



**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving - PWGSC / Réception des**  
**soumissions - TPSGC**  
**11 Laurier St. / 11, rue Laurier**  
**Place du Portage, Phase III**  
**Core 0B2 / Noyau 0B2**  
**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**

<b>Title - Sujet</b> VIP RFP	
<b>Solicitation No. - N° de l'invitation</b> W8486-135152/D	<b>Date</b> 2017-01-27
<b>Client Reference No. - N° de référence du client</b> W8486-135152	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$QD-035-26158	
<b>File No. - N° de dossier</b> 035qd.W8486-135152	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2017-03-10</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Standard Time EST	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Weronski, Radek	<b>Buyer Id - Id de l'acheteur</b> 035qd
<b>Telephone No. - N° de téléphone</b> (819) 420-1774 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF NATIONAL DEFENCE 555 Boulevard de la Carrier Gatineau Quebec J8Y 6V7 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**

Defence Communications Division. (QD)  
11 Laurier St./11, rue Laurier  
Place du Portage, Phase III, 8C2  
Gatineau, Québec K1A 0S5

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



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Destination	Unit Price/Prix unitaire FOB/FAM	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
3	VIP	W8486	W8486	1	Each	\$	\$		See Herein	

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## List of Annexes for Contract 001- Goods (Build to Print)

Annex A: Statement of Work (SOW)

- Appendix A1: Deliverable Goods
- Appendix A2: Deliverable Data
- Appendix A3: Referenced Documents
- Appendix A4: Government Furnished Equipment

Annex B: Basis of Payment

Annex C: DND Form 626 – Task Authorization

Annex D: PWGSC Form 1111 – Progress Claim

Annex E: DND Form 672 – Design Change / Deviation

Annex F: DND Form 675 – Request for Waiver

Annex G: Bid Compliance and Evaluation Matrix

Annex H: Financial Bid Evaluation Methodology

Appendix H1: Financial Bid Presentation Sheet

Annex I: Insurance Requirements

## List of Annexes for Contract 002- In-Service Support Services (Repair and Overhaul)

Annex A: Statement of Work (SOW) - ISS

Annex B: Logistics Statement of Work (LOG SOW)

Annex C: Basis of Payment - ISS

Annex D: DND Form 626 – Task Authorization

Annex E: PWGSC Form 1111 – Progress Claim

## **PART 1 - GENERAL INFORMATION**

### **1. Introduction**

- 1.1 There will be two separate contracts awarded in response to this Request for Proposal (RFP) on behalf of Department of National Defence (DND). Two separate contracts will be awarded to one successful Bidder that must be able to provide goods and services required by this RFP. The two contracts will be as per the following:
- a. Contract 001 - Goods (Build to Print Contract).
  - b. Contract 002 - In-Service Support Services (Repair & Overhaul Contract).
- 1.2 The requirements for Goods and In-Service Support Services are defined in two separate Statements of Work (SOW) that are provided herewith as per the following:
- a. Annex A - SOW for Goods – Contract 001.
  - b. Annex A – SOW for ISS – Contract 002.
  - c. Annex B - Logistics SOW for ISS – Contract 002.
- 1.3 The bid solicitation is divided into eight parts plus annexes and appendices, as follows:
- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses for Contract 001 that includes the clauses and conditions that will apply to any resulting contract.
- Part 8 Resulting Contract Clauses for Contract 002 that includes the clauses and conditions that will apply to any resulting contract.

### **2. Security Requirement**

There is no security requirement associated with this RFP.

Contractor personnel MAY NOT ENTER sites where (protected/classified) information or assets are kept without an escort provided by the Client Department for which the work is being performed.

### 3. Requirement

The Contractor must:

- provide the goods in accordance with Annex A – SOW for Contract 001; and
- provide the services in accordance with Annex A – SOW for Contract 002 and Annex B – Logistics SOW for Contract 002.

### 4. Debriefings

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

### 5. Trade Agreements

The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).

### 6. Basis for Canada's Ownership of Intellectual Property

DND has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the [\*Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts\*](#):

Statutes, regulations or prior obligations of Canada to a third party or parties preclude Contractor ownership of the Intellectual Property Rights in Foreground Information.

### 7. Government Furnished Information

The reference documents identified as Government Furnished Information (Available with RFP) in Appendix A3 to Annex A, are available from the Contracting Authority on request. The document versions that will be provided reflect those currently in use.

The Bidder must be registered, exempt or excluded under the Controlled Goods Program (CGP) before receiving the information. Requests for reference documents related to controlled goods should be made in writing to the Contracting Authority identified in the bid solicitation and must contain the CGP registration number or written proof of exemption or exclusion of the Bidder and of any other person to whom the Bidder will give access to the controlled goods.

This request must be accompanied by a fully executed original copy of the Non-disclosure Agreement (NDA) as per the template attached herewith.

Bidders must contact the Contracting Authority identified as below to request GFI:

Radek Weronski  
Public Works and Government Services Canada  
Acquisitions Branch  
Defence and Major Projects Sector (DMPS)  
Place du Portage, Phase III, 11 Laurier Street, Gatineau, QC  
K1A 0S5  
Government of Canada

Telephone: (819) 420-1774  
E-mail: [radek.weronski@tpsgc-pwgsc.gc.ca](mailto:radek.weronski@tpsgc-pwgsc.gc.ca)

## PART 2 - BIDDER INSTRUCTIONS

### 1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

#### 1.1 SAAC Clauses

A7035T (2007-05-25) List of Proposed Subcontractors

A9130T (2014-11-27) Controlled Goods Program

### 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.

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

### 3. Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, Bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

#### 3.1 Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the Financial Administration Act, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"Lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the

implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c. C-17, the Defence Services Pension Continuation Act, 1970, c. D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c. R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c. R-11, the Members of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c. C-8.

### 3.2 Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes ( ) No ( )**.

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant; and
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

### 3.3 Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes ( ) No ( )**.

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks; and
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

## 4. Enquiries - Bid Solicitation

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

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient

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

## **5. Applicable Laws**

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

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

## PART 3 - BID PREPARATION INSTRUCTIONS

### 1. Bid Preparation Instructions

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

Section I: Technical Bid – Part A and B (4 hard copies each) and 1 soft copy on DVD for both resulting contracts. Part A for Contract 001 – Goods and Part B for Contract 002 – ISS.

Section II: One Financial Bid (1 hard copy each) for both resulting contracts.

Section III: Certifications (1 hard copy of each required certification for both resulting contracts).

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.

Prices should 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; and
- (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:

- 1.1 use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 1.2 use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

### 2. Section I: Technical Proposal (Part A and B) – For Goods and ISS Contracts

Canada requests that 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.

In their technical bid, Bidders must address all the requirements of the Annex A - Statements of Work (for both resulting contracts) and Annex B – Logistics SOW on a paragraph-by-paragraph basis. Bidders must provide their responses and provide comments as to how they will carry out the work listed in Annex A and its appendices.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement

contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Bidders should provide the page number and exact location of the brochures, document, and evidence of compliance, proof or any other material submitted with the Technical Bid to demonstrate compliance.

Bidders must provide their responses in its technical proposal as per the following:

- i. A compliance statement ("Compliant" or "Non-compliant"). "Compliant" statement will be interpreted as meaning full agreement with the requirement, whereas a Non-complaint statement will be interpreted as meaning not in full agreement with the requirement and the proposal will be deemed non-responsive and not given any further consideration.
- ii. For mandatory requirements, statements such as "Read", "Comply with Intent", "Partial Compliance", "Noted" or the like will be considered as non-responsive; Paragraphs, elements and subparagraphs that convey information rather than a requirement must be marked with "Noted and Understood".

For Mandatory and Point Rated Technical Requirements, Bidders must use Annex G – Bid Compliance and Evaluation Matrices to provide their responses.

## **2.1 Mandatory Technical Requirements:**

2.1.1 In order to be evaluated against the Mandatory Technical Criteria, Bidders must:

- a. submit a completed copy of the Mandatory Technical Requirements – Compliance & Evaluation Matrix shown in Table 1 of Annex G; and
- b. in the Bidder Self-Evaluation Columns of Table 1, for each requirement:
  - i. indicate that the Bidder meets or does not meet the listed criterion by placing an X in the either the Compliant column or the Non-compliant column, and
  - ii. include cross reference(s) to the specific paragraph number(s) and page number(s) of the Bidder's technical bid containing the required evidence of compliance as indicated in the Table 1 for each requirement.

Evaluation will be based on the evidence of compliance submitted by the Bidder to be conducted by the evaluation team.

## **2.2 Point Rated Technical Requirements:**

### **2.2.1 Quality Plan**

- a. Quality Plan format and content requirements are specified in DID SE-001 of Appendix A2.
- b. In order to be evaluated against the Point Rated Technical Criteria, Bidders must submit a completed copy of the Rated Technical Requirements - Quality Plan Evaluation Matrix shown at Table 2 of Annex G.
- c. In the Bidder Self-Evaluation Columns of Table 2, for each requirement listed, Bidders must:
  - i. for each Quality Plan Topic:

- claim a number of points for topic quality using the evaluation criteria provided in Part 4 of this document;
  - claim a number of points for topic risk using the evaluation criteria provided in Part 4 of this document;
  - sum the topic quality points and topic risk points to obtain the total points claimed; and
  - include cross reference(s) to specific location(s) in the submitted Quality Plan and supporting documents where the required evidence of compliance with the DID is provided.
- ii. indicate the sum of the total points claimed for each Quality Plan Topic to determine the Total Points Claimed.

### 2.2.2 Test Plan

- a. Test Plan format and content requirements are specified in DID SE-002 of Appendix A2.
- b. Bidders must submit a completed copy of the Point Rated Requirements – Test Plan Evaluation Matrix shown at Table 3 of Annex G.
- c. In the Bidder Self-Evaluation columns in Table 3, for each requirement listed Bidders must:
- i. for each Test Plan Topic:
    - claim a number of points for topic quality using the evaluation criteria provided in Part 4 of this document;
    - claim a number of points for topic risk using the evaluation criteria provided in Part 4 of this document;
    - sum the topic quality points and topic risk points to obtain the total points claimed; and
    - include cross reference(s) to specific location(s) in the submitted Test Plan and supporting documents where the required evidence of compliance with the DID is provided.
  - ii. indicate the sum of the total points claimed for each Test Plan Topic to determine the Total Points Claimed.

### 2.2.3 Environment Health and Safety

- a. Bidders must submit a completed copy of the Point Rated Requirements – Environmental Health and Safety Survey – Evaluation Matrix shown at Table 4 in Annex G.
- b. In the Bidder Self Evaluation columns in Table 4, for each requirement, Bidders must:
- i. answer each question with Yes or No, and
  - ii. include cross reference(s) to the specific paragraph number(s) and page number(s) of their bid containing the required evidence of compliance.

## 3. Section II: Financial Proposal (Combined) – For Goods Contract and ISS Contract

Bidders must utilize Appendix H1 (Financial Bid Presentation Sheet) to Annex H (Financial Bid Evaluation Methodology) for submitting their pricing.

### 3.1 For Contract 001 – Goods (Build to Print):

- 3.1.1 For CLINs 001 to 047, Bidders must submit Firm Unit Prices for the Firm Quantity.

- 3.1.2 For CLINs 001 to 047, Bidders must propose Firm Unit Prices for the Optional Quantities.
- 3.1.3 For Additional Work Arisings (AWAs), Bidders must propose Firm Hourly Labour Rates.
- 3.1.4 For Re-establishment of the production line, Bidders must propose a Firm Fixed Price.
- 3.1.5 All proposed prices and Hourly Labour Rates must be excluding applicable taxes.

### **3.2 For Contract 002 – In-Service Support Services:**

- 3.2.1 Bidders must propose Firm Fixed Hourly Labour Rates for Category 1 and 2 Work.
- 3.2.2 Bidders must propose Mark-up for Sub-contractor services.
- 3.2.3 Bidders must propose Mark-up for Material.
- 3.2.4 Bidders must propose Fixed Program Management Monthly Fee.
- 3.2.5 All proposed prices and Hourly Labour Rates must be excluding applicable taxes.

### **3.3 Exchange Rate Fluctuation Risk Mitigation:**

- 3.3.1 The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form PWGSC-TPSGC 450, Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each CLIN for which an exchange rate adjustment is required.
- 3.3.2 The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
- 3.3.3 The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
- 3.3.4 At time of bidding, the Bidder must complete columns (1) to (4) on form PWGSC-TPSGC 450, for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
- 3.3.5 Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

## **4. Section III:Certifications**

Bidders must submit the certifications required under Part 5 in their Technical Bids.

## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 1. Evaluation Procedures

- a. Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical, financial, evaluation criteria. For the purposes of this solicitation, Canada will utilize a two-step evaluation process as more fully described herein.
- b. In order to be deemed responsive, Bidder's proposals must comply with all General Conditions as laid out in the 2030 (2016-04-04), General Conditions – Goods (Higher Complexity) and 2035 (2016-04-04), General Conditions - Services (Higher Complexity) and Supplemental General Conditions associated with this RFP.
- c. An evaluation team composed of representatives of Canada will evaluate the bids.
- d. Bids will be evaluated to determine if they comply with all RFP requirements. Bids that do not meet all RFP requirements will be declared non-responsive and will not be further evaluated.
- e. The quality and completeness of the proposals will form the basis of the evaluation. The definitions of mandatory requirements are as follows:

MANDATORY REQUIREMENTS: Bidders should note that all MANDATORY requirements are identified specifically with the word "shall", "must", "will", "mandatory".

#### 1.1 Evaluation Overview and Underlying Principles

- a. Canada will conduct a two-step bid evaluation process for this requirement. Step 1 will consist of a preliminary evaluation of the bids and, if necessary, the release of a Preliminary Evaluation Report to the Bidder(s). Only those bids deemed to be responsive at the completion of Step 1 will be evaluated at Step 2. Step 2 will consist of an evaluation of the remaining bid sections.
- b. Notwithstanding the limited review which Canada may conduct for certain parts of the solicitation during Step 1, Bidders are and will remain solely responsible for the accuracy and completeness of their bids and Canada does not undertake, by reason of this review, any obligations or responsibility for identifying errors or omissions in bids submitted nor does Canada undertake to identify any or all such errors or omissions.
- c. **BIDDERS ARE AND WILL REMAIN SOLELY RESPONSIBLE FOR ENSURING CONSISTENCY OF THE INFORMATION SUBMITTED IN THEIR BIDS AT ALL TIMES. WITHOUT LIMITING THE FOREGOING, BIDDERS ARE AND WILL REMAIN SOLELY RESPONSIBLE FOR ENSURING THAT ANY INFORMATION PROVIDED IN RESPONSE TO A PRELIMINARY EVALUATION REPORT IS CONSISTENT WITH ANY OTHER INFORMATION ORIGINALLY SUBMITTED IN THEIR BID IN RESPONSE TO OTHER REQUIREMENTS. FAILURE TO DO SO MAY PREJUDICE THE EVALUATION OF PREVIOUSLY SUBMITTED INFORMATION AND/OR RENDER THE BID NON-RESPONSIVE.**
- d. Notwithstanding that this solicitation divides the bids into two parts (Part 001: Goods and, Part 002: In-Service Support Services), Canada may consider information submitted for one part in its evaluation of the other part. It is the Bidders' responsibility to ensure consistency amongst all parts of their bids.
- e. This two-step bid evaluation process shall not limit Canada's rights under SACC 2003 (2016-04-04) Standard instructions – Goods or Services – Competitive Requirements nor Canada's right to request or accept any information during the solicitation period or after bid solicitation closing in circumstances where the bid solicitation expressly provides for this right.

## 2. Preliminary Evaluation – Step 1

- 2.1 The evaluation team will evaluate the bids to identify any instances where a Bidder has failed to submit any mandatory documentation or requirement (required certification or proof/evidence of compliance or where a submitted document lacks the requisite signature(s) only for any of the required documents and those documents which must otherwise be submitted with the bid response).
- 2.2 The Contracting Authority (CA) will contact the Bidder(s) that forgot to submit any mandatory plans, required proof, evidence of compliance, and/or any certifications. Additionally, the CA will contact the Bidder(s) if any of the mandatory financial information is missing in their financial proposals.
- 2.3 Upon request, the Bidder must provide the missing information within three working days. Bidders not able to meet this deadline will be deemed non-responsive and their bids will not be further evaluated.
- 2.4 Bids meeting all the necessary preliminary evaluation requirements will proceed to be evaluated against the Mandatory and Point Rated Technical Requirements under Step 2 process described here below.

## 3. Technical Bid Evaluation – Step 2

### 3.1 Mandatory Requirements Evaluation:

- 3.1.1 Technical Bids will be evaluated against the Mandatory Technical requirements specified in Table 1 of the Annex G – Mandatory Technical Requirements – Compliance and Evaluation Matrix.
- 3.1.2 Technical bids will be evaluated for Compliant/Non-compliant assessment. If one or more of the Mandatory Requirements is not met, the bid will be declared non-responsive and will not be further evaluated.
- 3.1.3 Bids that meet all of the Mandatory Technical Requirements will proceed to be evaluated for the Technical Point Rated Requirements.

### 3.2 Point Rated Requirements Evaluation:

- 3.2.1 As emphasized in Annex A - SOW, this is a “build-to-print” rather than an “off-the-shelf” or development” initiative. As such the specified requirements are largely associated with the essential production and test processes rather than the product itself. Therefore, the point-rated requirements aim to assess the maturity of Bidder production and test capabilities evidenced by *pre-existing* Quality Management System documentation containing thoroughly developed and repeatable procedures based on relevant experience. It’s likely that such documentation will require augmentation through *supplementary* documentation in order to more completely fulfill particular requirements.

By signing their bid the Bidder is certifying that, unlike *supplementary* documents, written specifically to respond to this RFP, documents that the Bidder identifies as *pre-existing* were authored prior to, and with no knowledge of, the content of this RFP.

Available Rated Technical Points are identified in Annex G:

- Table 2 – Rated Technical Requirements – Quality Plan Evaluation Matrix,
- Table 3 – Rated Technical Requirements – Test Plan Evaluation Matrix, and
- Table 4 – Rated Technical Requirements – EHS Evaluation Matrix.

Bidders must self-evaluate against the rated requirements as detailed in Part 3. This will enable the evaluation team to assess its evaluation results against the Bidders' self-evaluation. However, the rated points awarded by the evaluation team (not the points claimed by the Bidders) will be used to evaluate the overall bid results.

Technical bids will be assessed against Point Rated Technical Evaluation Criteria based on information provided by the Bidders as per the following paragraphs. The Rated Points will be summed and the sum will be utilized in the Basis of Selection - Lowest Price per Point, outlined below in Article 8.

- 3.2.2 A bid will be found non-responsive if any of the following conditions are present in Tables 2 to 4 of Annex G:
- a. A Bidder does not obtain the minimum Pass Mark of 125 Rated Points for the Quality Plan;
  - b. A Bidder does not obtain the minimum Pass Mark of 110 Rated Point for the Test Plan; or
  - c. A Bidder does not obtain Pass Mark of 60 Rated Points for Environment Health and Safety.

#### **4. Quality Plan Evaluation**

- 4.1 The evaluation team will evaluate quality and assess risk to Canada for each Quality Plan topic based on the evidence of compliance submitted by the Bidders through the Quality Plan.
- 4.2 The evaluation team will award points for quality and points for risk in accordance with the Evaluation Criteria provided in the respective tables below.
- 4.3 The required minimum points for the Quality Plan is one hundred (125) of an available one hundred and seventy (170) points. Bids which do not obtain the minimum mandatory points, will be declared non-responsive and will not be evaluated further.

#### **5. Test Plan Evaluation**

- 5.1 The evaluation team will evaluate quality and assess risk to Canada for each Test Plan topic based on the evidence of compliance submitted by the Bidders through the Test Plan.
- 5.2 The evaluation team will award points for quality and points for risk in accordance with the Evaluation Criteria provided in the respective tables below.
- 5.3 The required minimum points for the Test Plan is one hundred ten (110) of an available one hundred and fifty (150) points. Bids which do not obtain the minimum mandatory points, will be declared non-responsive and will not be evaluated further.

### Quality Evaluation Criteria for the Test Plan and the Quality Plan Topics

Available Points	Quality Evaluation Criteria
5	Pre-existing QMS documentation and supplementary documentation together address 100% of the requirement. The Plan topic is fully developed.
4	Pre-existing QMS documentation and supplementary documentation together address 80% of the requirement. The Plan topic is well developed.
3	Pre-existing QMS documentation and supplementary documentation together address 60% of the requirement. The Plan topic is sufficiently developed.
2	Pre-existing QMS documentation and supplementary documentation together address 40% of the requirement. The Plan topic is not well developed.
1	Pre-existing QMS documentation and supplementary documentation together address 20% of the requirement. The Plan topic is not developed.
0	The Plan topic addresses 0% of the requirement.

### Risk Evaluation Criteria for the Test Plan and the Quality Plan Topics

Available Points	Risk Evaluation Criteria
5	75% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects a very mature capability and very little risk.
4	60% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects a mature capability and little risk.
3	45% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects a sufficiently mature capability and moderate risk.
2	30% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects an insufficiently mature capability and unacceptable risk.
1	15% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects an initial capability and high risk.
0	0% of the Plan topic is addressed through pre-existing QMS documentation. The Plan topic reflects an adhoc capability and very high risk.

## 6. EHS Evaluation

- 6.1 The evaluation team will evaluate compliance based on the evidence submitted by the Bidders, and award points in accordance with the criteria specified in the Table 4 of Annex G.
- 6.2 The required minimum points for EHS is sixty (60) of an available one hundred (100) points. Bids which do not obtain the minimum mandatory points, will be declared non-responsive and will not be evaluated further.

## 7. Financial Bid Evaluation

The Bid Price will be evaluated as follows:

- a. Bidders must submit firm unit prices DDP Incoterms 2010, Canadian customs duties and excise taxes included, and the applicable taxes excluded.
- b. The financial bids will be evaluated in Canadian currency. Pricing submitted in foreign currency will be converted to Canadian dollars based on the exchange rate provided by the Bank of Canada at noon on the date of RFP closing.
- c. The financial bids will be evaluated based on pricing received from Bidders in Annex H (Appendix H1).

### 7.1 Financial Bid Evaluation Parameters:

- a. A full review of the Financial Bid will not be conducted at Step 1. Canada's initial review will be limited to identifying whether required data is missing from the bid or whether GST/HST amounts are not shown separately. In instances where a different price for the same item is provided in more than one location within the Financial Bid, Canada will identify this discrepancy and the Bidder must confirm which price applies.
- b. Where a required line item has been left blank, only the missing information may be added to the Financial Bid for Step 2, except that, in those instances where the addition of such information will necessarily result in a change to other pricing or cost information previously submitted as a result of calculations required by the solicitation (for example, the calculation to determine a total price), such necessary adjustments shall be identified by the Bidder and only these adjustments shall be made. Any other changes to the Bid shall be considered to be new information and will be disregarded.
- c. Canada will also identify any instances where a Bidder has failed to submit a required certification or proof of compliance or where a submitted document lacks the requisite signature(s) only for the above-noted documents and those documents which must otherwise be submitted with the Financial Bid.

## 8. Basis of Selection – Lowest Price Per Point

To be declared responsive at the conclusion of Step 1 and Step 2 a bid must:

- a. comply with all the requirements of the bid solicitation;
- b. meet all mandatory technical evaluation criteria; and
- c. obtain the required minimum points for the technical evaluation criteria which are subject to point rating;

Bids not meeting (a) or (b) or (c) will be declared non-responsive, and receive no further consideration. Neither the responsive bid that receives the highest number of points nor the one that proposed the lowest price will necessarily be accepted. The responsive bid with the lowest evaluated price per point will be recommended for award of a contract.

## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated 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 may render the bid non-responsive or constitute a default under the Contract.

### 1. Certifications Required with the Bid

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

#### 1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

### 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.

#### 2.1 Integrity Provisions – Required Documentation

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ciif/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### 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 ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from Employment and Social Development Canada (ESDC) - Labour's website.

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

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 annex 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 annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

## **2.3 Non-Disclosure Agreement**

- 2.3.1 The Bidder must provide the non-disclosure agreement (NDA) to the Contracting Authority (CA) during the solicitation phase when requesting the Government Furnished Information (GFI).
- 2.3.2 The GFI will only be released to Bidders submitting the completed NDA.
- 2.3.3 The template of the NDA is provided at the bottom of this document.

## **2.4 Federal Contractors Program for Employment Equity - Certification**

The Bidder should provide this certification its bid submission as per the template provided at the bottom of this document.

## **PART 6 - FINANCIAL AND OTHER REQUIREMENTS**

### **1. Financial Capability**

SACC Manual clause A9033T (2012-07-16) Financial Capability

### **2. Insurance – Proof of Availability Prior to Contract Award**

The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex I.

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

## **PART 7 - CLAUSES FOR RESULTING CONTRACT 001 – GOODS**

### **1. Security Requirement**

There is no security requirement applicable to this Contract.

Contractor personnel MAY NOT ENTER sites where (protected/classified) information or assets are kept without an escort provided by the Agency for which the work is being performed.

