive or portable hard-drive.
- Section III: Certifications (one hard copy) and one soft copy on flash drive or portable hard-drive.

If there is a discrepancy between the wording of the soft copy 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 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 fiber 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 color printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

3.2 Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

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, Bidders must submit their Technical Bid in accordance with Attachment 1 to Part 4 of the Bid Solicitation - Technical Bid Submission Document.

In Attachment 1 to Part 4 of the Bid Solicitation - Technical Bid Submission Document: Section A - Mandatory Bid Submission Requirements, the Bidder must clearly detail how the proposed system meets each of the requirements directly referenced in **ANNEX A**.

In Attachment 1 to Part 4 of the Bid Solicitation - Technical Bid Submission Document: Section B – Mandatory Information for Validation of Bid, the Bidders must demonstrate a technical and organizational capacity to deliver a compliant system that meets the requirements of the bid solicitation. Regardless of the content of the information provided in Section B, if the Bidder is awarded a Contract, the work must be done in accordance with **ANNEX A**.

Large data files do not need to be printed for inclusion in the hard copy; however, they must be provided with the soft copy and accessible without the need for specialized software. All appended figures, tables, and supporting data should be referenced where indicated in Attachment 1 to Part 4 of the Bid Solicitation - Technical Bid Submission Document.

3.3 Section II: Financial Bid

3.3.1 Bidders must submit their financial bid in accordance with Attachment 4 to Part 4 of Bid Solicitation – Pricing Schedule. The total amount of applicable taxes must be shown separately.

3.3.2 Electronic Payment of Invoices – Bid

If the Bidder is willing to accept payment of invoices by Electronic Payment Instruments, Attachment 1 to Part 3 of Bid Solicitation - Electronic Payment Instruments must be completed to identify which methods are accepted.

If Attachment 1 to Part 3 of Bid Solicitation - 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.

3.3.3 Exchange Rate Fluctuation

SACC Manual clause [C3011T](#) (2013-11-06), Exchange Rate Fluctuation

3.4 Section III: Certifications

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

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ATTACHMENT 1 to PART 3 OF THE BID SOLICITATION ELECTRONIC PAYMENT INSTRUMENTS

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

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);
- Large Value Transfer System (LVTS) (Over \$25M)

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- 4.1.1 Bids will be assessed in accordance with the entire requirement of the bid solicitation. The evaluation will be conducted as described below. The fact that Canada has proceeded to a later step does not mean that Canada has conclusively determined that the Bidder has successfully passed any or all other steps. Canada reserves the right to conduct steps of the evaluation in parallel or in a different sequence than they appear in this bid solicitation.
- 4.1.2 An evaluation team composed of representatives of Canada will evaluate the bids.
- 4.1.3 Canada will proceed to a preliminary review of the technical bid to ensure that all mandatory information and data required in Attachment 1 to Part 4 of the Bid Solicitation - Technical Bid Submission Document has been provided. If any part of the mandatory requirements is not completed and submitted as required, the Contracting Authority will inform the Bidder and allow the Bidder to complete the requirement within a specified time frame. Failure to comply with the request of the Contracting Authority and meet the requirement within the specified time frame will render the bid non-responsive.
- 4.1.4 Where Canada has made a final determination that a bid has failed any individual mandatory requirement of the bid solicitation, Canada reserves the right to not proceed further in the evaluation of the bid and may deem the bid non-responsive.

4.2 Technical Evaluation

4.2.1 Mandatory Technical Evaluation

- (a) The Bidder must complete, in full, all the information and substantiating data required in Attachment 1 to Part 4.
- (b) The information and data submitted will be reviewed for compliance with the mandatory technical requirement identified in Attachment 1 to Part 4.

4.2.2 Point Rated Technical Evaluation

Only Bids meeting the mandatory technical evaluation of 4.2.1- Mandatory Technical Evaluation will proceed to the point rated technical evaluation.

Bids will be evaluated against the rated technical evaluation criteria set out in Attachment 2 to Part 4 of the Bid Solicitation - Technical Point Rating Evaluation Matrix.

The Bidder is requested to complete Attachment 2 to Part 4 of the Bid Solicitation - Technical Point Rating Evaluation Matrix. The evaluation will be based on the information submitted in Attachment 2 to Part 4 of the Bid Solicitation, and the substantiating information and data in Attachment 1 to Part 4.

4.2.3 Preliminary Ranking of Bidders

All responsive bids will be ranked based on the technical score assigned.

4.2.4 Demonstration – Data Validation Test (DVT)

Canada may, but will have no obligation to, require that the top two ranked Bidders as established under 4.2.4 above, perform a Data Validation Test (DVT) on a HB X-ray System to validate performance claims of compliance with the mandatory technical evaluation criteria as

specified under 4.2.1 above; and to confirm the preliminary technical scores allocated from the point rated technical evaluation as specified under 4.2.3 above. Data Validation Testing will be conducted at the CBSA Lab located at 79 Bentley Ave in Ottawa, between 10 and 25 calendar days after notification by the Contracting Authority. The tested system must be made available for between four and eight hours of testing to be conducted over the course of one day, by CBSA personnel. Representatives from both CBSA and PSPC will observe the testing.

If Canada determines that the HB X-ray System used during the DVT does not meet any specific criterion of the mandatory technical evaluation criteria, or does not meet the minimum threshold for point-rated mandatory criteria, the bid will be declared non-responsive and will be given no further consideration. In the event of any discrepancy between the preliminary scores allocated on the basis of the information submitted in the Bidder's Technical Point Rating Evaluation Matrix (attached as Attachment 2 to Part 4) and the DVT results, Canada will adjust the score downwards on any point rated technical evaluation criteria to reflect the demonstrated performance accordingly and arrive at the final point rated scores. If the Bidder's score is reduced as a result of the DVT, Canada will reassess the ranking of all Bidders. If both top two ranked Bidders' scores drop below the 3rd ranked Bidder, then the 3rd rank Bidder will be invited to the DVT.

If only one of the top two ranked Bidders' score drop below the 3rd ranked Bidder, then Canada will continue the evaluation with the one remaining top ranked bidder.

Canada will provide the DVT Test Plan to the top two ranked Bidders in advance of the DVT commencement, if Canada elects to perform a DVT.

Following the completion of the DVT, if conducted, Canada will review the DVT test results with the Bidder to ensure the demonstrated performance has been accurately documented.

Where a bid has been allocated scores for any of the Point Rated Technical Evaluation Criteria found in Attachment 2 to Part 4 of the Bid Solicitation - Technical Point Rating Evaluation Matrix, these criteria will be incorporated as requirements obligations in the Resulting Contract under ANNEX A - Statement of Work. After Contract award, the Bidder selected by Canada must perform the work in accordance with the Resulting Contract and the Statement of Work therein.

Canada will be responsible for travel and living expenses for CBSA and PSPC personnel attending the DVT. The Bidder will be responsible for all costs to furnish the HB X-ray System, test equipment, test fixtures and radiation survey instruments required to demonstrate systems compliance. The Bidder will also be responsible for all travel and living expenses for its personnel attending/performing the DVT.

Further to the DVT, a technical score will be allocated against the rated technical evaluation criteria set out in Attachment 2 to Part 4 of the Bid Solicitation – Technical Point Rating Matrix. The Pro-Rating process will be conducted as described at Attachment 3 to Part 4 of the bid solicitation.

4.3 Financial Evaluation

The financial evaluation will be conducted in accordance with Attachment 4 to Part 4 of the Bid Solicitation.

The price of the bid will be evaluated in Canadian dollars, Applicable taxes excluded, Delivered Duty Paid (DDP) (various locations) Incoterms® 2010, Canadian customs duties and excise taxes included.

Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes.

The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

4.4 Basis of Selection

4.4.1 To be declared responsive, a bid must:

- (a) Comply with all the requirements of the bid solicitation; and
- (b) Meet all the Mandatory Technical Evaluation criteria stated under Attachment 1 to Part 4 of the Bid Solicitation - Section A; and
- (c) Successfully pass the Data Validation Test, if the DVT is conducted.

4.4.2 Bids not meeting either (a), (b), or (c) (if the DVT is conducted) will be declared non-responsive.

4.4.3 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.

4.4.4 To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows:

$(\text{Points Received} / \text{Maximum number of points available}) \times 60 = \text{Technical Merit Score}$

The Maximum number of points available in the Point Rated Technical Evaluation is 35.

4.4.5 To establish the pricing score, each responsive bid will be prorated against the lowest evaluated Bid and the ratio of 40%. The responsive bid with the lowest Total Bid Price (TBP) is given full price points, while other bids receive a pro-rated score based on the ratio of the lowest evaluated bid to their total bid price, as follows:

Lowest Responsive TBP

$\frac{\text{Bidders TBP}}{\text{Lowest Responsive TBP}} \times 40 = \text{Pricing Score}$

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

4.4.7 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.

4.4.8 In the event that two or more responsive bids have resulted in the same highest combined rating, the responsive bid with the highest technical score will be recommended for award of a contract.

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](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.1.2 Additional Certifications Required with the Bid

Product Conformance

The Bidder certifies that all goods proposed conform, and will continue to conform throughout the period of the contract, to the requirement detailed under **ANNEX A**.

Bidder's authorized representative signature

Date

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) (<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](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed Attachment 1 to Part 5 of Bid Solicitation - [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Original Equipment Manufacturer (OEM) Certification

Any Bidder that is not the OEM for the equipment being proposed as part of its bid is required to submit the OEM's certification regarding the Bidder's authority to provide the said item, which must be signed by the OEM (not the Bidder). No Contract will be awarded to a Bidder who is not the OEM of the equipment being proposed to supply to Canada, unless the OEM certification has been provided to Canada.

Bidders are requested to use the OEM Certification Form, Attachment 2 of Part 5 included with the bid solicitation. Although all the contents of the OEM Certification Form are required, using the form itself to provide this information is not mandatory. For Bidders/OEMs who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided. Alterations to the statements in the form may result in the bid being declared non-responsive.

If the equipment being proposed by the Bidder originates with multiple OEMs, a separate OEM certification is required from each OEM.

For the purposes of this bid solicitation, OEM means the manufacturer of the equipment, as evidenced by the name appearing on the equipment or on all accompanying documentation.

ATTACHMENT 1 to PART 5 OF THE BID SOLICITATION

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\)-Labors'](#) website.

Date: _____ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity](#) (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Bidder is not a Joint Venture.

OR

- B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed ANNEX Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

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1000347933

Amd. No. - N° de la modif.
File No. - N° du dossier
pv873.47419-207933

Buyer ID - Id de l'acheteur
pv873
CCC No./N° CCC - FMS No./N° VME

ATTACHMENT 2 to PART 5 OF THE BID SOLICITATION

OEM Certification Form

This confirms that the original equipment manufacturer (OEM) identified below has authorized the Bidder named below to provide and maintain its products under any contract resulting from the bid solicitation identified below.

Name of OEM _____

Signature of authorized signatory of OEM _____

Print Name of authorized signatory of OEM _____

Print Title of authorized signatory of OEM _____

Address for authorized signatory of OEM _____

Telephone no. for authorized signatory of OEM _____

Fax no. for authorized signatory of OEM _____

Date signed _____

Solicitation Number _____

Name of Bidder _____

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ATTACHMENT 3 TO PART 5 OF THE BID SOLICITATION
COMPLETE LIST OF DIRECTORS
(As per Standard Instructions, Clauses and Conditions Part 2)

Name	Position/Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Financial Capability

SACC Manual clause [A9033T](#) (2012-07-16), Financial Capability

PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The Contractor must perform the work in accordance with the Statement of Work at **ANNEX A**.