### **2. Statement of Work**

The Contractor must perform the Work in accordance with the Statement of Work at Annex A.

### **3. Standard Clauses and Conditions**

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

2030 (2016-04-04), General Conditions – Goods (Higher Complexity) apply to and form part of the Contract.

The following sections and subsections of 2035 (2016-04-04), General Conditions - Services (Higher Complexity), apply to and form part of the Contract:

1. Section 5 – Conduct of Work:  
Subsection 2.d, 2.e and 2.f and subsection 3, 4 and 5
2. Section 20 – Copyright
3. Section 21 – Translation of Documentation
4. Section 35 – No Bribe or Conflict  
Subsection 2, 3 and 4
5. Section 42 – Harassment in Workplace
6. Section 44 – Access to Information

#### **3.1 Warranty Period**

Section 22 (2015-07-25) of General Condition 2030 is amended by replacing the period of 12 months by 24 months.

#### **3.2 Supplemental General Conditions**

4007 (2010-08-16), Canada to Own Intellectual Property Rights in Foreground Information.

#### **3.3 Additional SACC Clauses**

A9131C (2014-11-27) Controlled Goods Program

B4060C (2011-05-16) Controlled Goods

## 4. Term of Contract

### 4.1 Period of the Contract

The period of the Contract is from date of Contract to \_\_\_\_\_.

### 4.2 Delivery Date

All the deliverables must be received on or before \_\_\_\_\_

### 4.3 Option to purchase Optional Quantities

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described in the Annex A and B of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option 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 at any time before the expiry of the Contract by sending a written notice to the Contractor.

### 4.4 Option to extend the Period of the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to two (2) additional one (1) year periods, as defined below, one period at a time. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least 30 calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment

Option Period 1 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 1.

Option Period 2 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 2.

## 5. Authorities

### 5.1 Contracting Authority

The Contracting Authority for the Contract is:

**Radek Weronski**

Public Works and Government Services Canada  
Acquisitions Branch

Defence and Major Projects Sector (DMPS)

Place du Portage, Phase III, 11 Laurier Street, Gatineau, QC K1A 0S5  
Government of Canada

Telephone: (819) 420-1774

E-mail: [radek.weronski@tpsgc-pwgsc.gc.ca](mailto:radek.weronski@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.*

## 5.2 Technical Authority

The Technical Authority for the Contract is:

To be inserted at Contract award.

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

## 5.3 Procurement Authority

The Procurement Authority for the Contract is:

To be inserted at Contract award.

*The Procurement 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 financial and technical content of the Work under the Contract. Technical matters may be discussed with the Procurement Authority; however the Procurement Authority has no authority to authorize changes to the scope of the Work or the pricing in the Basis of Payment (Annex C). Changes to the scope of the Work or the Basis of Payment can only be made through a contract amendment issued by the Contracting Authority.*

## 5.4 Contractor's Representative

To be inserted at Contract award.

Bidders to provide name, title, telephone number and email address.

## 6. Limitation of Expenditure

Canada's total liability to the Contractor under the Contract must not exceed \$ \_\_\_\_\_.  
Customs duties are included and Applicable Taxes are extra.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

- a. when it is 75 percent committed, or
- b. four (4) months before the contract expiry date, or
- c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work, whichever comes first.

If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

## 7. Basis of Payment

### 7.1 Firm Unit Prices

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices as specified in Annex B – Basis of Payment, Customs duties are included and Applicable Taxes are extra, if applicable.

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.

### 7.2 Task Authorizations - Additional Work Arisings (AWAs):

In the absence of a firm price or a ceiling price, the Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Labour Rates listed in Annex B - Basis of Payment, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

The Contractor will be reimbursed for the direct expenses reasonably and properly incurred in the performance of the AWAs. These expenses will be paid at actual cost with permissible/negotiated mark-up, upon submission of an itemized statement supported by receipt vouchers.

### 7.3 Travel and Living Expenses:

If required, the Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the National Joint Council Travel Directive (<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>), and with the other provisions of the directive referring to "travelers", rather than those referring to "employees".

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

### 7.4 Overtime

The Contractor must obtain written permission from the Procurement Authority to work on overtime time basis. Overtime will only be permissible under exceptional circumstances. In the event, overtime is performed, the Contractor shall be paid one and half time the labour rates.

## 8. Method of Payment

### 8.1 Multiple Payments

Canada will pay the Contractor upon completion and delivery of units in accordance with the payment provisions of the Contract if:

- a. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all such documents have been verified by Canada; and
- c. the Work delivered has been accepted by Canada.

### 8.1.1 Invoicing Instructions for Multiple Payments

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

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

2. Invoices must be distributed as follows:
  - a. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
  - b. One (1) copy must be forwarded to the Procurement Authority identified under the section entitled "Authorities" of the Contract.
  - c. One (1) copy must be forwarded to the consignee.

### 8.2 Progress Payments for Task Authorizations and Holdback

1. Canada will make progress payments in accordance with the payment provisions of the Contract (Annex B), no more than once a month, for cost incurred in the performance of the Work, up to the amount claimed and approved by Canada if:
  - a. an accurate and complete claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - b. the amount claimed is in accordance with the Basis of Payment;
  - c. the total amount for all progress payments paid by Canada does not exceed the total amount to be paid under the Contract; and
  - d. all certificates appearing on form [PWGSC-TPSGC 1111](#) have been signed by the respective authorized representatives.
2. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

### 8.2.1 Invoicing Instructions for Progress Payments

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment.

Each claim must show:

- a. all information required on form PWGSC-TPSGC 1111; and
- b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions.

Each claim must be supported by:

- a. a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses; and
  - b. any other information requested from the Contracting Authority.
2. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Technical Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.
  3. The Technical Authority will then forward the original and two (2) copies of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.
  4. The Contractor must not submit claims until all work identified in the claim is completed.

### 8.3 Section 427 of Bank Act

1. If any lien under section 427 of the Bank Act, S.C.. 1991, c. 46, exists in respect to any materials, parts, work-in-process, or finished work for which the Contractor intends to claim payment, the Contractor agrees to inform the Contracting Authority without delay and agrees, unless instructed otherwise by the Contracting Authority, either:
  - a. to cause the bank to remove such lien and to provide the Contracting Authority with written confirmation from the bank; or
  - b. to provide to the Contracting Authority an undertaking from the bank that the bank will not make any claim under section 427 of the Bank Act on materials, parts, work-in-process, or finished work in respect of which payment is made to the Contractor under the Contract.
2. Failure to inform the Contracting Authority of such lien or failure to implement paragraph 1(a) or (b) above will constitute default under the default section of the general conditions and will entitle Canada to terminate the Contract.

### 8.4 Exchange Rate Fluctuation Adjustment

- 8.4.1 The foreign currency component (FCC) is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuation. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
- 8.4.2 For each line item where a FCC is identified, Canada assumes the risks and benefits for exchange rate fluctuation, as shown in the Basis of Payment. For such items, the exchange rate fluctuation amount is determined in accordance with the provision of this clause.
- 8.4.3 The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provisions in the contract. The exchange rate adjustment amount will be calculated in accordance with the following formula:

$$\text{Adjustment} = \text{FCC} \times \text{Qty} \times (i_1 - i_0) / i_0$$

where formula variables correspond to:

<b>FCC</b>	Foreign Currency Component (per unit)
$i_0$	Initial exchange rate (CAN\$ per unit of foreign currency [e.g. US\$1])
$i_1$	exchange rate for adjustments (CAN\$ per unit of foreign currency [e.g. US\$1])
<b>Qty</b>	quantity of units

- 8.4.4 The initial exchange rate is typically set as the noon rate as published by the Bank of Canada on the solicitation closing date.
- 8.4.5 For goods, the exchange rate for adjustment will be the noon rate as published by the Bank of Canada on the date the goods were delivered. For services, the exchange rate for adjustment will be the noon rate on the last business day of the month for which the services were performed. For advance payments, the exchange rate for adjustment will be the noon rate on the date the payment was due. The most recent noon rate will be used for non-business days.
- 8.4.6 The Contractor must indicate the total exchange rate adjustment amount (either upward, downward or no change) as a separate item on each invoice or claim for payment submitted under the Contract. Where an adjustment applies, the Contractor must submit with their invoice form PWGSC-TPSGC 450 , Claim for Exchange Rate Adjustments.
- 8.4.7 The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease), calculated in accordance with column 8 of form PWGSC-TPSGC 450  (i.e.  $[i_1 - i_0] / i_0$ ).
- 8.4.8 Canada reserves the right to audit any revision to costs and prices under this clause.

## 9. Insurance

The Contractor must comply with the insurance requirements specified in [Annex I](#). The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

## 10. SACC Manual Clauses for the Goods

- A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)  
 A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)  
 A9006C (2012-07-16) Defence Contract

B4019C (2015-02-25)	United States Military Specifications and Standards
B7500C (2006-06-16)	Excess Goods
C0705C (2010-01-11)	Discretionary Audit
C2000C (2007-11-30)	Taxes - Foreign-based Contractor
C2604C (2013-04-25)	Customs Duties, Excise Taxes and Applicable Taxes – Non Resident
C2605C (2008-05-12)	Canadian Customs Duties and Sales Tax – Foreign-based Contractor
C2606C (2008-05-12)	Custom Duties and Excise Taxes - Exemption
C2610C (2007-11-30)	Custom Duties – Department of National Defence - Importer
C2611C (2007-11-30)	Custom Duties – Contractor Importer
C2800C (2013-01-28)	Priority Rating
C2801C (2014-11-27)	Priority Rating - Canadian Contractors
C6000C (2011-05-16)	Limitation of Price
D0050C (2007-05-25)	End User Certificate
D5510C (2014-06-26)	Quality Assurance Authority (DND) - Canadian-based Contractor
D5515C (2010-01-11)	Quality Assurance Authority (Department of National Defence) - Foreign-based and United States Contractor
D5545C (2010-08-16)	ISO 9001:2008 - Quality Management Systems - Requirements (Quality Assurance Code C)
D5604C (2008-12-12)	Release Documents (DND) - Foreign-based Contractor
D5605C (2010-01-11)	Release Documents (DND) - United States-based Contractor
D5606C (2012-07-16)	Release Documents (DND) - Canadian-based Contractor
D9002C (2007-11-30)	Incomplete Assemblies
L0005C (2008-05-12)	Special Production and Special Test Equipment Owned by Canada
L5001C (2008-05-12)	Surplus Government Property

## 11. Certifications

### 11.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

### 11.2 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.

## 12. Applicable Laws

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

### 13. Priority of Documents

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

- a. The Articles of Agreement;
- b. Annex C - Basis of Payment;
- c. The general conditions 2030 (2016-04-04), General Conditions – Goods (Higher Complexity);
- d. The applicable sections and sub-sections of the general conditions 2035 (2016-04-04), General Conditions - Services (Higher Complexity);
- e. The supplemental conditions 4007 (2010-08-16), Canada to Own Intellectual Property Rights in Foreground Information;
- f. The supplemental conditions 4010 (2012-07-16), Services Higher Complexity;
- g. Annex A - Statement of Work; and
- h. The Contractor's proposal dated \_\_\_\_\_.

### 14. Preparation for Delivery - Canadian-based Contractor

- 14.1 Preservation and packaging for Line Items 001 to 047 must be in accordance with the Canadian Forces packaging specification *D-LM-008-001/SF-001*, and must be marked to *D-LM-008-002/SF-001*. Form Level B Package Data Form Required must be in accordance with *D-LM-008-011/SF-001*.
- 14.2 Packaging data forms previously approved by Canadian authorities are acceptable.
- 14.3 Approved coded packaging data is shown immediately below the description of the item to which it applies. Where no data is shown, the Contractor must submit a packaging data form for approval.

### 15. Preparation for Delivery – Canadian Forces Packaging Specifications

The Contractor must prepare Line Items 001, 010, 011, 012, 040 and 041 for delivery in accordance with the latest issue of the Canadian Forces packaging specifications *D-LM-008-035/SF-001*, Electrostatic Discharge Protective Packaging - Electronic Parts, Assemblies and Equipment.

### 16. Delivery at Destination

1. For Line Items 001 to 009, goods must be consigned to the destination specified in the Contract and Delivered Duty Paid (DDP) to 7 CFSD, Edmonton, Alberta Incoterms 2010 for shipments from a commercial contractor.
2. For Line Items 010 to 047 FCA Free Carrier to Contractor Address, Incoterms 2010 for shipments from a commercial contractor.

## 17. Shipping Instructions

18.1 Goods must be consigned Incoterms 2010 Delivered Duty Paid (DDP) to:

7 CFSD – Receipts Section  
CFB Edmonton,  
195 Ave. and 82 St. – Bldg 236,  
Edmonton, Alberta,  
Canada T5J 4J5

18.2 The Contractor must ship the goods prepaid via the most economical means including all delivery charges to the above listed destination. Prepaid transportation costs must be shown as a separate item on the invoice, supported by a certified copy of the prepaid transportation bill of lading.