7.2 Optional Goods and Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annexes A and B of the Contract under the same conditions and at the prices and/or rates stated in the Contract:

- (a) The Contractor grants to Canada the irrevocable option to purchase additional HB X-Ray systems;
- (b) The Contractor grants to Canada the irrevocable option to purchase additional warranty including maintenance and support services for each HB X-Ray system procured, as detailed herein, for three additional one-year periods after expiry of the initial one year all-inclusive warranty;
- (c) An irrevocable option to purchase additional User Licences for the Image Analysis Software.

The options may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment. The Contracting Authority may exercise the option for (a) and (c) above by 31 March 2025; and for (b) at any time before the expiry of the Contract by sending a written notice to the Contractor.

7.3 Task Authorization Process

A portion of the work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). This includes Equipment Maintenance Training, purchase of material and replacement parts and consumables and technical services. The work described in the TA must be in accordance with the scope of the Contract.

1. The CBSA Technical Authority will provide the Contractor with a description of the task using the "Task Authorization" form specified in ANNEX C.
2. The TA will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis and methods of payment as specified in the Contract.
3. The Contractor must provide the CBSA Technical Authority, within 14 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.
4. The Contractor must not commence work until a TA authorized by the Technical Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

7.4 Periodic Usage Reports - Contracts with Task Authorizations

The Contractor must compile and maintain records on its provision of services to the federal government under authorized Task Authorizations issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below or in ANNEX D. If some data is not available, the reason must be indicated. If services are not provided during a given period, the Contractor must still provide a "nil" report.

The data must be submitted on a quarterly basis to the Contracting Authority.

The quarterly periods are defined as follows:

- 1st quarter: April 1 to June 30;
- 2nd quarter: July 1 to September 30;
- 3rd quarter: October 1 to December 31; and
- 4th quarter: January 1 to March 31.

The data must be submitted to the Contracting Authority no later than 15 calendar days after the end of the reporting period.

Reporting Requirement- Details

A detailed and current record of all authorized tasks must be kept for each contract with a task authorization process. This record must contain:

For each authorized task:

- a) the authorized task number or task revision number(s);
- b) a title or a brief description of each authorized task;
- c) the total estimated cost specified in the authorized Task Authorization (TA) of each task, exclusive of Applicable Taxes;
- d) the total amount, exclusive of Applicable Taxes, expended to date against each authorized task;
- e) the start and completion date for each authorized task; and
- f) the active status of each authorized task, as applicable.

For all authorized tasks:

- i. the amount (exclusive of Applicable Taxes) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
- ii. the total amount, exclusive of Applicable Taxes, expended to date against all authorized TAs.

7.5 Task Authorization Limit

The Technical Authority may authorize individual task authorizations up to a limit of \$40,000.00, applicable taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Contracting Authority before issuance.

7.6 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-) (https://buyandsell.gc.ca/policy-and-

guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

7.6.1 General Conditions

2030 (2018-06-21), General Conditions – Higher Complexity - Goods, apply to and form part of the Contract.

7.6.2 Supplemental General Conditions

4001 (2015-04-01) Hardware Purchase, Lease and Maintenance

4003 (2010-08-16) Licensed Software, and

4004 (2013-04-25) Maintenance and Support Services for Licensed Software

apply to and form part of the Contract.

7.7 Security Requirements

There is no security requirement applicable to the Contract.

7.8 Terms of Contract

7.8.1 Period of the Contract

The period of the Contract is from date of Contract award to 31 March 2030 inclusive.

7.8.2 Delivery – Firm Requirement

The Contractor must deliver the initial purchase of thirteen (13) HB X-Ray systems with a one year Warranty including Work detailed in ANNEX A Section 8 - Maintenance and Support Services Requirements on or before 1 March 2020.

7.8.3 Delivery – Additional Equipment Maintenance Training

The Contractor must deliver Equipment Maintenance Training as detailed in ANNEX A, Section 2.3 -Training Requirements. The Work to be performed under the Contract will be purchased on an "as and when requested basis" using a TA and must be delivered within 60 calendar days of TA submission. The Work described in the TA must be in accordance with the scope of the Contract.

7.8.4 Delivery – Material and Replacement Parts

The Contractor must deliver Material and Replacement Parts as detailed in ANNEX A Section 8.7.6. The parts to be delivered under the Contract will be purchased on an "as and when requested basis" using a TA. The parts described in the TA must be in accordance with the scope of the Contract.

7.8.5 Delivery - Technical Services

The Contractor must deliver Technical Services as detailed in Annex B. The Work to be performed under the Contract will be purchased on an "as and when requested basis" using a TA and must be delivered within 21 working days of TA submission. The Work described in the TA must be in accordance with the scope of the Contract.

7.8.6 Delivery - Optional Goods and Services

Deliverables for additional HB X-Ray Systems, as detailed under **ANNEX A**, must be received within 3 months from date of the written notice.

7.8.7 Delivery Points

The Contractor must deliver the 13 initial HB X-Ray systems to the CBSA Lab at 79 Bentley Avenue in Ottawa, ON to conduct Site Acceptance Testing (SAT). Once SAT is complete, CBSA will deploy the systems to the final destinations. Delivery of optional HB X-Ray Systems could be conducted at any CBSA office in Canada. The exact location will be specified at time of amendment.

The Contractor must deliver all operator training at final destinations: Toronto, ON; Vancouver, BC; Calgary, AB; Edmonton, AB; Ottawa, ON; Winnipeg, MB; Montréal, QC, Halifax, NS.

7.9 Authorities

7.9.1 Contracting Authority

The Contracting Authority for the Contract is:

Cassandra Shannahan
Supply Specialist
Public Services and Procurement Canada - Acquisitions Branch
Commercial Consumer Products Directorate
140 O'Connor St., 7th Floor East, L'Esplanade Larurier, Ottawa, ON K1S 0R5
Telephone: 819-775-1562
E-mail address: cassandra.shannahan@tpsgc-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.

7.9.2 CBSA Technical Authority

The CBSA Technical Authority for the Contract is: *(to be filled in only at contract award)*

Name: _____

Title: _____

Canada Border Services Agency - Science and Engineering Directorate

Address: _____

Telephone: _____

E-mail address: _____

The CBSA 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 CBSA Technical Authority; however the CBSA 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.

7.9.3 Accounts Payment Contact *(to be filled in only at contract award)*

Name: _____
Title: _____
Canada Border Services Agency - _____
Address: _____

Telephone: _____
E-mail address: _____

7.9.4 Contractor's Representative *(to be completed by the bidder)*

The telephone number (with extension if applicable) of the person responsible for:

General enquiries	Delivery Follow-up
Name: _____	Name: _____
Tel. No. _____ ext.: _____	Tel. No. _____ ext.: _____
E-mail address: _____	E-mail address: _____

7.10 Basis of Payment

7.10.1 Firm Quantity: Handheld Backscatter (HB) X-Ray System

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract for the HB X-Ray systems as detailed under **ANNEX A**, the Contractor will be paid the firm, all-inclusive lot price, as specified under Annex C, in accordance with the Breakdown of Milestone Payments identified herein, Delivered Duty Paid (DDP)(Ottawa, ON), Incoterms 2010. Customs duties are included and Applicable Taxes extra.

7.10.2 Task Authorizations - Equipment Maintenance Training

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract for the Equipment Maintenance Training as detailed under **ANNEX A**, the Contractor will be paid the firm, all-inclusive lot prices, as specified under Annex C, DDP (various destinations), Incoterms 2010. Customs duties are included and Applicable Taxes extra.

7.10.3 Task Authorizations – Material and Replacement Parts

The material and replacement parts must be provided at the list price detailed in Annex E, less a discount of ____ *(to be inserted at Contract award)* percent. All prices for parts and material are DDP (destination) Incoterms 2010. Customs duties are included and Applicable Taxes are extra. Pricing may be refreshed annually, but the discount will remain firm for the duration of the Contract.

7.10.4 Task Authorizations - Technical Services

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract for Technical Services as detailed under **ANNEX B**, the Contractor will be paid the firm hourly rates, as specified under Annex C, DDP (various destinations), Incoterms 2010. Customs duties are included and Applicable Taxes extra.

The Contractor will be reimbursed for the authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for overhead or profit, in accordance with the meal and private vehicle allowances specified in Appendices B, C and D of the National Joint Council Travel Directive, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees". Canada will not pay the Contractor any incidental expense allowance for authorized travel.

All travel must have the prior authorization of the Technical Authority. All payments are subject to government audit.

7.10.5 Optional Goods and Services:

(a) Additional Purchase: Handheld Backscatter (HB) X-Ray System

If Canada exercises its option, and in consideration of the Contractor satisfactorily completing all of its obligations under the Contract for the HB X-Ray systems, as detailed under **ANNEX A**, the Contractor will be paid the firm, all-inclusive lot price, as specified under Annex C, in accordance with the Breakdown of Milestone Payments identified herein, DDP (Ottawa, ON) Incoterms 2010. Customs duties are included and Applicable Taxes extra.

(b) Additional Annual Warranty including Maintenance and Support Services

If Canada exercises its option, and in consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm lot price, per system, as specified under Annex C, for each additional year of Warranty including all Maintenance and Support Services, to commence after expiry of the initial one year Warranty including all Maintenance and Support Services for each system purchased in the initial delivery and all optional deliveries, DDP (various destinations), Incoterms 2010. Customs duties are included and Applicable Taxes is extra.

(c) Additional User Licence for Image Analysis Software

If Canada exercises its option, and in consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm unit price, as specified under **ANNEX C**, Article 2.3 for additional license coverage per user for the image analysis software, DDP Delivered Duty Paid, Incoterms 2010. Customs duties are included and Applicable Taxes is extra.

7.10.6 Limitation of Price

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.

7.10.7 SACC Manual Clauses

[B9031C](#) (2011-05-16) Canada's Obligation - Portion of the Work - Task Authorizations

[C2000C](#) (2007-11-30) Taxes - Foreign-Based Contractor

[H1001C](#) (2008-05-12) Multiple Payment

H3010C (2016-01-28) Milestone payment – Not subject to holdback

7.10.8 Electronic Payment of Invoices – Contract (to be identified only at contract award)

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M)

7.10.9 Breakdown of Milestones Payment of Invoice

(a) Schedule of Milestones for Initial Purchase

For the purchase of the Firm Quantity HB X-Ray System, the schedule of milestones for which payments will be made in accordance with the Contract is as stated below in Table 1:

Table 1: Schedule for milestone payments

Milestone No.	Deliverables	% of Firm Lot Price	Payment Due
1	HB X-Ray System Delivery	40% of the Initial Purchase Price.	Upon delivery of HB X-Ray system to the CBSA Lab (79 Bentley Avenue, Ottawa).
2	Site Acceptance Testing (SAT)	50% of the Initial Purchase Price.	Upon successful completion of Site Acceptance Testing, by the CBSA Technical Authority or designated representative.
3	Training Delivery	10 % of the Initial Purchase Price.	Upon completion of the Contractor provided Training at the final designated CBSA location.

(b) Schedule of Milestones for Optional Quantities, if exercised is given in Table 2 below:

Table 2: Schedule of Payment for Optional Quantities

Milestone No.	Deliverables	% of Firm Lot Price	Payment Due
1	HB X-Ray System Delivery	40% of the Purchase Price for each additional system.	Upon delivery of each HB X-Ray system to the designated CBSA location.
2	Site Acceptance Testing (SAT)	50% of the Purchase Price for each additional system.	Upon successful completion of Site Acceptance Testing, by the CBSA Technical Authority or designated representative.
3	Training Delivery	10 % of the Purchase Price for each additional system.	Upon completion of the Contractor provided Training at the final designated CBSA location.

7.11 Invoicing Instructions

7.11.1 Invoicing Instructions – Milestone Payments

The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the General Conditions 2030. Invoices cannot be submitted until all work identified in the invoice is completed.

Each invoice must be supported by a copy of the release document and any other documents as specified in the Contract.

7.11.2 Invoicing Instructions – Additional Annual Warranty including Maintenance and Support Services

Payments for additional annual warranty and maintenance and support services will be made following the end of each three months of the Option Year.

The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions 2030.

7.11.3 The Contractor must submit the invoices as follows:

- (a) The original invoice (in pdf format) along with a copy of the agreed upon maintenance report (in .xlsx format) must be forwarded to the following for certification and payment.

- (b) One electronic copy of the invoice and the quarterly maintenance report must be forwarded to the CBSA Technical Authority and Contracting Authority email address identified under the section entitled "Authorities" of the Contract.
- (c) One electronic copy of the invoice and the quarterly maintenance report must also be forwarded to the following CBSA email addresses:

1. _____

- (d) To facilitate the payment process, it is important that the Contractor quote the contract number on all the invoices, shipping bills and packing slips. Failure to do so will delay payment and the date used for calculating interest on overdue accounts.

7.12 Certifications and Additional Information

7.12.1 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.

7.12.2 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.

7.13 Applicable Laws

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

7.14 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 4001 (2015-04-01) Hardware Purchase, Lease and Maintenance, 4003 (2010-08-16) Licensed Software, and 4004 (2013-04-25) Maintenance and Support Services for Licensed Software);
- (c) the general conditions 2030 (2018-06-21) General Conditions – Higher Complexity – Goods;
- (d) ANNEX A, Statement of Work;
- (e) ANNEX B, Basis of Payment;
- (f) the signed Task Authorizations (including all annexes, if any); and
- (g) the Contractor's bid dated _____ (*insert date of bid*).

7.15 SACC Manual Clauses

- A9068C (2010-01-11) Government Site Regulations
- A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)
- A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)
- B1501C (2018-06-21) Electrical Equipment
- G1005C (2016-01-28) Insurance – No Specific Requirement

7.16 Shipping Instructions – Delivery at Destination

- (a) Goods must be consigned to the destination specified in the Contract and delivered: DDP (destination) Incoterms 2010 for shipments from a commercial contractor.
- (b) The Contractor will be responsible for all delivery charges, administration, costs and risk of

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transport and customs clearance, including the payment of customs duties and taxes.

ANNEX A STATEMENT OF WORK

1 General Requirements

1.1 Summary

- 1.1.1 The Contractor must provide handheld backscatter (HB) X-Ray systems including delivery of all equipment, imaging analysis software, three concurrent user licenses for the image analysis software to be used on the HB X-Ray system and on CBSA computer systems, all training and training materials, a one-year warranty including maintenance and support services, and the Operator and Maintenance manuals.
- 1.1.2 The Contractor must also provide additional Equipment Maintenance Training, as detailed herein, on an as and when requested basis through the use of Task Authorizations, for up to ten years after contract award.
- 1.1.3 The Contractor must also provide material and replacement parts and consumables, as detailed herein, on an as and when requested basis through the use of Task Authorizations, for up to 10 years after contract award.
- 1.1.4 The Contractor must also provide technical services, as detailed in ANNEX B, on an as and when requested basis, for up to ten years after contract award.

1.2 Manuals

- 1.2.1 Each system must be supplied with two hard copies and two soft copies of the Operator's manual (in searchable .pdf format), one in French and one in English).
- 1.2.2 The Operator's manual must contain all operational procedures in detail, with pictures of systems/ subsystems, warning lights, etc. explaining the functionality and usage for operating the HB X-Ray system.
- 1.2.3 Each system must be supplied with two hard copies and two soft copies (in searchable .pdf format), of the Maintenance manual in English.
- 1.2.4 The Maintenance manual must contain all details (with pictures/schematics) to address all diagnostic, replacement, adjustment and calibration aspects of the system, to enable CBSA to be the primary maintenance provider, post warranty, of its procured systems.
- 1.2.5 The Maintenance manual must include, at a minimum, sufficient information to conduct Level 1 and Level 2 Corrective Maintenance and complete Preventative Maintenance.
- 1.2.6 The Maintenance manual must contain a complete, detailed list and description of all error codes for the HB X-Ray system.
- 1.2.7 The Maintenance manual must contain fault tree diagrams of all warnings, errors, failure notifications, etc. that may present themselves at any time while using the system.

1.3 Factory Acceptance Testing (FAT)

- 1.3.1 The Contractor must submit a Factory Acceptance Test (FAT) Plan for the HB X-Ray system to the CBSA Technical Authority or designated representative, for review and comment within 15 business days of Contract award. At a minimum, the FAT must demonstrate:

- (a) Imaging performance;

- (b) Radiation safety and fail safes;
 - (c) Assembly and configuration; and
 - (d) Design robustness and Data management.
- 1.3.2 The Contractor must address all comments regarding the submitted FAT Plan, to the satisfaction of the CBSA Technical Authority or the designated representative, within ten business days of receipt.
- 1.3.3 The Contractor must submit all resulting FAT Documentation for review to the CBSA Technical Authority or the designated representative, within five business days of completion of the FAT.
- 1.3.4 The Contractor must address all comments regarding the submitted Documentation, to the satisfaction of the CBSA Technical Authority or the designated representative, within 10 business days of notification.
- 1.3.5 The Contractor must obtain written approval, from the CBSA Technical Authority or designated representative, before the FAT will be deemed complete.

1.4 Site Acceptance Testing (SAT)

- 1.4.1 The Contractor must submit a draft Site Acceptance Test (SAT) Plan for the HB X-Ray system to the CBSA Technical Authority or designated representative 30 business days prior to planned delivery for review and comment. At a minimum, the SAT must address:
- o Imaging performance;
 - o System robustness;
 - o Radiation safety and fail safes; and
 - o Operational readiness.
- 1.4.2 The finalized SAT plan will be developed by the CBSA in consultation with the Contractor.
- 1.4.3 The Contractor must install the system in preparation for the SAT within 10 business days after delivery of the system unless otherwise agreed upon between the Contractor and the CBSA Technical Authority.
- 1.4.4 Any discrepancy from the required performance or proposed componentry of the system will be noted and must be addressed to the satisfaction of CBSA Technical Authority prior to the final acceptance of the system.
- 1.4.5 The SAT will be used to satisfy regulatory requirements, validate performance claims, and confirm system compliance with the contractual requirements.

2 Training Requirements

2.1 Operator Training

- 2.1.1 The Contractor must provide on-site (at CBSA facility) Operator Training in English and/or French (upon request of the CBSA Technical Authority or designated representative) for up to twenty (20) trainees per system delivered.
- 2.1.2 Operator training must include, but not be limited to, the following:
- All operational aspects of the HB X-Ray System; and
 - Basic radiation safety

- 2.1.3 The class size must not exceed ten (10) trainees per training session.
- 2.1.4 The Contractor must deliver the Operator Training within 15 business days of the completion of the SAT (unless otherwise agreed upon with the CBSA Technical Authority).
- 2.1.5 The Contractor must take full responsibility for fixing the unit or replacing any component in the event of failure or malfunction during the operator training courses.

2.2 Equipment Maintenance Training

- 2.2.1 The Contractor must deliver Equipment Maintenance Training in English to a maximum of 6 CBSA technicians, at a mutually agreeable time and date within three months of delivery of the system(s) (unless otherwise agreed upon with the CBSA Technical Authority or the designated representative) for each year of system delivery.
- 2.2.2 Equipment Maintenance Training may be delivered at the Contractor's location in North America, at a location to be mutually agreed upon by the Contractor and the CBSA. The CBSA will be responsible for any travel and living expenses for its personnel attending training at the Contractor's facility.
- 2.2.3 Equipment Maintenance Training must enable CBSA to be the primary maintenance provider for its procured systems.
- 2.2.4 Equipment Maintenance Training must include, but not be limited to, the following:
 - o a review of basic radiation safety and operator functionality;
 - o assembly, disassembly, repair or replacement of modular components, adjustment and calibration aspects of the system; and
 - o diagnostics and troubleshooting of component/subsystems/software interconnections.
- 2.2.5 The Contractor must provide all specialized jigs, tools, diagnostic equipment, or ancillary equipment required for the Equipment Maintenance Training.

2.3 Additional Equipment Maintenance Training

- 2.3.1 Additional Equipment Maintenance Training, as described in the articles above, must be provided for up to 6 CBSA technicians per training session on an as-and-when-requested basis (through the use of task authorizations) for up to 5 years after contract award. CBSA will be responsible for any travel and living expenses for its personnel attending training at the Contractor's facility, if applicable.

2.4 Training Materials

- 2.4.1 The Contractor must provide editable soft copies of all training materials for system operation in English and French to CBSA for review and comment at least three months prior to the delivery of training (unless otherwise agreed to with the CBSA Technical Authority or designated representative).
- 2.4.2 Training materials must include all of the following:
 - o Presentation materials of all essential messaging;
 - o A Facilitator Guide providing clear instructions to the instructor with detailed description of each component on which training is to be performed, how the training would be performed as well as the content of the Participant Guide;
 - o A Participant Guide for the learner to follow along with the instruction; and

- Job Aids for quick reference to critical operational tasks including: deployment, start-up, stowing, moving, inspection imaging, shut-down, and troubleshooting; illustrated with images and examples.

- 2.4.3 The Contractor must address all comments regarding the submitted training materials to the satisfaction of the CBSA Technical Authority or designated representative.
- 2.4.4 The Contractor must provide the final versions of the training materials in both English and French within ten business days after all the comments have been addressed to the satisfaction of the CBSA Technical Authority or designated representative.
- 2.4.5 The Contractor must permit use of all training materials for its exclusive and unrestricted use in the development of internal training packages by CBSA.

2.5 Training Delivery

- 2.5.1 Training delivery must include:
 - Presentation of the content tailored to learner characteristics as appropriate (e.g.: prior knowledge, prior experience, education level, motivation, modality (online, in class, virtual classroom, etc.);
 - Application of the content as appropriate, with a focus on interaction (e.g. written activities discussion, hands-on activities, oral tests, role-plays, etc.); and
 - Constructive feedback of the content as appropriate (e.g. corrected quizzes with feedback, group discussions, personalised feedback forms, oral feedback, etc.).

2.6 Instructional Design

- 2.6.1 All training materials and instructional techniques must integrate overall and module specific objectives aligned with Bloom's Taxonomy meeting the S.M.A.R.T. (Specific, Measurable, Achievable, Relevant, and Time-Based) criteria.
- 2.6.2 Each learning objective must have an associated assessment which validates that the objective has been met.