## 18. Release Documents – Distribution

The Contractor must prepare the release documents in a current electronic format and distribute them as follows:

- a. One (1) copy mailed to consignee marked: "Attention: Receipts Officer";
- b. Two (2) copies with shipment (in a waterproof envelope) to the consignee;
- c. One (1) copy to the Contracting Authority;
- d. One (1) copy to:

National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
Attention: \_\_\_\_\_

- e. One (1) copy to the Quality Assurance Representative;
- f. One (1) copy to the Contractor; and
- g. For all non-Canadian contractors, one (1) copy to:

DQA/Contract Administration  
National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
E-mail: ContractAdmin.DQA@forces.gc.ca.

## 19. Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a *Public Service Superannuation Act* (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

## 20. Confirmation of Contract Award

The Contractor was notified of contract award by \_\_\_\_\_ (*insert "e-mail", "facsimile" or "telephone", as applicable*) on \_\_\_\_\_ (*insert date*). The Work specified in the notice, if any, must not be duplicated.

## 21. Contractual Disputes

The following procedures for the settlement of any disputes which may arise throughout the life of this Contract shall prevail:

- 21.1 Disputes arising from this Contract will in the first instance be resolved by the Contracting Authority and the Contractor's Contract Administrator within fifteen (15) working days or such additional time as may be agreed to by both parties.
- 21.2 Failing resolution under (1) above, the Manager, Defence Communications Division, Electronics, Munitions and Tactical Systems Procurement Directorate (EMTSPD), Defence and Major Projects Sector (DMPS) and the Contractor's Representative Supervisor will attempt to resolve the dispute within an additional fifteen (15) working days.

## **PART 8 - CLAUSES FOR RESULTING CONTRACT 002 – IN-SERVICE SUPPORT**

### **1. Security Requirement**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

### **2. Requirements**

The Contractor must perform the Work in accordance with the Statement of Work at Annex A.

### **3. Standard Clauses and Conditions**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

#### **3.1 Supplemental General Conditions**

4007 (2010-08-16), Canada to Own Intellectual Property Rights in Foreground Information

#### **3.2 Additional SACC Clauses**

1031-2 (2008-05-12) Contract Cost Principles

A9131C (2014-11-27) Controlled Goods Program

B4060C (2011-05-16) Controlled Goods

### **4. Term of Contract**

#### **4.1 Period of the Contract**

The period of the contract shall be for two (2) years from the date of contract award.

The Contract will come into effect on the date of delivery of the first units of the Firm Quantity under Contract 001.

*(The actual start and finish dates will be inserted herein at the time of contract award.)*

#### **4.2 Option to Extend the Period of the Contract**

The Contractor grants to Canada the irrevocable option to extend the period of the contract by up to five (5) additional one (1) year periods, one period at a time, as defined below. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least thirty (30) calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

Option Period 1 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 1.

Option Period 2 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 2.

Option Period 3 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 3.

Option Period 4 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 4.

Option Period 5 - \_\_\_\_\_ to \_\_\_\_\_ referred as Option Year 5.

*Note: The actual start and finish dates of the Option Periods will be inserted herein at the time of contract award.*

## **5. Authorities**

### **5.1 Contracting Authority**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

### **5.2 Technical Authority**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

### **5.3 Procurement Authority**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

### **5.4 Contractor's Representative**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

## **6. Limitation of Expenditure**

Canada's total liability to the Contractor under the Contract must not exceed \$ \_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

- a. when it is 75 percent committed, or
- b. four (4) months before the contract expiry date, or
- c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work, whichever comes first.

If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

### **6.1 Funding by Periods**

Despite the Total Estimated Cost (Limitation of Expenditure) specified in the Contract, and unless otherwise authorized in writing by the Contracting Authority, the maximum amount which may be paid for work completed in the period ending 31 March of the year specified is as follows:

From Contract Award to 31 March 2018	\$50,000.00 (GST excluded [GSTE])
1 April 2018 to 31 March 2019	\$50,000.00 (GSTE)

*Note: The above noted dates will be revised at the time of contract award.*

**Option Periods:**

Option Period 1 - \_\_\_\_\_ to \_\_\_\_\_ Unfunded

Option Period 2 - \_\_\_\_\_ to \_\_\_\_\_ Unfunded

Option Period 3 - \_\_\_\_\_ to \_\_\_\_\_ Unfunded

Option Period 4 - \_\_\_\_\_ to \_\_\_\_\_ Unfunded.

Option Period 5 - \_\_\_\_\_ to \_\_\_\_\_ Unfunded.

The Contractor must promptly notify the Contracting Authority if at any time the above cash flow limitations impact unfavorably upon its operational requirements.

Note: *The above noted dates will be revised at the time of contract award.*

**7 Basis of Payment**

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work as determined in accordance with the Basis of Payment in Annex C. Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

**7.1 For Category 1 – Free-flow Repair and Overhaul Work**

For authorized in-plant free flow R&O, modification, contract furnished material and/ or reduction to spares services in accordance with the requirements of the contract, the Contractor shall be paid the Firm hourly Labour rates and Markups, as applicable in Canadian dollars, Customs duties are included and Applicable Taxes are extra, if applicable.

For authorized in-factory repairs the Contractor shall be paid in CAD dollars at the applicable annual hourly labour rates in accordance with the Annex C – Basis of Payment.

**7.2 For Category 2 Work – Task Authorizations**

For work and services satisfactorily performed when authorized by the Procurement Authority under a Task Authorization form i.e. DND 626, the contractor shall be paid in accordance with the payment terms specified in the 626 (i.e. Firm Fixed Price or Ceiling Price or Limitation of Expenditure price) utilizing the labour rates and mark-up listed in Annex C – Basis of Payment, plus the GST and HST, as applicable.

**7.3 Task Authorizations for AWAs:**

In the absence of a firm price or a ceiling price, the Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Labour Rates listed in Annex B - Basis of Payment, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or

interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

The Contractor will be reimbursed for the direct expenses reasonably and properly incurred in the performance of the AWAs. These expenses will be paid at actual cost with permissible/negotiated mark-up, upon submission of an itemized statement supported by receipt vouchers.

#### **7.4 Travel and Living Expenses:**

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the National Joint Council Travel Directive, (<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>), and with the other provisions of the directive referring to "travelers", rather than those referring to "employees".

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

#### **7.5 Overtime**

The Contractor must obtain written permission from the Procurement Authority to work on overtime time basis. Overtime will only be permissible under exceptional circumstances. In the event, overtime is performed, the Contractor shall be paid one and half time the labour rates.

*Note: Finalized Annex C will be incorporated at the time of contract award that will include the proposed Hourly Labour Rates and Mark-up.*

### **8. Method of Payment**

#### **8.1 Method of Payment**

SACC Manual Clause H1008C (2008-05-12) - Monthly Payments

SACC Manual Clause H1003C (2010-01-11) - Progress Payments

SACC Manual Clause H3010C (2010-01-11) - Milestone Payments

#### **8.2 Discretionary Audit**

SACC Manual Clause C0101C (2010-01-11) Discretionary Audit

#### **8.3 Time Verification**

SACC Manual Clause C0710C (2007-11-30) Time and Contract Price Verification

SACC Manual Clause C0711C (2008-05-12) Time Verification

#### **8.4 Cost Control**

The Contractor must monitor the cost of each repair, transportation and other fee to ensure that total repair costs remain within approved limits. Appropriate management control procedures must be in place and records maintained. These control procedures and records shall be available for review and/or audit on request.

## 9. SACC Manual Clauses

A2000C (2006-06-16)	Foreign Nationals (Canadian Contractor)
A2001C (2006-06-16)	Foreign Nationals (Foreign Contractor)
A9006C (2012-07-16)	Defence Contract
A9117C (2007-11-30)	T1204 - Direct Request by Customer Department
B4019C (2015-02-25)	United States Military Specifications and Standards
C0307C (2014-06-26)	Cost Submission
C0705C (2010-01-11)	Discretionary Audit
C2000C (2007-11-30)	Taxes - Foreign-based Contractor
C2604C (2013-04-25)	Customs Duties, Excise Taxes and Applicable Taxes – Non Resident
C2605C (2008-05-12)	Canadian Customs Duties and Sales Tax – Foreign-based Contractor
C2606C (2008-05-12)	Custom Duties and Excise Taxes - Exemption
C2610C (2007-11-30)	Custom Duties – Department of National Defence - Importer
C2611C (2007-11-30)	Custom Duties – Contractor Importer
C2800C (2013-01-28)	Priority Rating
C2801C (2014-11-27)	Priority Rating - Canadian Contractors
C6000C (2011-05-16)	Limitation of Price
D0050C (2007-05-25)	End User Certificate
D5510C (2014-06-26)	Quality Assurance Authority (DND) - Canadian-based Contractor
D5515C (2010-01-11)	Quality Assurance Authority (Department of National Defence) - Foreign-based and United States Contractor
D5545C (2010-08-16)	ISO 9001:2008 - Quality Management Systems - Requirements (Quality Assurance Code C)
D5604C (2008-12-12)	Release Documents (DND) - Foreign-based Contractor
D5605C (2010-01-11)	Release Documents (DND) - United States-based Contractor
D5606C (2012-07-16)	Release Documents (DND) - Canadian-based Contractor
D9002C (2007-11-30)	Incomplete Assemblies
G1005C (2008-05-12)	Insurance
L0005C (2008-05-12)	Special Production and Special Test Equipment Owned by Canada
L5001C (2008-05-12)	Surplus Government Property

## 10. Invoicing Instructions

- 10.1 The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment. Each claim must show:
- all information required on form PWGSC-TPSGC 1111;
  - all applicable information detailed under the section entitled "Invoice Submission" of the general conditions; and
  - the description and value of the work claimed as detailed in the Contract.
- 10.2 Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

- 10.3 The Contractor must not submit claims until all work identified in the claim is completed.
- 10.4 Invoices must be distributed as follows:
- (a) The original invoice (hard copy) and one (1) e-copy must be forwarded to the Procurement Authority identified under the section entitled "Authorities" of the Contract.
  - (b) An e-copy must be sent to the consignee.
  - (c) One (1) e-copy must be forwarded to the Contracting Authority and the Technical Authority identified under the section entitled "Authorities" of the Contract.

## 11. Certifications

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

## 12. Applicable Laws

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

## 13. Priority of Documents

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

- a. The Articles of Agreement;
- b. Annex C - Basis of Payment;
- c. The general conditions 2030 (2016-04-04), General Conditions – Goods (Higher Complexity);
- d. The applicable sections and sub-sections of the general conditions 2035 (2016-04-04), General Conditions - Services (Higher Complexity);
- e. The supplemental conditions 4007 (2010-08-16), Canada to Own Intellectual Property Rights in Foreground Information;
- f. Annex B – Logistics SOW; and
- g. The Contractor's bid dated \_\_\_\_\_.

## 14. Preparation for Delivery - Canadian-based Contractor

- 14.1 Preservation and packaging for all items must be in accordance with the Canadian Forces packaging specification D-LM-008-001/SF-001, and must be marked to D-LM-008-002/SF-001. Form Level B Package Data Form Required must be in accordance with D-LM-008-011/SF-001.
- 14.2 Packaging data forms previously approved by Canadian authorities are acceptable.
- 14.3 Approved coded packaging data is shown immediately below the description of the item to which it applies. Where no data is shown, the Contractor must submit a packaging data form for approval.

## 15. Preparation for Delivery – Canadian Forces Packaging Specifications

The Contractor must prepare all Items for delivery in accordance with the latest issue of the Canadian Forces packaging specifications D-LM-008-035/SF-001, Electrostatic Discharge Protective Packaging - Electronic Parts, Assemblies and Equipment.

## 16. Periodic Usage Reports

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

The Contractor must provide this data in accordance with the reporting requirements detailed below. 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.

### 16.1 Quarterly Periods

The Quarterly Periods are defined as follows:

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

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

### 16.2 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, GST or HST extra;
- d. the total amount, GST or HST extra, expended to date against each authorized task;
- e. the start and completion date for each authorized task;
- f. the active status of each authorized task, as applicable; and
- g. total funds committed and expended including and excluding taxes.

**For all authorized tasks:**

- a. the amount (GST or HST extra) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
- b. the total amount, GST or HST extra, expended to date against all authorized TA's.

## **17. Shipping Addresses**

Goods must be consigned Incoterms 2011 Delivered Duty Paid (DDP) to:

7 CFSD – Receipts Section  
CFB Edmonton,  
195 Ave. and 82 St. – Bldg. 236,  
Edmonton, Alberta,  
Canada T5J 4J5

## **18. Release Documents – Distribution**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

## **19. Proactive Disclosure of Contracts with Former Public Servants**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

## **20. Confirmation of Contract Award**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

## **21. Contractual Disputes**

Same wording applies as presented in Part 7 – Clauses for Resulting Contract 001.

*Note: Full text of applicable clauses as shown in Part 7 will be inserted at the time of contract award, under paragraphs that refer to Part 7.*

## NON-DISCLOSURE AGREEMENT

### Land Command Support System Life Extension (LCSS LE) Project

This Agreement made in duplicate this \_\_\_\_\_ day of \_\_\_\_\_ 201\_\_.

(Day number) (Month) (Year)

BETWEEN Her Majesty the Queen in Right of Canada as Represented by the Minister of Public Works and Government Services ("Canada")

AND \_\_\_\_\_ receiving the unclassified  
(Full legal name of organization in print)  
 information as constituted pursuant to the laws of \_\_\_\_\_ and having a  
(Insert laws in print)  
 place of business at \_\_\_\_\_ (the "Recipient").  
(Complete address in print)

Whereas Canada has issued a Request for Proposal (RFP) No. W8486-135152/D, to solicit proposals for the Land Command Support System Life Extension (LCSS LE) Project; and

Whereas in accordance with the provisions of the RFP Canada has provided for the disclosure of certain information listed in Appendix A2 to Annex A of the RFP ("Information"); and

Whereas the Recipient wishes to receive the Information solely for the purpose of preparing a proposal in response to the LCSS LE RFP.

Therefore, in consideration of the premises and the mutual promises, conditions and agreements of this Agreement the Parties hereto agree as follows:

1. Subject to the terms and conditions of this Agreement Canada agrees to disclose the Information to the Recipient on an as requested basis.
2. The Recipient agrees that it shall use the Information solely for the purpose of preparing a proposal in response to the LCSS LE RFP and for no other purpose.
3. The Recipient acknowledges that the Information may be subject to certain proprietary rights belonging to various parties and shall not be used by the Recipient or disclosed to anyone at any time except for the purposes of, and in accordance with, this Agreement and for no other purpose and shall ensure that its personnel do likewise.
4. The Recipient shall not disclose the Information to anyone unless and until the proposed recipient has signed an agreement in terms identical to this Agreement with the necessary changes to reflect names, addresses, offices and the like. Such disclosure shall be made only to a recipient with a need to know and solely for the purposes of the preparation of a proposal in response to the LCSS LE RFP.
5. The Recipient shall not copy, reproduce or otherwise duplicate the Information or any information reflecting the Information in whole or in part or allow others to do so for any purposes other than the preparation of a bid in response to this LCSS LE RFP unless Canada has given its express, prior, written approval.
6. Whether in storage or in use, the information shall be protected by the Recipient with the same degree of care as the Recipient uses to protect its own proprietary intellectual property of like importance against public disclosure, but in no case any less than reasonable care.

- 7. The Recipient shall return the Information when it is no longer required for the preparation of a proposal in response to the LCSS LE RFP, when required by Canada to do so, or with its proposal. In like fashion the Recipient shall return any copies it may have been allowed to make which are in a media that is capable of being sent with the proposal, shall destroy any other copies or any information reflecting the Information on any media whatsoever, and shall ensure that anyone to whom the Information has been divulged do likewise. Those who do not submit a proposal must nevertheless comply with this paragraph by the Closing Date of the LCSS LE RFP.
- 8. The obligations herein contained shall survive the submission of a bid and the performance of any contract awarded and shall continue thereafter in full force and effect.
- 9. This Agreement shall be interpreted, and the relationship of the parties be determined, in accordance with the laws in force in the province of Ontario in Canada.

IN WITNESS THEREOF, this Agreement has been executed by duly authorized officers of

\_\_\_\_\_  
(Name of Recipient in print)

Per: \_\_\_\_\_  
(Name of duly authorized officer in print)

\_\_\_\_\_  
(Title of duly authorized officer in print)

\_\_\_\_\_  
(Signature of duly authorized officer)

\_\_\_\_\_  
(Date in print)

**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 \(ESDC\) – Labour's](#) 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).

## **ANNEX A**

### **Statement of Work**



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## Dictionary of Terms and Acronyms

<b>Term/Acronym</b>	<b>Definition</b>
AOI	Automated Optical Inspection
AVL	Alternate Vendor List
BOM	Bill of Material
CA	Contracting Authority
CAD	Computer Aided Design
CAGE	Contractor and Government Entity
CCA	Circuit Card Assembly
CDRL	Contract Data Requirements List
CFM	Contractor Furnished Spares
CFSD	Canadian Forces Supply Depot
CFSS	Canadian Forces Supply System
CFTO	Canadian Forces Technical Order
CGP	Controlled Goods Program
CIS	Contract Issue Spares
CLIN	Contract Line Item
CNC	Computer Numerically Controlled
CofC	Certificate Of Conformance
COTS	Commercial Off The Shelf
CP	Commissioning Plan
CRPA	Contractor Repair Parts Account
CS	Central Server
CSB	Communications Selector Box
CTP	Certified TEMPEST Product
db	decibel
DCG	Document Control Group
DDP	Delivered Duty Paid
DID	Data Item Description
DL	Data List
DLCSPM	Directorate - Land Command Systems Program Management
DLP	Directorate - Land Procurement
DMC	De-militarization Code
DND	Department of National Defence
DSCO	Directorate - Supply Chain Operations
EDD	Estimated Delivery Date
e.g.	exempli gratia (for example)
EHS	Environmental Health and Safety
EIPA	Export and Import Permits Act
ELAN	Enhanced Local Area Network
EMS	Environmental Management System
EmSec	Emanations Security
ESS	Environmental Stress Screening
FAAP	First Article Approval Procedure
FAI	First Article Inspection
FAIR	First Article Inspection Report
FRP	Full Rate Production
FATP	Final Acceptance Test Procedure
FIFO	First-In- / First-Out
FTS	Functional Test Station

<b>Term/Acronym</b>	<b>Definition</b>
GETS	Government Electronic Tendering System
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GFOS	Government Furnished Overhaul Spares
GIDEP	Government/Industry Data Exchange Program
GST	Goods and Services Tax
HST	Harmonized Sales Tax
HVAC	Heating, Ventilation and Air Conditioning
Hz	Hertz
iATP	Initial Acceptance Test Procedure
ID	Identifier
i.e.	id est (in other words)
I/O	Input / Output
IOR	Immediate Operational Requirement
IR	Insulation Resistance
ISO	International Organization for Standardization
ISS	In-Service Support
ITA	Integrated Test Adapter
LAN	Local Area Network
LCSS	Land Command Support System
LCSS LE	Land Command Support System Life Extension
LED	Light Emitting Diode
LES	LAN Ethernet Switch
LIFO	Last-In / First-Out
LRIP	Low Rate Initial Production
MAFA	Months After Full Rate Production Approval
Mk	Mark
MPS	Master Project Schedule
MRB	Manufacturer's Review Board
MRC	Maximum Repair Cost
MS	Microsoft
MSD	Moisture Sensitive Device
MSDS	Material Safety Data Sheet
NATO	North Atlantic Treaty Organization
NCAGE	NATO Contractor and Government Entity
NDA	Non-Disclosure Agreement
NDHQ	National Defence Headquarters
NDID	National Defence Index of Documentation
NDQAR	National Defence Quality Assurance Representative
No.	Number
NSCM	NATO Supply Code for Manufacturers
NSN	NATO Stock Number
OAG	Office of the Auditor General
OEM	Original Equipment Manufacturer
OHSMS	Occupational Health and Safety Management System
OPI	Office of Primary Interest
PA	Procurement Authority
PATP	Post-TEMPEST Acceptance Test Procedure
PCB	Polychlorinated Biphenyls
PCB	Printed Circuit Board

<b>Term/Acronym</b>	<b>Definition</b>
PDF	Portable Document Format
PDU-SFF	Power Distribution Unit – Small Form Factor
PL	Parts List
PM	Project Manager
PM	Project Management
PN	Part Number
POC	Point of Contact
PPE	Personal Protective Equipment
PRM	Progress Review Meeting
PRR	Priority Repair Request
PSCN	Permanent System Control Number
PSD	Power Spectral Density
PSI	Pounds per Square Inch
PSPC	Public Services and Procurement Canada
QA	Quality Assurance
QAC	Quality Assurance Code
QAR	Quality Assurance Representative
QMS	Quality Management System
Qty	Quantity
R&O	Repair and Overhaul
RCA	Root Cause Analysis
RDD	Required Delivery Date
RFP	Request for Proposal
RMA	Repairable Material Account
RMR	Repairable Material Request
ROSE	Resistivity of Solvent Extract
RSA	Repairable Supply Account
SACC	Standard Acquisition Clauses and Conditions
SAT	Site Acceptance Test
SC	Stock Holding Code
SE	System Engineering
SFP	Small Form-factor Pluggable
SIP	System Integration Plan
SIR	Surface Insulation Resistance
SMT	Surface Mount Technology
SOMM	System Operation and Maintenance Manual
SOP	Standard Operating Procedure
SOW	Statement of Work
SPC	Statistical Process Control
SSSRP	Site Survey and System Relocation Plan
STE	Special Test Equipment
TA	Technical Authority
TAT	Turn Around Time
TB	Treasury Board
TDP	Technical Data Package
THT	Through-Hole-Technology
TLA	Top Level Assembly
TP&M	Training Plan and Materials
TQM	Total Quality Management
TRM	Technical Review Meeting

<b>Term/Acronym</b>	<b>Definition</b>
TS	Test Station
UID	Unique Identifier
UUT	Unit Under Test
TTS	Thermal Test Station
Validate	Validation is intended to ensure a product, service, or system result in a product, service, or system that meets the operational needs of the user
Verify	Verification is intended to check that a product, service, or system meets a set of specifications
VDC	Volts Direct Current
VDN	Vehicle Distribution Network
VIP	Vehicle Interface Panel
VPN	Virtual Private Network
VTS	Vibration Test Station
WBS	Work Breakdown Structure
WIP	Work in Progress
Work	All activities needed to fulfill the requirements specified in the Statement of Work
Working Days	The working days of the Technical Authority, i.e. Monday through Friday minus statutory holidays observed by the Department of National Defence
XML	Extensible Markup Language

## 1 General

This Statement of Work is a “build to print” rather than an “off the shelf” or “development”, initiative. As such, the requirements specified herein are largely associated with the essential production and test *processes* rather than the *product*. The product already exists as its detailed design has been developed and specified through a previous DND contract. This documented design is provided to the Contractor as Government Furnished Information (GFI) along with Government Furnished Equipment (GFE) including significant test equipment and sample products.

The essential work of the Contractor is primarily to:

- a. understand the intricacies of the existing product design from a manufacturing perspective, and
- b. employ existing mature production and test capabilities, tailored as necessary, to produce and deliver high quality product.

### 1.1 Purpose

The purpose of this Statement of Work (SOW) is to specify the requirements for the manufacture of the Vehicle Interface Panel Mark 25 (VIP Mk25), associated VIP Mk25 Flange Assemblies, and VIP Mk25 spare components.

Throughout this document the term “Work” is used synonymously with “Statement of Work.”

### 1.2 Scope

This document is structured as follows:

- a. Manufacturing Requirements:
  - i. Administration Requirements
  - ii. Product Requirements
  - iii. Production Requirements
  - iv. Test Requirements
- b. Environment Health and Safety Requirements

#### 1.2.1 Manufacturing

The following subparagraphs provide an overview of the items to be manufactured which includes:

- a. VIP Mk25,
- b. VIP Mk25 Flange Assemblies, and
- c. VIP Mk25 spare components.