3 Operational Requirements

3.1 X-Ray Imaging

- 3.1.1 The HB X-Ray system must be a backscatter X-Ray system.
- 3.1.2 The HB X-Ray system must allow operators to continuously scan objects for at least 15 seconds during a single scan.
- 3.1.3 The HB X-Ray system must automatically separate images of scans.
- 3.1.4 The HB X-Ray system must deliver, enable and support the download of the above-mentioned images into separate files for analysis.

3.2 X-Ray Beam-On Time

- 3.2.1 The HB X-Ray system must log the accumulated clock time during which X-Ray generation is on, on a daily basis.

3.3 Material Discrimination

- 3.3.1 The HB X-Ray system must differentiate between organic (very low Z), and inorganic/metals (intermediate Z) material types and identify these in different shades of gray. Organic materials must appear as white and inorganic materials must appear as black.

3.4 Number of Operators

- 3.4.1 The HB X-Ray system must provide continuous scanning operations with only one operator.

3.5 Viewing Display

- 3.5.1 The HB X-Ray system must have either a display built-into the system or a detachable display.

3.6 Battery and Battery Charger Requirements

- 3.6.1 The HB X-Ray system must derive power for scanning operations from a rechargeable lithium battery(ies) pack.
- 3.6.2 The HB X-Ray system battery must provide a minimum of two (2) hours of operation when fully charged.
- 3.6.3 The HB X-Ray system battery must provide a minimum of three (3) hours of standby when fully charged.
- 3.6.4 The HB X-Ray system must have a display to show the remaining battery charge.
- 3.6.5 Each HB X-Ray system must be supplied with at least three (3) spare battery pack (four (4) in total).
- 3.6.6 The charger for the HB X-Ray system batteries must operate from a standard 110-125 Volts Alternating Current (VAC).
- 3.6.7 The charger for the HB X-Ray system batteries must be chargeable from a standard 12V car outlet.
- 3.6.8 Each HB X-Ray system must be supplied with at least two (2) chargers and corresponding connector cables for standard wall and car outlets.

3.7 System Mobility

- 3.7.1 The HB X-Ray system must be a battery-powered handheld system.

3.8 System Carry Case

- 3.8.1 Each HB X-Ray system must be supplied with a ruggedized shipping case.
- 3.8.2 Each HB X-Ray system must be supplied with either a backpack or a shoulder bag to carry it in.

3.9 Fail-Safe Shutdown

- 3.9.1 The HB X-Ray system must include a fail-safe shutdown of all the system components in the case of a power loss.
- 3.9.2 The HB X-Ray system must automatically save images during an unexpected shut down.

3.10 Operating Environment

- 3.10.1 The HB X-Ray system must provide continuous operation from 0 °C to 40 °C.
- 3.10.2 The HB X-Ray system must provide continuous operation in 0%-90% (inclusive, non-condensing) relative humidity.

3.11 Image Analysis Tools

The image manipulation capability must include the use of a full suite of “easy-to-use” tools which can be applied / removed during image analysis and must include common pre-sets to facilitate use. Specifically, this capability must include (but not be restricted to):

- 3.11.1 Zoom Tool: System must have continuous electronic zoom, which allows enlargement and allows operators to zoom in and out of parts of the scanned image for analysis.
- 3.11.2 Contrast and Brightness Tool: System must deliver, enable and support modification of the contrast and brightness of the scanned image.
- 3.11.3 Image Enhancement/Sharpness Tool: System must deliver, enable and support modification of image sharpness and color scheme to emphasize or discriminate between different elements in the image.
- 3.11.4 Gray Scale Image: System must deliver, enable and support greyscale.
- 3.11.5 Negative: System must deliver, enable and support reversing dark and light areas on the image.

4 Design and Configuration Requirements

4.1 X-Ray Source and Anode Voltage

- 4.1.1 The HB X-Ray system must be equipped with an X-Ray source.
- 4.1.2 The HB X-Ray system must generate backscatter X-Ray images of target objects as they are imaged (i.e. in near-real time) for review by the operator.
- 4.1.3 The nominal anode operating voltage of the X-Ray generator must be greater than or equal to ≥ 120 kV.

4.2 Maximum Weight and Dimensions

- 4.2.1 The HB X-Ray system weight must not exceed 7 kg. All applicable weight measurements must be performed with the battery installed and all attachments.
- 4.2.2 The HB X-Ray system dimensions must not exceed the following values:
 - o Length: 40 cm
 - o Width: 40 cm
 - o Height: 40 cm

4.3 Identification of Controls and Markings

- 4.3.1 All HB X-Ray system controls (switches/buttons/levers) must be clearly marked in order to identify their functionality.

- 4.3.2 All HB X-Ray system controls markings must be of equal size and bilingual (French and English) , or be universal icons, eliminating the need for written words.
- 4.3.3 All HB X-Ray system markings must be permanently painted, etched or silk-screened onto surfaces

5 Radiation Safety Requirements

5.1 Regulatory Compliance Requirements

- 5.1.1 The HB X-Ray system must comply with the Radiation Emitting Devices Act (RED Act): <https://laws-lois.justice.gc.ca/eng/acts/R-1/index.html>

5.2 X-ray Activation Button and Warning Lights

- 5.2.1 The HB X-Ray system must immediately terminate X-ray production when X-ray Activation Button is depressed.
- 5.2.2 The HB X-Ray system must be equipped with Radiation Warning Lights to warn the operators that the system is in operation and actively generating X-ray radiation. Indicators must be solid state with LED lights.

5.3 Laser Alignment

- 5.3.1 The HB X-Ray system must be equipped with a simple battery operated laser alignment device that shows visually where the X-ray beam is being projected.

5.4 Auto-Logoff

- 5.4.1 The HB X-Ray system must be equipped with an auto Logoff procedure that locks the unit automatically when not in use after 10 minutes. The time delay must be adjustable and allow disabling by authorized personnel.

5.5 Labels and Markings

- 5.5.1 The HB X-Ray system must have a warning sign which indicates that hazardous ionizing radiation emissions are produced when the device is operating and prohibits unauthorized use.
- 5.5.2 The HB X-Ray system must have a radiation warning sign that reflects the x-ray tube logo shown in Appendix I of the Safety Code 34: <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/radiation/radiation-protection-safety-industrial-equipment-safety-code-34-health-canada-2003.html>
- 5.5.3 The HB X-Ray system must have an identification label which indicates the name and business address of the manufacturer, the model number, the serial number, the date of manufacture and the country of manufacture.

5.6 Radiation Dose to the Operator

- 5.6.1 The dose received by an operator of the HB X-Ray system must not exceed 5 µSv/h microsieverts per hour (instantaneous) to the chest (0.5 m offset), in accordance with the testing procedures outlined in ATTACHMENT 1 TO PART 4 OF THE BID SOLICITATION, Technical Bid Submission Document, M.2 Radiation Dose.

- 5.6.2 The HB X-ray system must be compliant with the effective dose limits for a person who is not a nuclear energy worker (member of general public), as defined by Radiation Protection Regulations (SOR/2000-203); for more details refer to : <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2000-203/page-2.html#h-14>

6 Imaging Performance Requirements

6.1 Penetration in Steel

- 6.1.1 The HB X-Ray system must enable identification of a target object behind a steel wall of thickness 1.8 mm, in accordance with the testing procedures outlined in ATTACHMENT 1 TO PART 4 OF THE BID SOLICITATION, Technical Bid Submission Document, M.1 Imaging Performance Test Results.

6.2 Penetration in Aluminum

- 6.2.1 The HB X-Ray system must enable identification of a target object behind an aluminum wall of thickness 15 mm, in accordance with the testing procedures outlined in ATTACHMENT 1 TO PART 4 OF THE BID SOLICITATION, Technical Bid Submission Document, M.1 Imaging Performance Test Results.

7 Data Management Requirements

7.1 Login Requirements

- 7.1.1 CBSA must be granted unrestricted "Administrator" rights to the system for the purpose of login.
- 7.1.2 CBSA must be provided with a list of all user account types and passwords for all HB X-Ray system computer systems, subsystems, servers and equipment.
- 7.1.3 A user login and password must be required at the start-up of the system and after 10 minutes of latency; the latency time must be configurable by the administrator.
- 7.1.4 The HB X-Ray system must employ three levels of system access for CBSA that must enable:
- Level 1: Operator – All operator functions for scanning targets.
 - Level 2: Supervisor – All Level 1 functions, plus access, manage stored scan data files, and access, create, edit add/remove user accounts functions.
 - Level 3: X-ray Technologist – All Level 2 functions, plus diagnostic, calibration, Data Management and Storage Capability functions, and other functionalities required to setup and repair the equipment.
- 7.1.5 The HB X-Ray system must have storage space with a capacity sufficient to store all data (including all images) from a minimum of 10,000 X-Ray images and associated data.
- 7.1.6 When the maximum capacity of the file storage area is approached, the operating system or system application must display a plain language error message, and remain functional, using a first-in, first-out overwrite mode.
- 7.1.7 The HB X-Ray system must support automatic data housekeeping of CBSA inspection data for a period (which must be configurable) of no less than 30 days.
- 7.1.8 The HB X-Ray system must automatically save scanned images in individual files, using date and time of scan as storage and retrieval file name parameters.

- 7.1.9 The HB X-Ray system must deliver, enable and support the viewing of images archived in a proprietary format and saving archived images in the following standard formats: TIFF, JPEG or BMP.
- 7.1.10 The HB X-Ray system must deliver, enable and support the disabling of automatic housekeeping of data at Level 2 (Supervisor) access, (i.e. permit users to clear and manage this data directly).
- 7.1.11 The HB X-Ray system must provide Supervisors (Level 2) access to the file directory in which scanned data is saved for the purpose of copying and clearing this data manually as required.
- 7.1.12 All networked systems must be IPv4 and IPv6 compatible.
- 7.1.13 The HB X-Ray system's application software must provide the choice to work in either French or English. The system must support the capability to toggle between languages (i.e., via a language icon on the operator screen) without loss of work.
- 7.1.14 The Contractor must supply all software without license restriction to enable complete rebuild of operating system, drivers and applications to factory defaults.
- 7.1.15 External devices must be automatically recognized by the operating system and made available for copying of files without the need for special computer configuration.

7.2 Image Analysis Software

- 7.2.1 Each HB X-Ray system must be accompanied with image analysis software and licensing to enable installation and use on stand-alone CBSA computers or virtualized for up to three concurrent users.
- 7.2.2 The software must deliver, enable and support the exporting of raw image data for processing or displaying on a remote workstation or the same system on which the original acquisition was captured.
- 7.2.3 The software must deliver, enable and support the scanning of images and data files by copying and saving them to standard storage devices having USB-3 connectivity. Such devices must be automatically recognized by the operating system and made available for the movement of files without the need of special computer configuration.
- 7.2.4 The HB X-Ray system must deliver, enable and support the exporting of scanned images, without distorting the aspect ratio, into TIFF, JPEG or BMP formats.
- 7.2.5 The Contractor must provide software upgrades to the CBSA to provide support for saving and manipulating images in the Unified X-Ray Imaging File Format, once the technology becomes available.
- 7.2.6 All software must be supplied without license restriction to enable complete rebuild of operating system, drivers, proprietary and any other applications required to restore to factory defaults.
- 7.2.7 All software must be provided to CBSA for installation on system hardware.
- 7.2.8 Copies of all software required to operate, diagnose and maintain the machine must be supplied to the CBSA at no additional cost.