##### 1.2.1.1 VIP Mk25

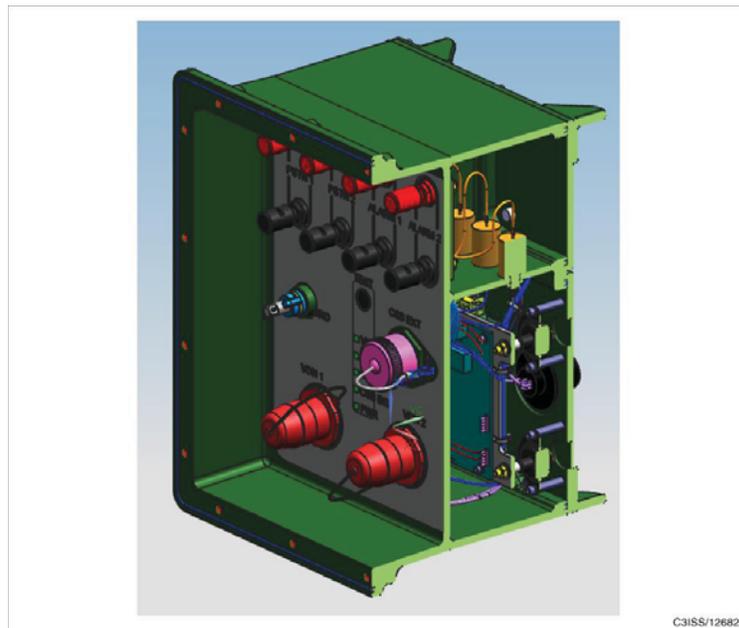
The primary function of VIP Mk25 is to connect communication systems external to a military vehicle to communication devices internal to the vehicle. Internal equipment includes the Communications Selector Box (CSB), the Power Distribution Unit – Small Form Factor (PDU-SFF) and the Local Area Network (LAN) Ethernet Switch (LES) v2. External equipment includes field wired telephones, alarm devices, CSB Extension devices and the capability of three

Ethernet interfaces to the Vehicle Distribution Network (VDN) fibre optic and copper wire infrastructure.

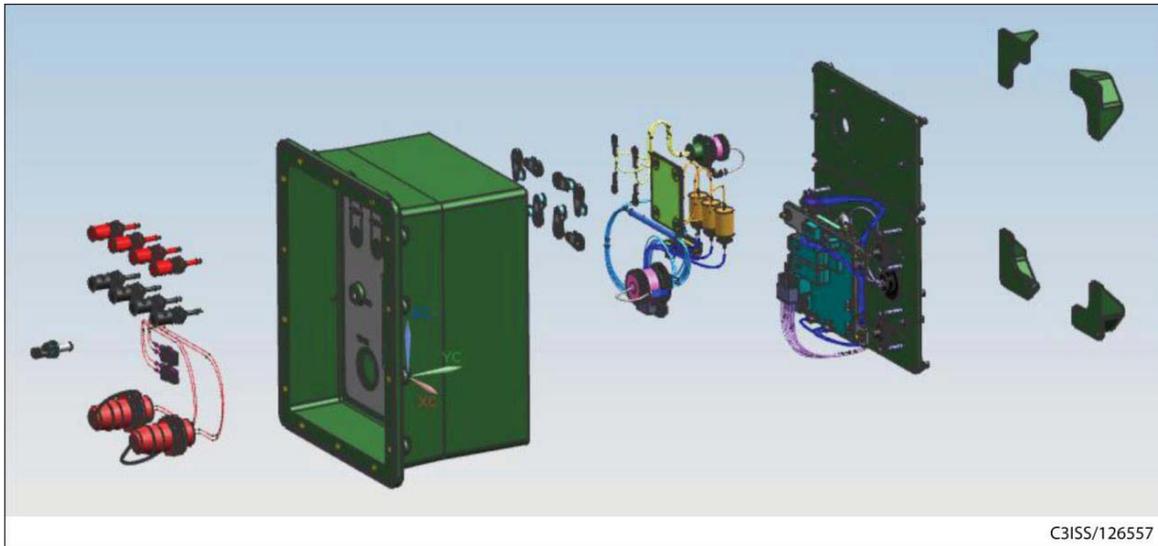
The VIP Mk25 chassis design is based on the envelope of the legacy VIP Mk2 and VIP Mk18. Assembled, cross-section and exploded views of the VIP Mk25 are shown in Figure A-1, Figure A-2 and Figure A-3 respectively.



**Figure A-1: VIP Mk25 Assembled View**



**Figure A-2: VIP Mk25 Cross-Section View**



**Figure A-3: VIP Mk25 Exploded View**

#### **1.2.1.2 VIP Mk25 Flange Assemblies**

Flange Assemblies are used to adapt the mounting of the VIP Mk25 to various vehicle types. There are three (3) different Flange Assembly types as follows:

- a. Flange Assembly Vehicle Interface Panel Mk18 to Vehicle Interface Panel Mk25, shown in Figure A-15;
- b. Flange Assembly Vehicle Interface Panel Mk2 to Vehicle Interface Panel Mk25, shown in Figure A-16; and
- c. Flange Assembly Vehicle Interface Panel Mk3 to Vehicle Interface Panel Mk25, shown in Figure A-17.

#### **1.2.1.3 VIP Mk25 Spare Components**

Limited in-service repair of the VIP Mk25 will be conducted by field units. Delivery of additional spare VIP Mk25 components required to support this activity is included within the scope of this Work.

In Service Support of the VIP Mk25 will be provided by the Contractor under a separate contract. Delivery of additional spare VIP Mk25 components required to support this activity is included within the scope of this Work.

## **2 Administration Requirements**

The Contractor must fulfill the administrative requirements specified in the following subparagraphs.

### **2.1 Meetings**

The Contractor must fulfill the meeting requirements specified in the following subparagraphs. Meetings will be held at the Contractor's facility or via videoconference or teleconference at the discretion of the Contracting Authority (CA) or Technical Authority (TA).

#### **2.1.1 Kick-off Meeting**

The Contractor must hold a meeting within twenty (20) working days after Contract Award to:

- a. review the details of the Contract,
- b. review Department of National Defence (DND) procedures (quality assurance, supply, finance, etc.),
- c. clarify areas of confusion,
- d. review and clarify scheduled activities, and
- e. ensure that everyone understands their responsibilities under the Contract.

For planning purposes, up to ten (10) Government representatives will attend the Kick-off Meeting. The names of the government representatives attending the Kick-off Meeting will be provided by the TA.

#### **2.1.2 Progress Review Meetings**

The Contractor must hold a Progress Review Meeting (PRM) at least once per month throughout the Contract Period, and whenever the TA or the CA deems it necessary. The first PRM must occur one calendar month after the Kick-off Meeting.

#### **2.1.3 Technical Review Meetings**

The Contractor must hold Technical Review Meetings (TRM) as required by the TA to address technical issues as they arise. This includes technical milestone meetings such as:

- a. Low Rate Initial Production Readiness Review Meetings (Paragraphs 4.2.1.1 and 4.3.1.1),
- b. First Article Inspection Readiness Review Meetings (Paragraphs 4.2.2.7 and 4.3.2.5),
- c. First Article Inspection Review Meetings (Paragraphs 4.2.2.8.3 and 4.3.2.6.2), and
- d. Full Rate Production Readiness Review Meetings (Paragraphs 4.2.2.10 and 4.3.2.8).

#### **2.1.4 Contract Closeout Meeting**

The Contractor must hold a Contract Closeout Meeting to close out the project. Details of the Closeout Meeting, as well as the number and names of government representatives attending the meeting, will be provided by the TA.

## **2.2 Agendas**

The Contractor must submit meeting agendas and materials in accordance with Contract Data Requirements List (CDRL) Item No. 001 and Data Item Description (DID) PM-001.

## **2.3 Meeting Minutes**

The Contractor must submit meeting minutes in accordance with CDRL Item No. 002 and DID PM-002.

## **2.4 Action Item Registry**

The Contractor must maintain an Action Item Registry and submit updates in accordance with CDRL Item No. 003 and DID PM-003.

## **2.5 Schedule**

The Contractor must maintain a Master Project Schedule (MPS) and submit updates in accordance with CDRL Item No. 004 and DID PM-004.

### **2.5.1 Working Days**

When the term “Working Days” is used within this Statement of Work (Annex A), and its appendices, this must be interpreted as the working days of the TA, i.e. Monday through Friday minus statutory holidays observed by the DND. Due date adjustments will not be made for Contractor compressed work weeks, although every effort will be made not to schedule activities like meetings on such days. Due Date adjustments will be considered for one annual plant shutdown for vacation.

## **2.6 Reports**

The Contractor must fulfill the reporting requirements specified in the following subparagraphs.

### **2.6.1 Progress Reports**

The Contractor must submit Progress Reports in accordance with CDRL Item No. 005 and DID PM-005.

### **2.6.2 Technical Reports**

The Contractor must submit Technical Reports in accordance with CDRL Item No. 014 and DID SE-006.

### **2.6.3 Closeout Report**

The Contractor must submit a Closeout Report in accordance with CDRL Item No.006 and DID PM-006.

## **2.7 Data Deliverables**

The Contractor must submit the data deliverables specified in Appendix A2. The TA may decrease the delivery frequency of any data deliverable at its discretion.

## **2.8 Information Exchange**

The Contractor must communicate with the CA, TA and Procurement Authority (PA), and submit Data Deliverables via email.

The Contractor must establish an on-line capability that facilitates secure electronic exchange between the Contractor and CA, TA and PA of files that are too large to transmit via email.

## **2.9 Applicable Documents**

Documents listed in Appendix A3 form part of this SOW to the extent specified herein, and are supportive of the SOW when referenced herein. All other document references are to be considered supplemental information only. Unless otherwise specified, the issue or amendment of documents effective for this SOW will be those in effect on the date of Bid Closing. In the event of a conflict between the documents referenced herein, with the exception of the Technical Data Packages (TDP), and the contents of the SOW, then the contents of the SOW will take precedence.

### 3 Product Requirements

The Contractor must produce VIP Mk25s and Flange Assemblies that comply with the following subparagraphs.

#### 3.1 General Product Requirements

The following subparagraphs apply to the VIP Mk25 and Flange Assembly products.

##### 3.1.1 Build To Print

The Contractor must manufacture the VIP Mk25 and Flange Assemblies in accordance with their respective TDP referenced at Appendix A3, plus all authorized design changes and deviations listed in Table 3 of Appendix A1.

The Contractor must not deviate from the TDP unless explicitly authorized to do so by way of a design change, deviation or waiver approved per Paragraph 3.1.2.

##### 3.1.2 Design Changes, Deviations, Waivers and Additional Work

These procedures must be followed for any design change, deviation, waiver or additional work.

###### 3.1.2.1 When Canada Requests a Design Change, Deviation or Additional Work

- a. The TA will provide the CA with a description of the design change, deviation or additional work in sufficient detail to allow the Contractor to respond by documenting the impact on Contract requirements, price and schedule:
- b. The CA will then forward the description to the Contractor.
- c. The Contractor must complete the appropriate form as follows, and submit the completed form to the CA for evaluation and negotiation:
  - i. DND 672 Design Change/Deviation per CDRL Item No. 016 and DID SE-008,
  - ii. DND 675 Waiver per CDRL Item No. 017 and DID SE-009, or
  - iii. PWGSC-TPSGC 1379 Work Arising per CDRL Item No. 018 and DID SE-010.
- d. The completed form must document the following:
  - i. any impact of the design change, deviation, waiver or additional work on the requirements of the Contract;
  - ii. a price breakdown of the cost (increase or decrease) associated with the implementation of the design change or deviation, or performance of the additional work; and
  - iii. a schedule to implement the design change or deviation, or perform the additional work, and the impact on the Contract delivery schedule.
- e. **For Design Changes / Deviations and Waivers** - Once agreement has been reached DND 672 and DND 675 forms must be signed by all parties in the appropriate signature blocks. This constitutes the written authorization for the Contractor to proceed with the work, and the Contract will be amended accordingly.
- f. **For Additional Work** - Once agreement has been reached DND will issue a DND 626. This constitutes written authorization for the Contractor to proceed with the additional work.

### **3.1.2.2 When the Contractor Requests a Design Change, Deviation, Waiver or Additional Work**

- a. The Contractor must provide the CA with a description of the design change, deviation, waiver or additional work in sufficient detail for review by Canada.
- b. The CA will forward the description to the TA for review.
- c. If Canada agrees that a design change, deviation, waiver or additional work is required, then the procedures detailed in Paragraph 3.1.2.1 must be followed.
- d. The CA will inform the Contractor in writing if Canada determines that the design change, deviation, waiver or additional work is not required.

### **3.1.2.3 Approval**

The Contractor must not proceed with any design change, deviation, waiver or additional work without the written authorization of the CA. Any work performed without the CA's written authorization will be considered outside the scope of the Contract and no payment will be made for such work.

### **3.1.3 Condition of Components and Material**

The Contractor must use only component parts and material that are new production of current manufacture supplied by the principal manufacturer or its accredited agent.

All component parts and material must conform to the latest issue of the applicable drawing, specification and part number, as applicable, in effect on the bid closing date, or as revised by way of a design change, deviation or waiver approved per Paragraph 3.1.2.

The Contractor must not use component parts and materials that have been refurbished or are certified as "equal to new quality".

### **3.1.4 Substitute Components and Material**

The Contractor must use only component parts and material that are of the identical description, brand name, model and/or part number as specified in the TDP (including the Alternate Vendor List (AVL)) or in a design change, deviation or waiver approved per Paragraph 3.1.2.