7.3 System Reporting

- 7.3.1 The HB X-Ray system must allow the Operator to generate a date-time searchable usage report, including, but not limited to, the following data:

- 7.3.1.1 duration of X-rays emission; and
- 7.3.1.2 duration of system-on time;
- 7.3.2 The HB X-Ray system must deliver, enable and support retrieval of the system event log, which must include but not be limited to the following:
 - 7.3.2.1 the date-time of X-Rays on/off; and
 - 7.3.2.2 user log-on/off date-times.

8 Maintenance Service Requirements

8.1 Maintenance-Services Requirements

The Contractor must maintain the safety, operational capabilities and performance of the HB X-Ray System, including but not limited to: any-and-all Preventative Maintenance (PM), Corrective Maintenance (CM), Service Management, and Unplanned Technical Support.

8.2 Maintenance Service Experience

- 8.2.1 The Contractor must have a minimum of two years proven experience in the provision of maintenance services to other clients; this support should be on the same or similar Handheld Backscatter (HB) X-Ray system and having comparable requirements as defined herein.
- 8.2.2 The Contractor will be responsible for all time and materials pertaining to maintenance services during the warranty period.
- 8.2.3 The Contractor must not sub-contract Maintenance Service to third parties without written permission to do so from the CBSA Technical Authority or designated representative.

8.3 Maintenance Reference Terms

Term	Acronym	Definition
Availability	A	Availability (A) is defined herein as the percentage of all-inclusive clock time that the HB X-Ray System functional for operations.
CBSA Help Desk		Refers to the primary contact point within CBSA for tracking problem issues from initial report through to resolution.
Failure		A breakdown precluding expected performance of the system.
Full Functionality	FF	Full Functionality (FF) is defined here as the percentage of Available time that the HB X-Ray is free from any failures.
Inoperable Condition		A failure of the HB X-Ray System that precludes safe operational use by the CBSA.

Limited Functionality Condition		A failure of the HB X-Ray System that may hinder operational use by the CBSA but does not affect safety or require additional resources to accommodate.
Location		Refers to the sites where the HB X-Ray System is operated or stored when not in use.
Maintenance Time	MT	The all-inclusive clock time required for technical personnel to undertake activities (including preventative and corrective maintenance) which preclude or hinder normal operations.
Mean Time Between Failures	MTBF	The average all-inclusive clock time between states of Inoperable Condition.
Mean Time To Repair	MTTR	The average all-inclusive clock time, from initial notification of an Inoperable Condition (i.e., red status) until fully resolved or mitigated (i.e., green or yellow status).
Normal Working Hours		The hours between 8:00 a.m. until 5:00 p.m., local time, Monday through Friday, except on local provincial or federal legal holidays.
Contractor's Help Desk		Refers to the Contractor's primary contact point for recording and managing the resolution of problem issues with equipment.
Operator Error		Operator Error is an improper action or inaction, which may have occurred as a result of accident, miscalculation, distraction or variance from normal procedure. Inability to follow directions provided by the Contractor (e.g., during troubleshooting) for which formal training has not been provided is not deemed an error.
Shift Superintendent		Refers to the supervising CBSA staff member on-duty at a particular location at which HB X-Ray Systems are used.
Temporary Ticket Number	TTN	A transitory number issued by the Contractor's Help Desk for issue tracking purposes, later to be replaced by the CBSA's CAS Notification Number (CNN)
Trouble Reporter		Refers to the person who initiates a notification of possible failure of the HB X-Ray System.

8.4 Service Management

8.4.1 Maintenance and Support Services Coordination

- 8.4.1.1 The Contractor must coordinate among all stakeholders (including but not limited to: internal technical resources, external suppliers, etc.) in order to deliver any and all maintenance and support services.

8.4.1.2 The Contractor must manage an inventory of any replacement parts, tools and consumables necessary to conduct any and all preventative and corrective maintenance (regardless of cause).

8.4.1.3 The Contractor must manage all part orders, shipping and logistics pertaining to the delivery of maintenance and support services.

8.4.1.4 The Contractor must provide part order confirmation numbers (from Original Equipment Manufacturers), package delivery timelines and tracking details for all shipments to the CBSA's Technical Authority.

8.4.2 Maintenance Help Desk

The Contractor must maintain a 24/7 Help Desk for issuing and managing Problem Tickets and activities, in response to notification by phone call or email.

8.4.3 Problem Ticket Information and Updates

The Contractor must provide to the CBSA Help Desk, accurate updates to the Problem Ticket within 4 hours of completing of any maintenance activities; details should include:

8.4.3.1 Problem identification (e.g., faulty component, software bug, etc.)

8.4.3.2 Current operational impact (Inoperable Condition or Limited Functionality Condition)

8.4.3.3 Projected resolution date and time

8.4.3.4 Logistical information (location of the HB X-Ray and expected delivery/shipping times)

8.4.3.5 Technical notes (e.g., summary of activities, additional problems, next steps, etc.)

8.4.4 Maintenance-Service Reporting and Reconciliation

8.4.4.1 The Contractor must participate in a regular conference call (at a mutually agreeable time) to reconcile with the CBSA's Technical Authority, problem ticket information (e.g., the duration of inoperable time, issue causes and delays in repairs). Note: the frequency may be reduced after initial warranty period and the baseline system reliability is established.

8.4.4.2 The Contractor must provide an electronic copy of any and all Maintenance Reports and/or any other substantiating documentation requested in order to reconcile ticket information.

8.4.4.3 The Contractor must provide to the CBSA's Technical Authority (or designated representative) an electronic copy of the monthly Maintenance Reports to demonstrate levels of compliance with performance metrics defined herein

8.4.4.4 The Contractor must provide the CBSA's Technical Authority (or designated representative) with Maintenance Reports within the first 10 business days of the subsequent month.

8.4.4.5 The CBSA's Technical Authority (or designated representative) must provide validated performance metrics to the Contractor, for invoicing purposes, within 15 business days of the subsequent month and/or quarter; unless otherwise agreed upon in advance.

8.5 Preventative Maintenance (PM)

Preventative Maintenance is defined here as the care and service of equipment in order to ensure good operating condition, by systematic inspection, calibration, configuration and correction of incipient failures either before they occur or before they develop into major defects. It's primarily performed on equipment to lessen the likelihood of it failing.

Note: time spent on the preventative maintenance activities will be counted as inoperable condition in the Availability calculation.

- 8.5.1 The Contractor must provide a detailed description of the PM activities necessary to sustain operational performance of the HB X-Ray. PM activities should include: physical inspection, cleaning, lubricating of parts, system health diagnostics, and performance verification.
- 8.5.2 The Contractor must conduct Preventative Maintenance Inspections on the HB X-Ray every year (at a minimum).
- 8.5.3 The Contractor must conduct a Radiation Survey of the HB X-Ray every year (at a minimum) during the warranty period and following any change associated with the source/shielding configuration.
- 8.5.4 The Contractor must propose a schedule of preventative maintenance activities, for review and approval by the CBSA's Technical Authority, 30 calendar days in advance of each contract year.
- 8.5.5 The Contractor must perform preventative maintenance activities by a qualified Technician.
- 8.5.6 The Contractor must complete a preventative maintenance activities report and send an electronic copy to the CBSA's Technical Authority (or designated representative) by email.
- 8.5.7 The Contractor must rectify and update open tickets for corrective maintenance during preventative maintenance activities.
- 8.5.8 The Contractor must initiate the Problem Issue Reporting process (outlined in Section 8.6.1.1) for any issue(s) identified (whether resolved or not) during any preventative maintenance activities.

8.6 Corrective Maintenance

Corrective maintenance (CM) is defined as the repair and servicing on an unscheduled or remedial basis, following equipment degradation or failure, including parts repair and/or replacement of parts, such that the equipment is returned to its original factory condition.

The Contractor must provide escalating response services upon notification of trouble with the equipment.

8.6.1 Step 1 Problem Issue Reporting

- 8.6.1.1 The Contractor's Help Desk must accurately record the information provided by CBSA Operations in the Ticket Notification Template as outlined in ANNEX H .
- 8.6.1.2 The Contractor's Help Desk must issue a Temporary Ticket Number (TTN) for each maintenance request within 1 hour of initial notification.
- 8.6.1.3 The Contractor's Help Desk must notify the CBSA's Trouble Reporter and the CBSA's Help Desk of the Temporary Ticket Number (TTN) by email.

8.6.2 Step 2 Technical Phone Support

8.6.2.1 The Contractor must provide technical phone support within one (1) hour of TTN issuance normal working hours (in the time zone of the DT location).

8.6.2.2 The Contractor must troubleshoot and/or positively identify the issue, with the Trouble Reporter, local Superintendent on-duty or CBSA Technician.

8.6.2.3 The Contractor must provide troubleshooting by telephone that is limited to actions within the capabilities of a trained operator (i.e., not a trained technician), unless otherwise directed to do so by the CBSA's Technical Authority.

8.6.2.4 The Contractor must never expose the local trouble-shooter to potential hazards (including, but not limited to: electrical, mechanical or radiation hazards).

8.6.3 Step 3 Return Material Authorization (RMA)

8.6.3.1 If unable to resolve the issue remotely, the Contractor must issue a Return Material Authorization (RMA) to the Technical Authority and (or) CBSA Help Desk.

8.6.3.2 Once the RMA is obtained by the Technical Authority and (or) CBSA Help Desk, the equipment will be shipped for repair to the Contractor's Service Depot.

8.6.3.3 Upon receipt of the system at the Contractor's Service Depot, the Contractor must advise the Technical Authority and (or) CBSA Help Desk, by electronic mail, of its arrival.

8.6.3.4 The Contractor must repair the unit, confirm and document functionality and performance and then return it to the original location (unless otherwise directed by the Technical Authority and (or) CBSA Help Desk).

8.7 Performance Metrics

The following obligations contained in this sub-article 8.7 are material obligations of the Contractor. Failure to achieve them will result in a price reduction to take into account the liquidated damages caused by a failure to achieve these Performance Metrics, as such price reduction and liquidated damages are tabulated in accordance with the formula set out in ANNEX C BASIS OF PAYMENT.

For performance equations, refer to graphical representation of maintenance service metrics in Figure 1 below.

Maintenance and Reliability Metrics: Graphical Representation

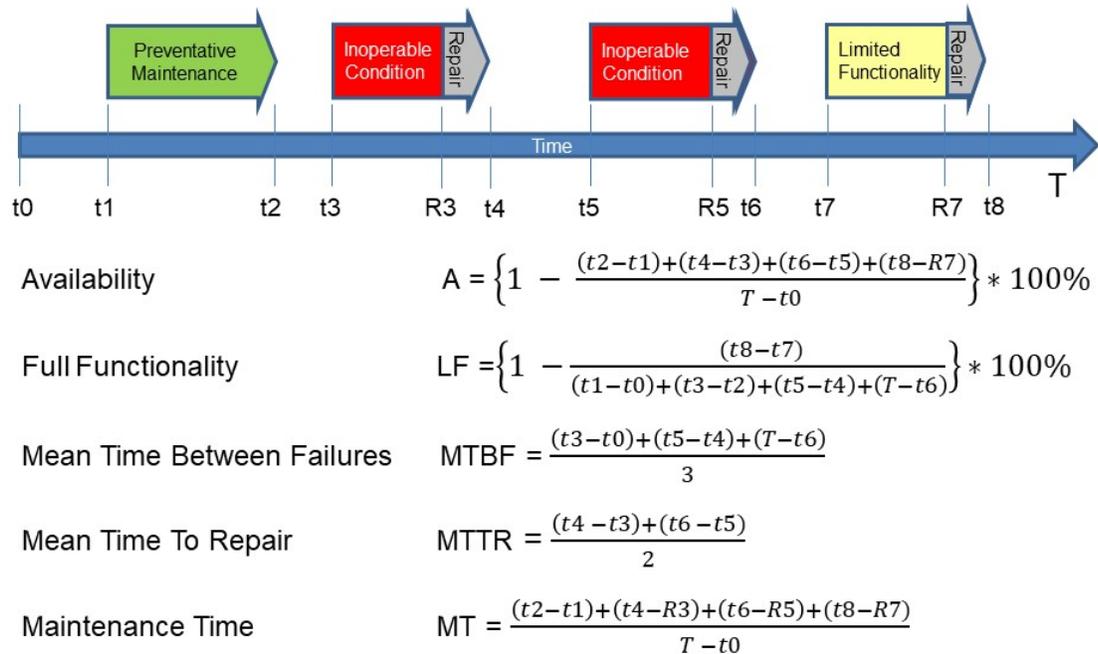


Figure 1: Maintenance and Reliability metrics: Graphical Representation

8.7.1 Availability (A)

8.7.1.1 The Contractor should maintain each HB X-Ray System with a mean Availability (A) for scanning operations of at least 90% of the time, measured over a rolling three (3) month time period.