The Contractor must not use component parts and material that are not specified in the TDP, AVL or an authorized design change, deviation or waiver.

### **3.1.5 Lead Time**

The Contractor must review the TDP Bills of Material (BOM) and Alternate Vendor Lists (AVL) within two (2) weeks after Contract Award and quarterly thereafter and identify all long lead-time components that could impact the delivery schedule. All Parts Lists defined within the TDP must be considered BOMs. Where no AVL exist, BOMs must be used.

The Contractor must report all long lead-time issues in the Technical Report per DID SE-006.

### **3.1.6 Obsolescence**

The Contractor must keep current regarding obsolescence and last-time-buy notifications of all component parts and material. Obsolescence issues must be reported in the Technical Report per DID SE-006.

The Contractor must:

- a. advise the TA within five (5) working days of discovering that a component or material is or will become unobtainable due to obsolescence, and an obtainable alternate is not specified in the AVL, thereby impacting the *Firm Quantity* production.
- b. advise the TA within twenty (20) working days of discovering that a component or material is or will become unobtainable due to obsolescence, and an obtainable alternate is not specified in the AVL, thereby impacting production of any *Optional Quantity*.

The Contractor must research options, such as last-time-buys and substitute items, for components and material becoming obsolete, and provide the TA with a recommended solution.

The Contractor must gain approval for use of new substitute items by way of a design change or deviation per Paragraph 3.1.2.

The Contractor must request approval to proceed with a last-time-buy by way of a request for additional work per Paragraph 3.1.2.

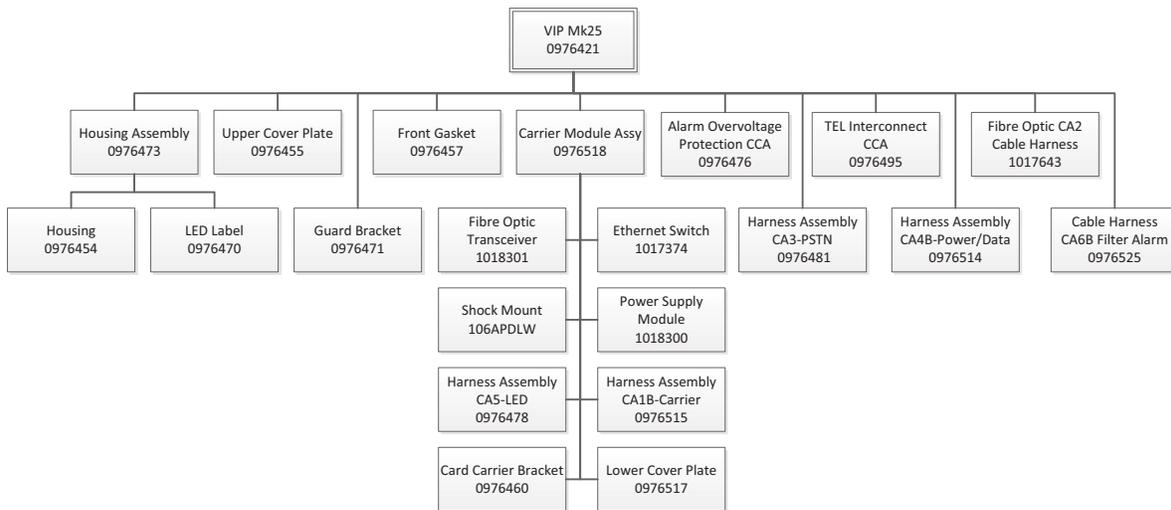
The Contractor must warehouse last-time-buy components and material until used for the intended purpose, or deliver them to Canada as directed by the TA. Last-time-buy components and materials must be stored appropriately by the Contractor (e.g. nitrogen storage), and may require periodic inspection, as directed by the TA.

### 3.2 VIP Mk25 Product Requirements

The following subparagraphs apply to the VIP Mk25 product.

#### 3.2.1 Overview

The VIP Mk25 is comprised of components as depicted in the Assembly Tree in Figure A-4.



**Figure A-4: VIP Mk25 Assembly Tree**

The primary components of the VIP Mk25 are:

- a. one Chassis,

- b. one Carrier Module Assembly,
- c. three Commercial-Off-The-Shelf (COTS) Modules,
- d. two Circuit Card Assemblies,
- e. six Internal Cable Harnesses, and
- f. a variety of other components that are defined within the VIP Mk25 TDP, e.g. keypad membrane and metal components.

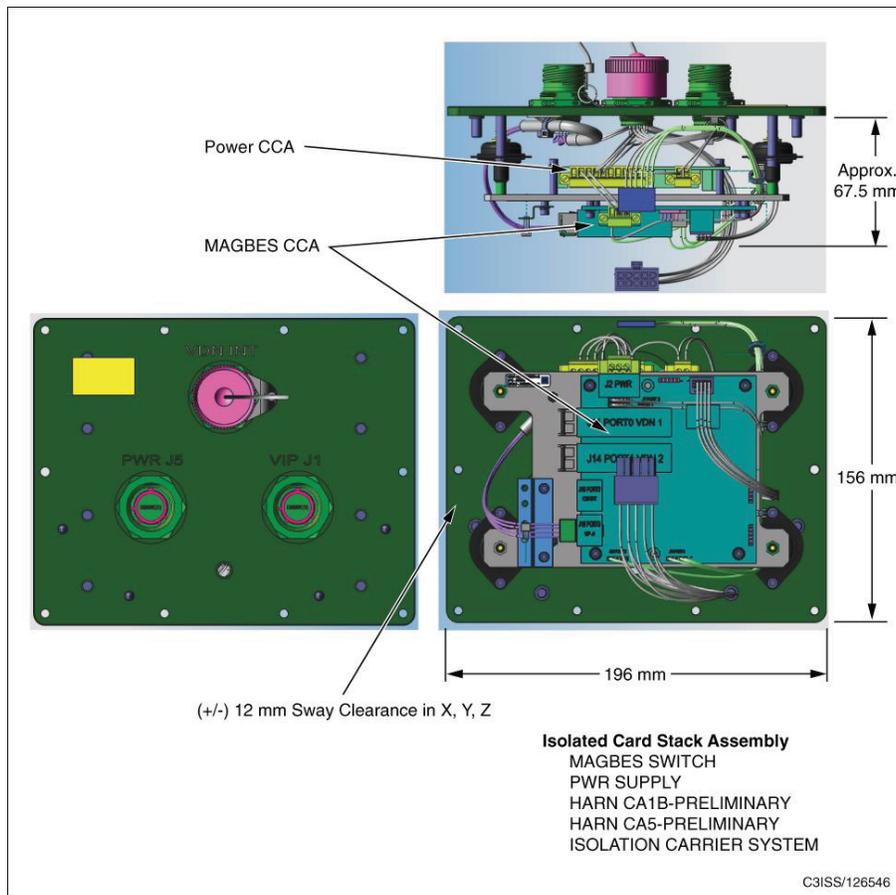
### **3.2.1.1 Chassis**

The main section of the VIP Mk25 Chassis is investment cast. The smaller metal chassis components, i.e. Plate Covers and Bracket Guards do not undergo investment casting. The Bracket Guards are die cast, whereas the Upper Plate Cover and Lower Plate Cover may be produced from metal sheeting using Computer Numerically Controlled (CNC) machinery.

### **3.2.1.2 Carrier Module Assembly**

The main electronic assembly of the VIP Mk25 is called the Carrier Module Assembly, or more specifically the 5-Port Gig Switch/Power Carrier Module Assembly. It's designed for ease of installation and replacement within the VIP Mk25 Chassis. The Carrier Module Assembly, which is shown in Figure A-5, contains the following sub-components.

- a. Ethernet Switch,
- b. Power Supply Module,
- c. Fibre Optic Transceivers,
- d. Shock Mounts,
- e. Back Plates,
- f. External Connectors, and
- g. Cable Harnesses (CA1B and CA5).



**Figure A-5: Carrier Module Assembly**

### 3.2.1.3 Commercial Off The Shelf Components

The VIP Mk25 contains COTS components which are available in the public domain. They are the following:

- a. Ethernet Switch,
- b. Power Supply Module, and
- c. Fibre Optic Transceivers (mounted within the Ethernet Switch).

It's noted that although the above items are COTS, the TDP specifies additional testing and/or screening requirements.

#### 3.2.1.3.1 Ethernet Switch

The main features of the MPL MAGBES-12P Ethernet Switch shown in Figure A-6 are as follows:

- a. PC/104 stacked,
- b. web based configuration; and
- c. extended temperature.

Further details can be found on the MPL website at <http://www.mpl.ch/t2865.html>.



**Figure A-6: Ethernet Switch**

### 3.2.1.3.2 Power Supply Module

The main features of the Tri-M Power Supply shown in Figure A-7 are as follows:

- a. PC-104 compliant,
- b. extended temperature,
- c. performs input to output, non-isolated vehicle power conditioning (ripple, surge and voltage regulation), and
- d. input level of +8 Volts Direct Current (VDC) to +33 VDC to an output capable of 10 Watts at +5 VDC.

Further details can be found on the Tri-M website at <http://www.tri-m.com/index.php/products/tri-m/power-ups/smart-pc104-power-supplies/tps1035-smart-psu>.



**Figure A-7: Power Supply Module**

### 3.2.1.3.3 Fibre Optic Transceiver

The main features of the fibre optic transceiver shown in Figure A-8 are as follows:

- a. Small Form-factor Pluggable (SFP),
- b. extended temperature, and
- c. capable of interfacing to multimode fibre as used in the Fibre Optic CA2 Cable Harness.



**Figure A-8: Fibre Optic Transceiver**

### **3.2.1.4 Circuit Card Assemblies**

The VIP Mk25 CCAs are as follows:

- a. Alarm Overvoltage Protection CCA, and
- b. TEL/Spare CCA.

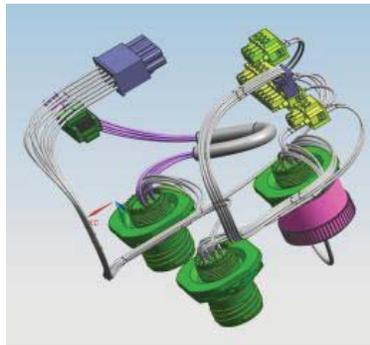
These custom CCAs are designed specifically for the VIP Mk25 and are relatively simple in design. The TEL/Spare CCA is a simple design with one (1) Through-Hole-Technology (THT) connector, whereas the Alarm Overvoltage Protection CCA contains five (5) components, four (4) of which are surface mount. For production, CCAs must be processed through a Surface Mount Technology (SMT) line. Intrusive Reflow may be considered for THT technology components.

### **3.2.1.5 Internal Cable Harnesses**

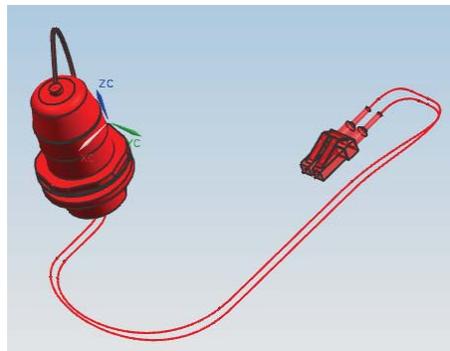
The VIP Mk25 contains the following cable harness assemblies depicted in Figure A-9, Figure A-10, Figure A-11, Figure A-12, Figure A-13 and Figure A-14:

- a. Harness Assembly CA1B-Carrier,
- b. Fibre Optic CA2 Cable Harness,
- c. Harness Assembly CA3-PSTN,
- d. Harness Assembly CA4B-Power/Data,
- e. Harness Assembly CA5-LED, and
- f. Harness Assembly CA6B, Filter, Alarm.

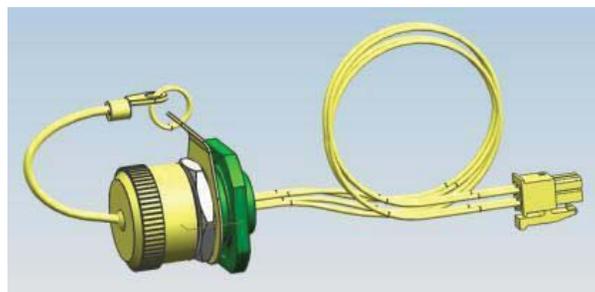
All cable harnesses are custom built to IPC except for the Fibre Optic CA2 Cable Harness, which is COTS and must be ordered in accordance with the TDP.