8.7.1.2 The Contractor must maintain each HB X-Ray System with a Mean Availability (A) for scanning operations at or above 60% of the time, measured over a rolling three (3) month time period.

8.7.2 Full Functionality (FF)

The Contractor must maintain the HB X-Ray System with a mean Full Functionality (FF) at or above 66% of the time, measured over a rolling six (6) month time period.

8.7.3 Mean Time Between Failures (MTBF)

The Contractor must maintain the HB X-Ray System with a Mean Time Between Failures (MTBF) greater than or equal to seventy-two (72) hours (straight clock time), measured over a rolling three (3) month time period.

8.7.4 Mean Time To Repair (MTTR)

8.7.4.1 The Contractor should maintain the HB X-Ray System with a MTTR less than or equal to thirty-six (≤ 36) hours, measured over a rolling three (3) month time period.

8.7.4.2 The Contractor must maintain the HB X-Ray System with a MTTR less than or equal to ninety-six (≤ 96) hours, measured over a rolling three (3) month time period.

8.7.5 Maintenance Time (MT)

8.7.5.1 The Contractor must complete any corrective maintenance on HB X-Ray returned to its depot within 4 business days of its receipt.

8.7.6 Replacement Parts Availability

8.7.6.1 The Contractor must maintain a supply of critical replacement parts in Canada.

8.7.6.2 The Contractor must inform the CBSA in writing of any critical replacement parts which cannot be stored or readily sourced in Canada and the foreseeable timelines for their provision if required.

8.7.6.3 The Contractor must maintain a supply of non-critical replacement parts in North America.

8.7.6.4 The Contractor must maintain a list of suppliers capable of providing any custom or very low failure rate parts.

8.7.6.5 The Contractor must promptly replace any stores of any replacement parts consumed for maintenance activities. If the stores of any critical part are temporarily exhausted or insufficient to fulfill an order (i.e., multiple requirements for the same part at the same time), the Contractor must inform the CBSA in writing along with the timeline for obtaining a new part (e.g., ordering, manufacturing, shipping, delivery).

8.7.7 Shipping and Logistics

8.7.7.1 The Contractor must prepare and coordinate the shipment of HB X-Ray systems and/or any parts or supplies by priority courier (1- day service in Canada, 2-day service US) unless otherwise specified by the CBSA's Technical Authority or Designated Representative.

8.7.7.2 The Contractor must ship HB X-Ray systems and/or any parts or supplies within 1 business day of a request therefore.

8.7.7.3 The Contractor must track and provide all details for shipments.

8.7.7.4 The Contractor must engage the services of a licensed customs broker to facilitate the clearing of critical replacement parts sent from outside Canada (<https://www.cbsa-asfc.gc.ca/services/cb-cd/cb-cd-eng.html>).

8.8 Unplanned Technical Support – As and When Requested

The Contractor must provide maintenance and support services on an “as and when requested” basis for requirements outside of the scope of those defined in the All-Inclusive Maintenance and Support Services section. This includes but is not limited to accident repairs, configuration changes, decommissioning, etc.

8.8.1 Step 1 – Unplanned Work Definition

8.8.1.1 The Contractor must submit a completed Unplanned Work Definition form (outlined as ANNEX E) in accordance with the Basis of Payment and defined Price List specified in the Contract, to the CBSA's Technical Authority within:

- (a) 5 business days for of receipt of a written request for minor corrective work (less than 8 hours of technical time).
- (b) 15 business days of receipt of a written request for major corrective work. Upon written request for, and approval by, the CBSA's Technical Authority, the Contractor may be granted an additional 15 calendar days to provide detailed costing for external labour and custom built parts only.

8.8.1.2 The Contractor must provide all quotes in accordance with the defined Materials Price List (outlined in ANNEX E MATERIAL AND REPLACEMENT PARTS LIST for parts and the Basis of Payment (as outlined in ANNEX C BASIS OF PAYMENT) for labour.

- (a) If parts are no longer available, the Contractor must provide costing for a suitable replacement at comparable costs.
- (b) The applicable warranties associated with replacement parts is the longer of 12 months or the duration of the original manufacturer's standard warranty (whichever is longer and to be provided with each replacement part), beginning from the accepted completion of the entire authorized work package.

8.8.1.3 In the event that parts are not on the Material Price List (outlined in ANNEX E), price for the part must be provided at the time of quotation, along with requested price justification.

The Contractor must provide, on Canada's request, one or more of the following price justification:

- (a) a current published price list indicating the percentage discount available to Canada; or
- (b) a copy of paid invoices for the like quality and quantity of the goods, services or both sold to other customers; or
- (c) a price breakdown showing the cost of direct labour, direct materials, purchased items, engineering and plant overheads, general and administrative overhead, transportation, etc., and profit; or
- (d) price or rate certifications; or
- (e) any other supporting documentation as requested by Canada.

8.8.1.4 The Contractor must present any options for rendering the unit operational in advance of the complete repairs (without compromising health and safety or impacting operational processes).

8.8.2 Step 2 – Completion of Maintenance and Support Services

8.8.2.1 The Contractor (or the dispatched Technician) must coordinate with the local CBSA representative, regarding the expected timeline and any access or resource requirements.

8.8.2.2 The Contractor must provide confirmation when parts have been ordered and delivery tracking details electronically.

8.8.2.3 The Contractor must initiate repairs as specified in the individual call-ups.

8.8.2.4 The Contractor must advise the CBSA's Technical Authority upon becoming aware of any potential changes to the maintenance and support services schedule for joint review on mitigating operational impacts.

8.8.2.5 The Contractor must advise the CBSA's Technical Authority upon becoming aware of any potential variations to the estimated cost of authorized work, for joint review on mitigating financial impacts.

8.9 Other

8.9.1 Health and Safety Requirements

8.9.1.1 The Contractor must ensure all its employees (including sub-contractors) are trained on all relevant workplace health and safety and application specific legislation and regulations (such as Health Canada Code 29 or the Nuclear Safety and Control Act) and are duly qualified to maintain the equipment.

8.9.1.2 The Contractor must not bypass, disable, or alter the performance in any way, the safety and or control feature of the HB X-Ray System without explicit permission from the CBSA's Technical Authority.

8.9.2 Software and Firmware Updates/Changes

8.9.2.1 The Contractor must provide all software or firmware updates necessary to maintain the performance and security capabilities at or above the level of the initial contract. These updates must be provided for the entire warranty (and extended warranty, if exercised) period.

8.9.2.2 The Contractor must provide software and special tools required to diagnose, calibrate or otherwise maintain the HB X-Ray system. All special tools must be marked for identification.

8.9.2.3 The Contractor must provide a bootable image disk of all final system configurations for rebuilding computer and server hard drives.

8.9.2.4 The Contractor must supply all parts, calibration fixtures, software and consumables required for Warranty including Maintenance and Support Services. All parts used must be new and equivalent to the original.

8.9.2.5 The Contractor must obtain written approval prior to implementing any changes to HB X-Ray System hardware or software that may impact safety, operations and/or performance for approval by the CBSA's Technical Authority prior to implementing.

8.9.3 Listed Maintenance Service Personnel

The Contractor must maintain and make available upon request by the Technical Authority a list of all employees or sub-contractors engaged in performing on-site maintenance services.

ANNEX B TECHNICAL SERVICES

The Contractor must provide technical services as and when requested via Task Authorization. These services include, but are not limited to, the following:

- Preventative maintenance not covered by warranty or for systems no longer under warranty; and
- Corrective maintenance (including all repair services) not covered under warranty or for systems not covered under warranty.

The Contractor must submit a completed Unplanned Work Definition form (ANNEX E) in accordance with the Basis of Payment and defined Price List specified in the Contract, to the CBSA's Technical Authority within 5 business days of receipt of written request.

The Contractor must provide all quotes in accordance with the defined Materials Price List detailed in ANNEX E, and Article 7.8.4 – Delivery – Material and Replacement Parts for parts and the Basis of Payment (as detailed in ANNEX C) for labour.

Services are to be provided by the following resources:

Technician:

- To perform all corrective maintenance, preventative maintenance, diagnostics, calibration, and performance verification; and
- To perform all software upgrades and patches.

Senior Technician:

- To provide subject matter expertise on troubleshooting complex issues that cannot be resolved by the Technician on-site (i.e., base code-level problems, problems not previously resolved with module replacements)
- To provide design and safety verifications

Program Manager

- To ensure that the quality of Technical Services offered by the Contractor meets contractual obligations and to the satisfaction of the CBSA Technical Authority or Designated Representative
- To coordinate Technical Services with the CBSA Technical Authority or Designated Representative
- To manage administrative elements of the Contract.

ANNEX C BASIS OF PAYMENT

Price is all inclusive of all components and consumables required to meet the mandatory requirements as specified in ANNEX A

1.0 Initial Purchase		Firm, all-inclusive Lot Price per class			
Thirteen (13) Handheld Backscatter X-Ray (HB X-Ray) systems for delivery to CBSA Ottawa, ON		Firm, All-inclusive Lot Price, per system			
2.0 Task Authorization Requirements ("as and when requested") 2.1 Additional Equipment Maintenance Training in accordance with ANNEX A Additional training sessions over a five-year period.		(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
At Contractor's Facility		\$ _____	\$ _____	\$ _____	\$ _____
2.2 Material and Replacement Parts For the purchase of material and replacement parts over a ten year period. Based on an estimated purchase of \$8,000 per year		Firm discount provided on list price			
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	_____ %	_____ %	_____ %	_____ %	_____ %
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	_____ %	_____ %	_____ %	_____ %	_____ %
2.3 Technical Services For the purchase of Technical Services, in accordance with ANNEX A and ANNEX B, over a five-year period.		Firm Hourly Rates for Technician			
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
		Firm Hourly Rates for Senior Technician			
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
		Firm Hourly Rates for Program Manager			
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

3.0 Optional Requirements, on an "as and when requested" basis		Firm, all-inclusive Lot Price per system				
	(Date of contract award to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)	
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
3.2 Option for Additional User Licenses for the Image Analysis software (as per ANNEX A)		Firm, all-inclusive Lot Price per license				
	(Date of contract award to 31 st March 2020)	(1 st April 2020 to 31 st March 2021)	(1 st April 2021 to 31 st March 2022)	(1 st April 2022 to 31 st March 2023)	(1 st April 2023 to 31 st March 2024)	(1 st April 2024 to 31 st March 2025)
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
3.3 Additional Annual Warranty and Maintenance Services	HB X-Ray systems Purchased prior to March 31, 2020	HB X-Ray system(s) Purchased between April 1, 2020-March 31, 2021	HB X-Ray system(s) Purchased between April 1, 2021-March 31, 2022	HB X-Ray system(s) Purchased between April 1, 2022-March 31, 2023	HB X-Ray system(s) Purchased between April 1, 2023-March 31, 2024	HB X-Ray system(s) Purchased between April 1, 2024-March 31, 2025
Additional years of Warranty and Maintenance Service to commence after expiry of the initial one year coverage period.						
Warranty including maintenance and support services coverage period						
(from date of contract award to 31 March 2021)	*Warranty					
(1 April 2021 to 31 March 2022)	\$ _____	*Warranty				
(1 April 2022 to 31 March 2023)	\$ _____	\$ _____	*Warranty			
(1 April 2023 to 31 March 2024)	\$ _____	\$ _____	\$ _____	*Warranty		
(1 April 2024 to 31 March 2025)	\$ _____	\$ _____	\$ _____	\$ _____	*Warranty	
(1 April 2025 to 31 March 2026)			\$ _____	\$ _____	\$ _____	*Warranty
(1 April 2026 to 31 March 2027)				\$ _____	\$ _____	\$ _____
(1 April 2027 to 31 March 2028)					\$ _____	\$ _____
(1 April 2028 to 31 March 2029)						\$ _____
*Represents the initial 1-year Warranty coverage included with each system purchased.						
Firm, All Inclusive Yearly Price per system						

4.0 Quarterly Payment Calculations

- Q1 (April 1st to June 30th)
- Q2 (July 1st to Sept. 30th)
- Q3 (Oct. 1st to Dec. 31st)
- Q4 (Jan. 1st to Mar. 31st)

1. The Quarterly Payment Amount shall be determined by dividing the amount shown in Table 3.0, section 3.2 divided by four.

2. If the system does not meet the maintenance service metrics defined in ANNEX A – STATEMENT OF WORK, sub-article 8.7, the Contractor will be paid a revised payment amount, in accordance with the following:

$$\text{Quarterly Payment Amount} = (\$ \text{ Quarterly Payment Amount}) \times (\text{A Score}) \times (\text{B Score})$$

Failure to meet the maintenance service metrics defined in this ANNEX and as set out in Sub Article 8.14 of ANNEX A will result in liquidated damages that will reduce the price payable, i.e. a reduced payment amount, in accordance with the following:

Table 1 – Availability (A) Scores

Measured Availability Quarterly (3 month closed)	A Score
90% ≤ X	1
80% ≤ X < 90%	0.9
70% ≤ X < 80%	0.8
*60% ≤ X < 70%	0.7

Table 2 – Mean time to repair (MTTR) - B Score

Mean Time To Repair (MTTR)	B Score
36 hrs ≥ X	1
48 hrs ≥ X ≥ 36 hrs	0.99
72 hrs ≥ X ≥ 48 hrs	0.98
96 hrs ≥ X ≥ 72 hrs	0.97

*The Measured Individual System Availability will be calculated to a precision of 2 decimal points.

ANNEX D TASK AUTHORIZATION FORM

Task Authorization (TA)			
Supplier's Name: Address:	Contract Number:		
	Fund Centre:		
Task Authorization Number: Amendment Number:	Date:		
New TA (if applicable)			
Total Estimated Cost of the Task (excluding taxes) before any revisions:	\$		
TA Revision (if applicable)			
TA Revision #:	Authorized Increase or Decrease (excluding GST/HST): \$		
Total Estimated Cost of the Task (excluding GST/HST) after this new revision:	\$		
Required Work (For completion by a project authority)			
<p>1. Description of the Work to Be Performed</p> <p>Statement of Work</p> <p>Description of Any Deliverables Required: (including the required format and media) Describe any reporting obligations and deadlines for submitting the reports as they apply to the resulting contract.</p>			
2. Period of Services	From:		To:
3. Work Location:			
4. Travel Requirement:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Specify:
5. Other Conditions/Restrains:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Specify:
6. Contract Security Requirements			
<input type="checkbox"/> No <input type="checkbox"/> Yes Refer to the Security Requirements Checklist (SRCL) ANNEX of the contract.			
<input type="checkbox"/> Reliability Status <input type="checkbox"/> Secret <input type="checkbox"/> Top Secret <input type="checkbox"/> Other			
7. Language Requirement			
<input type="checkbox"/> English and French <input type="checkbox"/> French <input type="checkbox"/> English			
Remarks:			

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ANNEX E MATERIAL AND REPLACEMENT PARTS LIST

(To be inserted at Contract award)

ANNEX F UNPLANNED WORK DEFINITION

Scope and Nature of work

[Provide brief summary of the scope of work necessary to return the unit to an agreed upon condition.

- *List any specific exclusions from work*

Type of work: [select all that apply]

Preventative (ad-hoc)

Corrective repairs

Quality

[Provide the following information (as applicable) pertaining to the work to be completed]:

- *List the principal tasks required to complete the work (including additional diagnostic visits)*
- *List expected parts to be replaced*
- *List sub-contractors to be engaged and the work to be completed thereby*
- *List any Expert Reach back required (i.e., other than local Technicians)*
- *List where the repairs will be completed*
- *List the verification standards/tests that will be used to confirm the work has been completed*
- *Identify any requirements for facilitation by the CBSA*

Schedule

Minor Corrective: Parts are in-stock or readily available for shipping, expertise is readily available and can be mobilized to undertake repairs promptly, and the repairs can be completed during a single visit.

[Provide an estimated start and end dates for work completion]

Major Corrective: Parts have long lead times and/or expertise is not available and/or corrective repairs require specialized facility and/or significant diagnostic work is required to define scope.

[For any work provide a Gant chart schedule of tasks and milestones]

Risks

The Contractor must identify tasks with a high risk of delay

The Contractor must identify any requirements for facilitation by the CBSA

Costs

The Contractor must provide a price breakdown of the work to be undertaken.

ANNEX G PERIODIC USAGE REPORT

Instructions for submission of Task Authorization (TA) usage data. The Contractor must e-mail the information identified below in an electronic spreadsheet in the format below, to the Contracting Authority identified herein.

cassandra.shannahan@pwgsc.gc.ca

The report must include as a minimum the following:

- Contract number for which the data is submitted;
- Total dollar value of all TAs to date;
- Total dollar value of all TAs during reporting period;
- The start date and end date of the reporting period;
- Total number of all TAs during reporting period;
- Total number of all TAs to date;
- TA number
- Item description;
- Quantity ordered, Unit price; and
- Date of delivery / Value of order.

CONTRACT #			
Total Dollar Value of all TAs to date (\$)	Total Dollar Value of all TAs during reporting period (\$)	Start Reporting Period (DD/MM/YYYY)	End Reporting Period (DD/MM/YYYY)
Total Number of all TAs during reporting period		Total Number of all TAs to date	
TA Number	Item Description	Firm Unit Price, Quantity Ordered	Date of Delivery / Value of Order (not including GST/HST, if applicable)

ANNEX H TICKET NOTIFICATION TEMPLATE

TICKET NOTIFICATION TEMPLATE	
Problem Reporter Contact Name	
Callback Number	
Email address (Outlook ID)	
Contractor's Temporary Ticket Number	
Provide 24/7 on Duty (Superintendent) Contact Name & Number	
Equipment information	
Equipment Serial Number	
Point Of Entry/Location	
Malfunction Information	
Date Of Malfunction : (DD/MM/YYYY)	
Local Time of Malfunction : (HH :MM)	
Status Of Equipment: RED – INOPERABLE YELLOW – OPERATIONAL WITH LIMITED FUNCIONALITY	
Description Of Malfunction:	
Other Relevant Information :	

ATTACHMENT 1 TO PART 4 OF THE BID SOLICITATION

Technical Bid Submission Document

All requested information should be presented in the respective sections of this Attachment, or referenced and appended thereto.

Large data files do not need to be printed for inclusion in the hard copy; however, they must be provided with the soft copy and accessible without the need for specialized software. All appended figures, tables, and supporting data should be referenced where indicated in this attachment.

In Section A of this attachment Bidders should clearly detail how the proposed HB X-Ray system meets each of the directly referenced requirements of ANNEX A. The information will be used to evaluate compliance with the referenced mandatory technical requirements.

In Section B of this attachment Bidders should demonstrate a technical and organizational capacity to deliver a compliant system that meets the requirements of the bid solicitation. Regardless of the content of the information provided in Section B, if the Bidder is awarded a Contract, work must be done in accordance with ANNEX A.

SECTION A. INFORMATION FOR MANDATORY COMPLIANCE VERIFICATION

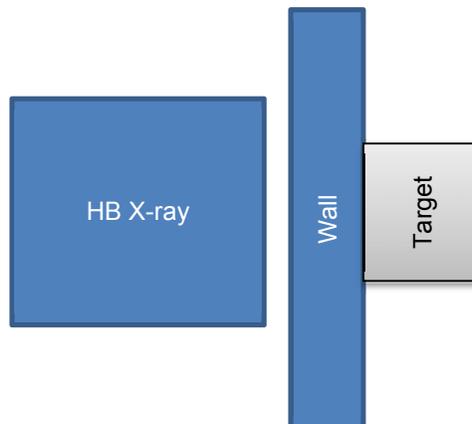
M.1. Imaging Performance Test Results

REFERENCE **ANNEX A**: Section 3.1 - X-Ray Imaging and
Section 6 - Imaging Performance Requirements (6.1 – 6.3)

The HB X-ray system must enable clearly display a target object, affixed to the rear side of a concealing wall (of defined material and dimensions), mounted with no mounted with nothing

- At least 75% of the target must be visible for positive identification
- For each positively identified target, the reference image must be provided in .tiff or .jpeg format

Target dimensions: 50 mm x 50 mm x 25 mm (Length, width, thickness)
Target Material: Polyvinyltoluene (or similar plastic material)
Wall Dimensions (minimum): 100 mm x 100 mm (Length, width)



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Wall Type	Wall Thickness	Target Visible (Y/N)	Reference Image (.tiff or .jpeg)
Aluminum	15 mm		
Aluminum	16 mm		
Aluminum	17 mm		
Aluminum	18 mm		
Aluminum	19 mm		
Aluminum	20 mm		
Aluminum	21 mm		
Aluminum	22 mm		
Aluminum	23 mm		
Aluminum	24 mm		
Steel	1.8 mm		
Steel	2.25 mm		
Steel	2.7 mm		
Steel	3.15 mm		
Steel	3.6 mm		

Make/Model Tested: _____

Date of Testing _____ Location of Testing: _____

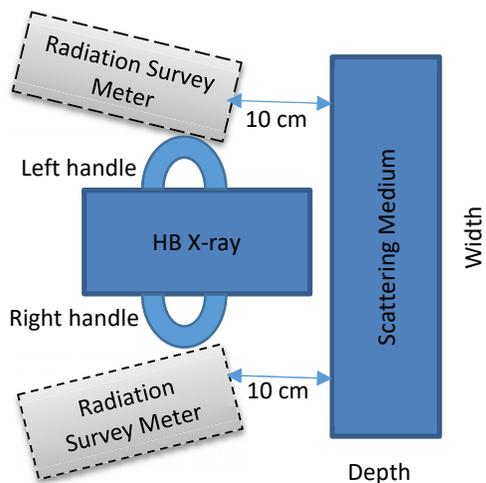
Additional details appended as: _____

M.2. Radiation Dose

REFERENCE: **ANNEX A:** Section 5.5 Radiation Dose to the Operator

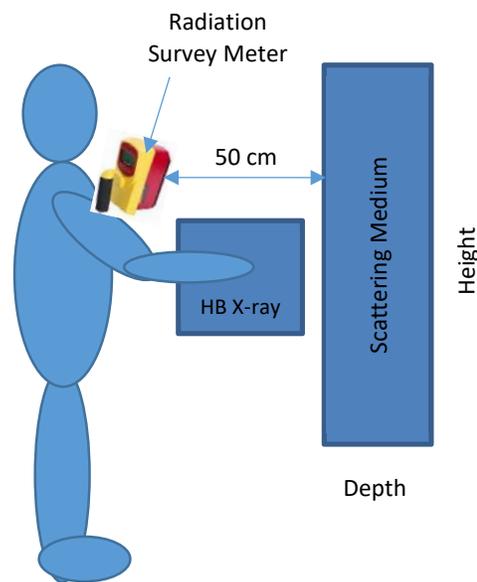
Scattering medium: 432 mm (17") x 279 mm (11") x ≥300 mm (Width, depth, height)
 Scattering Material: Paper
 Detector: Ion chamber (Fluke 451 B or equivalent), calibrated for dose within 1 year

Radiation measurements at the hands (view from the top)



Note: gap between HB X-ray system and Scattering Medium is approximately 1 cm

Radiation measurements at the chest



Note: gap between HB X-ray system and Scattering Medium is approximately 1 cm

Survey Meter Position (offset from scattering medium)	Peak Instantaneous Dose rate $\mu\text{Sv/h}$	
10 cm (hand)	(left hand)	(right hand)
50 cm (chest)		

Additional details appended as:

SECTION B. MANDATORY INFORMATION FOR VALIDATION OF BID

M.3. Primary Contact Information

The Bidder must provide the following information for the primary Point of Contact responsible for the proposed HB X-Ray system delivery:

Name:
 Title: Organization:

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pv873
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Telephone (W) Telephone (M):

Email:

Primary Office Address:

.....
Company Headquarters' Location:

Manufacturing and Service Delivery Locations for the proposed System:

.....
.....

Additional information appended as:

M.4. Additional Technical Information

The Bidder may submit any additional technical information they deem to be pertinent to this document; such as test results, 3rd party reports, configuration options, images, etc. Note that all information specifically requested in previous sections must be presented completely therein. This section should be formatted in the same manner as the rest of the document and must be referenced in the Table of Contents.

Details appended as:

ATTACHMENT 2 TO PART 4 OF THE BID SOLICITATION TECHNICAL POINT RATING MATRIX

Requirement	Type	Min Points	Max Points	Range of Points	Minimum Performance	Performance	Scoring Method	Point Rated Technical Evaluation**
ANNEX A – 6.2.1: Penetration in steel	Mandatory - Rated	0	6	6	1.8 mm	Equipment best result	*Prorated (see below)	
ANNEX A – 6.3.1: Penetration in aluminum	Mandatory - Rated	0	9	9	15 mm	Equipment best result	*Prorated (see below)	
ANNEX A – 4.5.1: Weight	Mandatory - Rated	0	10	10	7.0 kg	Equipment result	*Prorated (see below)	
ANNEX A – 5.6 Radiation Dose to the Operator	Mandatory - Rated	0	10	10	-	Equipment result: average of left and right hand dose rate measurements (5 points) and chest dose rate measurement (5 points). Lower dose rate measurements are awarded higher points	*Prorated (see below)	

*Prorated against the best performing responsive system and the range of points available. See ATTACHMENT 3 to Part 4.

**To be completed by CBSA/PSPC

**ATTACHMENT 3 TO PART 4 OF THE BID SOLICITATION
PRO-RATING PROCESS**

Pro-Rating Process

1. Determine best performer (X_{best}) for defined attribute (i.e., having min/max validated result)
2. Assign maximum points (Y_{max}) to best performer
3. Assign minimum points (Y_{min}) for mandatory minimum performance (X_{min})
4. Determine equation of line (slope and y-intercept) between best performer and mandatory minimum
5. Use equation to compute (Y_{Bidder}) values for validated performance (X_{Bidder}) for other bidders

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ATTACHMENT 4 TO PART 4 – PRICING SCHEDULE CALCULATION OF TOTAL BID PRICE

For evaluation purposes only, the quantities stated below are estimated and not to be construed as a contract guarantee.

1.0 Initial Purchase (Firm, all-inclusive Lot Price per system)												
Handheld Backscatter (HB) X-Ray systems to Ottawa, ON											\$ _____ (UNIT PRICE) (A)	
SUB-TOTAL: A x 13											\$ _____	
LINE 1 =											\$ _____	
2.0 Task Authorization Requirements (as and when requested)												
2.1 Additional Equipment Maintenance Training Maintenance Training in accordance with ANNEX A Additional training sessions over a five-year period.	Firm all-inclusive lot price per class											
	(from date of Contract award to 31 March 2021) (A)	(1 April 2021 to 31 March 2022) (B)	(1 April 2022 to 31 March 2023) (C)	(1 April 2023 to 31 March 2024) (D)	(1 April 2024 to 31 March 2025) (E)	(1 April 2025 to 31 March 2026) (F)	(1 April 2026 to 31 March 2027) (G)	(1 April 2027 to 31 March 2028) (H)	(1 April 2028 to 31 March 2029) (I)	(1 April 2029 to 31 March 2030) (J)		
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
SOUS-TOTAL :												
(Combined total of all Equipment Maintenance Training Option Years) (A+B+C+D+E+F+G+H+I+J)												
LINE 2 =												
2.2 Material and Replacement Parts For the purchase of material and replacement parts, on an as and when requested basis, for a ten year period. CBSA Estimated Annual Purchase of \$8,000.00 x discount on list price	(from date of Contract award to 31 March 2021) (A)	(1 April 2021 to 31 March 2022) (B)	(1 April 2022 to 31 March 2023) (C)	(1 April 2023 to 31 March 2024) (D)	(1 April 2024 to 31 March 2025) (E)	(1 April 2025 to 31 March 2026) (F)	(1 April 2026 to 31 March 2027) (G)	(1 April 2027 to 31 March 2028) (H)	(1 April 2028 to 31 March 2029) (I)	(1 April 2029 to 31 March 2030) (J)		
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
	(Combined total of all Equipment Maintenance Training Option Years) (A+B+C+D+E+F+G+H+I+J)											

<p>SUB-TOTAL: (Combined total of all Material and Replacement Years) (A+B+C+D+E+F+G+H+I+J) LINE 3 =</p>	\$ _____				
<p>2.3 Technical Services</p> <p>For the purchase of technical services on an as and when requested basis, for a ten year period.</p>	<p>(from date of Contract award to 31 March 2021) (A)</p>	<p>(1 April 2021 to 31 March 2022) (B)</p>	<p>(1 April 2022 to 31 March 2023) (C)</p>	<p>(1 April 2023 to 31 March 2024) (D)</p>	<p>(1 April 2024 to 31 March 2025) (E)</p>
<p>Technician</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>
<p>Senior Technician</p>	Average hourly rate [(A+B+C+D+E)/5] X 500 = _____ (F)				
<p>Program Manager</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>
<p>SUB-TOTAL: (Combined total of Technical Services Years) (F + G + H) LINE 4 =</p>	\$ _____				
<p>3.0 Optional Goods and Services, on an "as and when requested" basis</p>					
<p>3.1 Additional HB X-Ray systems For the purchase of additional HB X-Ray systems, at any location, over a five-year period.</p>	Firm, all-inclusive Lot Price per system				
<p>(From date of Contract award to 31 March 2020) (A)</p>	<p>(1 April 2020 to 31 March 2021) (B)</p>	<p>(1 April 2021 to 31 March 2022) (C)</p>	<p>(1 April 2022 to 31 March 2023) (D)</p>	<p>(1 April 2023 to 31 March 2024) (E)</p>	<p>(1st April 2024 to 31st March 2025) (F)</p>
<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>	<p>\$ _____</p>

SUB-TOTAL (Combined total of all Option Years) (A + B + C + D + E+F) LINE 5 =		Firm Unit price per User License						
		(From date of Contract award to 31 March 2020) (A)	(1 April 2020 to 31 March 2021) (B)	(1 April 2021 to 31 March 2022) (C)	(1 April 2022 to 31 March 2023) (D)	(1 April 2023 to 31 March 2024) (E)	(1st April 2024 to 31st March 2025) (F)	
		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
SUB-TOTAL (Combined Total of all Option Years) (A + B + C + D + E+F) LINE 6 =		\$ _____						
3.3 Additional Years of Warranty including Maintenance and Support Services Additional Years of Warranty including Maintenance and Support services to commence after expiry of the initial 1 year Warranty including Maintenance and Support services coverage period.	(1 April 2020 to 31 March 2021)	HB X-Ray systems Purchased prior to March 31, 2020 (A)	HB X-Ray system(s) Purchased between April 1, 2020-March 31, 2021 (B)	HB X-Ray system(s) Purchased between April 1, 2021-March 31, 2022 (C)	HB X-Ray system(s) Purchased between April 1, 2022-March 31, 2023 (D)	HB X-Ray system(s) Purchased between April 1, 2023-March 31, 2024 (E)	HB X-Ray system(s) Purchased between April 1, 2024-March 31, 2025 (F)	
		*Warranty						
		\$ _____	*Warranty					
		\$ _____	\$ _____	*Warranty				
		\$ _____	\$ _____	\$ _____	*Warranty			
		\$ _____	\$ _____	\$ _____	\$ _____	*Warranty		
		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	*Warranty	
		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
TOTAL		\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	
*Represents the initial 1- year Warranty and Maintenance and Support Services coverage included with each system purchased.								

Solicitation No. - N° de l'invitation
47419-207933/A
Client Ref. No. - N° de réf. du client
1000347933

Amd. No. - N° de la modif.
File No. - N° du dossier
pv873.47419-207933

Buyer ID - Id de l'acheteur
pv873
CCC No./N° CCC - FMS No./N° VME

SUB-TOTAL:
(Combined total of all Maintenance
Service Option Years:
A+B+C+D+E+F)
LINE 7 =

\$ _____

4.0 Price Calculations

INITIAL PURCHASE

(Sum LINE 1) \$ _____

AS-AND-WHEN-REQUESTED TRAINING

(Sum LINE 2) \$ _____

MATERIAL AND REPLACEMENT PARTS

(Sum LINE 3) \$ _____

TECHNICAL SERVICES

(Sum LINE 4) \$ _____

OPTIONAL SYSTEMS

(Sum LINE 5) \$ _____

OPTIONAL SOFTWARE USER LICENSES

(Sum LINE 6) \$ _____

ADDITIONAL YEARS OF WARRANTY

(Sum LINE 7) \$ _____

TOTAL BID PRICE

(Total LINES 1 to 7) \$ _____

(Excluding Applicable Taxes)