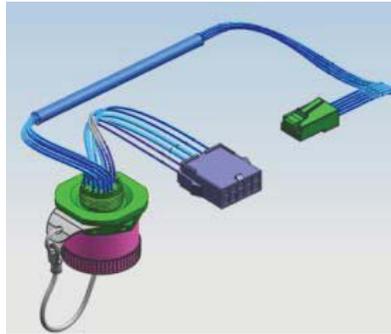
**Figure A-9: Harness Assembly CA1B-Carrier**



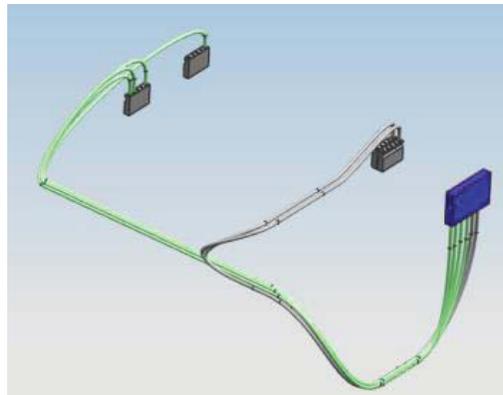
**Figure A-10: Fibre Optic CA2 Cable Harness**



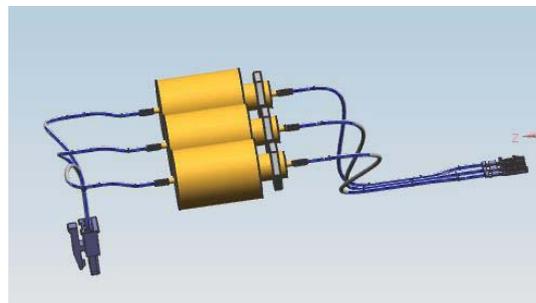
**Figure A-11: Harness Assembly CA3-PSTN**



**Figure A-12: Harness Assembly CA4B-Power/Data**



**Figure A-13: Harness Assembly CA5-LED**



**Figure A-14: Harness Assembly CA6B, Filter, Alarm**

### **3.2.2 Technical Data Package**

The VIP Mk25 TDP provides explicit design specifications through a combination of printed and electronic material, including:

- a. Computer Aided Design (CAD) files, e.g. Electronic (E)-CAD for Printed Circuit Boards (PCB); and Mechanical (M)-CAD for metal components, enclosure, brackets, plastic and gasket components;
- b. Drawings and Artwork Assembly Drawings, i.e. Top Level, Sub Level, CCA, PCB, cabling, labels, and membrane;
- c. BOM, AVL and Assembly Tree Structure;
- d. Schematics; and
- e. Level 3 Assembly Drawings and Aids, e.g. enclosure, cabling, CCA, PCB, and other sub-assemblies.

### 3.2.3 Component Updates

The Contractor must keep current of component data sheet updates, revisions or changes of all components used within the VIP Mk25 and report Component Data Sheet issues (i.e. updates, revisions or changes), including an impact analysis, in the Technical Report per DID SE-006.

### 3.2.4 Identification and Traceability

The Contractor must provide product identification and traceability as specified in the following subparagraphs.

The Contractor must submit an Identification and Traceability Plan as part of the Quality Plan in accordance with DID SE-001.

#### 3.2.4.1 Top Level Assembly Identification

The Contractor must identify and mark each VIP Mk25 Top Level Assembly (TLA) using a label as specified in the Drawing Number 0976453 of the VIP Mk25 TDP. The X's shown in the drawing must be replaced with values as follows:

- a. PT/PC: Replace X's with the Part Number specified for Contract Line Item 001 in Table 1 in Appendix A1 of this Annex;
- b. MFR: Replace X's with the NATO Contractor and Government Entity (NCAGE) identifier of the Contractor's VIP Mk25 production facility;
- c. SERIAL NO: Replace X's with serial number values starting at VIP25B0201 and continuing with VIP25B0202, VIP25B0203, etc.; and
- d. NSN: Replace X's with the NATO Stock Number specified for Contract Line Item 001 in Table 1 in Appendix A1 of this Annex.

The 2-dimensional data carrier symbol specified in the drawing is identified elsewhere herein as the Unique Item Identifier (See Paragraph 4.1.4.2). Its value must be structured in accordance with Construct #2 by concatenating the NCAGE, Part Number and Serial Number values into a single data string as follows:

- a. Raw Data:

NCAGE:           **XXXXX**  
 Part Number:   **0976421-4**  
 Serial Number:  **VIP25BXXXX**

b. Raw Data with Semantics:

NCAGE: 17V**XXXXXX**  
 Part Number: 1P**0976421-4**  
 Serial Number: S**VIP25BXXXX**

c. Raw Data with Semantics and Syntax concatenated into a single Data String:

[><sup>R</sup>/s06<sup>G</sup>/s17V**XXXXXX**<sup>G</sup>/s1P**0976421-4**<sup>G</sup>/s**VIP25BXXXX**<sup>R</sup>/s<sup>E</sup>O<sup>T</sup>

### 3.2.4.2 Component Identification

The Contractor must identify and mark each instance of the following components with a unique serial number per the TDP:

- a. Carrier Module Assembly,
- b. Ethernet Switch,
- c. Power Supply Module,
- d. Fibre Optic Transceiver,
- e. Alarm Overvoltage Protection CCA,
- f. TEL/Spare CCA, and
- g. Internal Cable harnesses.

The Contractor may use a component's existing serial number, or if none, use a Contractor-assigned and applied serial number.

### 3.2.4.3 Top Level Assembly Traceability

The Contractor must cross-reference each TLA serial number to the batch number of each of its components.

The Contractor must trace the genealogy of each VIP Mk25 by the serial numbers of its Carrier Module Assembly, Power Supply Module, Fiber Optic Transceiver, Ethernet Switch and Fibre Optic CA2 Cable Harness.

### 3.2.4.4 Component Traceability

The Contractor must cross-reference each CCA serial number to the batch number of each of its components, and record the cross references in an XML format in the VIP Mk25 Central Server (CS).

### 3.2.4.5 Security Seals

The Contractor must affix government-furnished Security Seals to fully assembled and successfully tested VIP Mk25 TLAs just prior to packaging for delivery in accordance with C-53-750-000/ME-001.

The Contractor must cross reference the serial number of each VIP Mk25 TLA to the serial number of the Security Seal that is affixed to the TLA and include the cross reference in the Delivery Report per DID SE-007.

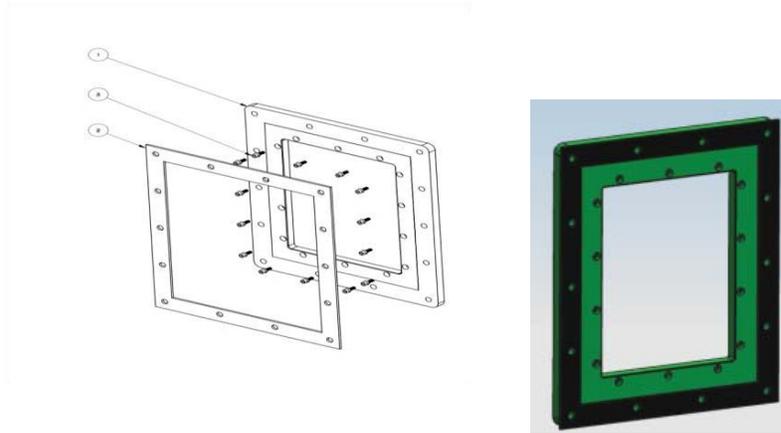
### 3.3 Flange Assembly Product Requirements

The following subparagraphs apply to the Flange Assembly products.

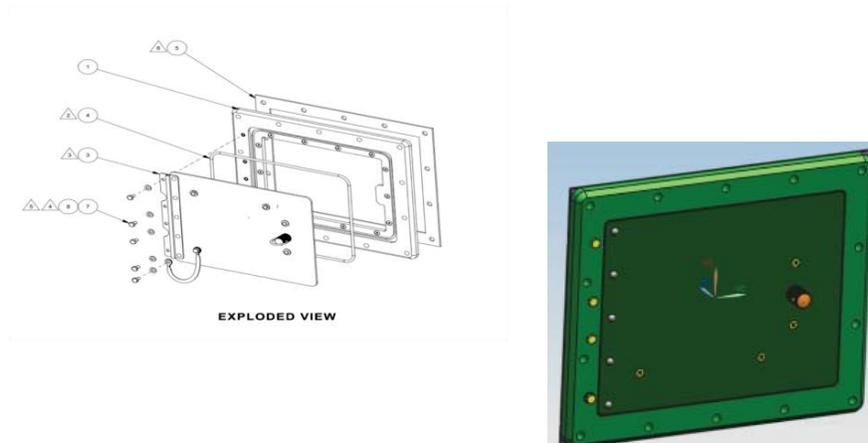
#### 3.3.1 Overview

Flange Assemblies are used to adapt the VIP Mk25 to appropriate mounting solutions for the various different vehicle types in which the VIP Mk25 is installed. There are three types of flange assembly as follows:

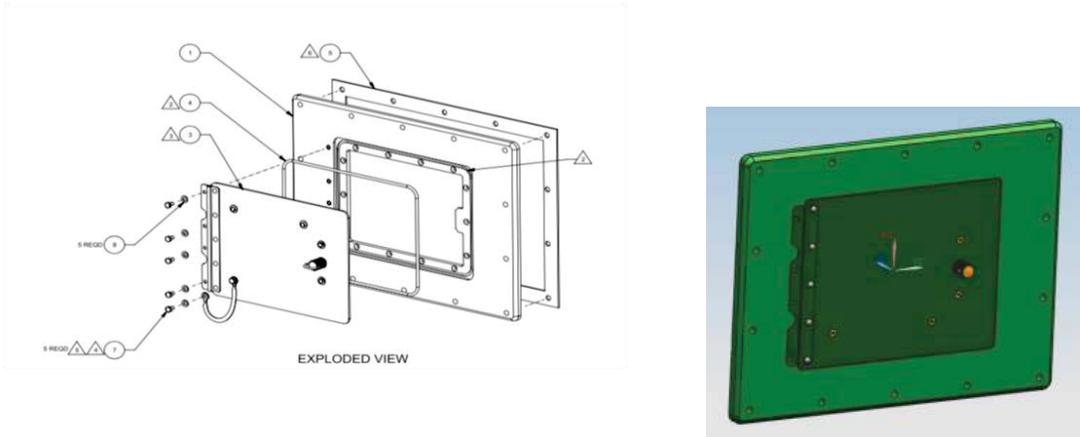
- a. Flange Assembly VIP Mk18 to VIP Mk25, shown in Figure A-15
- b. Flange Assembly VIP Mk2 to VIP Mk25, shown in Figure A-16, and
- c. Flange Assembly VIP Mk3 to VIP Mk25, shown in Figure A-17.



**Figure A-15: Flange Assembly VIP Mk18 to VIP Mk25**

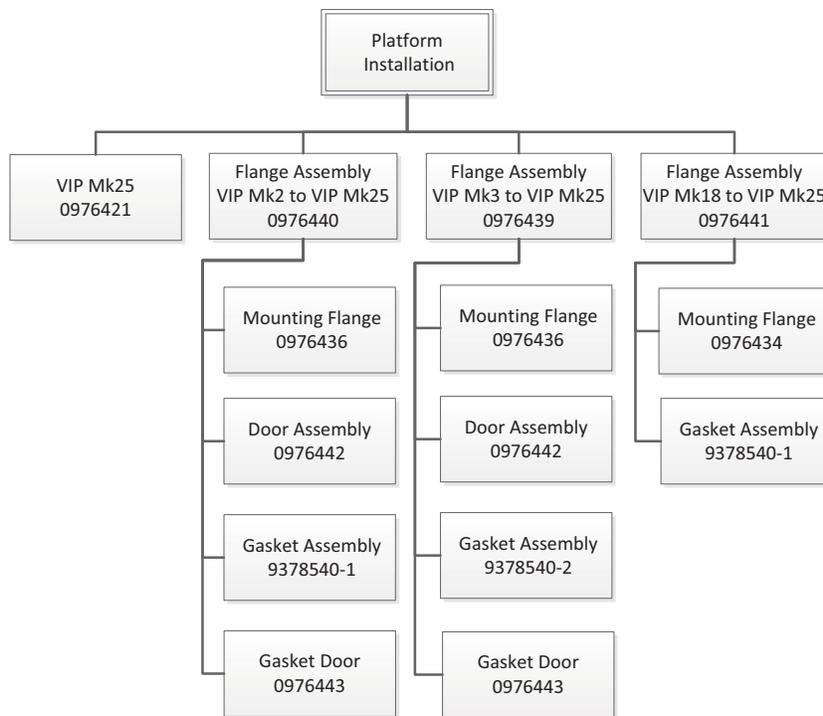


**Figure A-16: Flange Assembly VIP Mk2 to VIP Mk25**



**Figure A-17: Flange Assembly VIP Mk3 to VIP Mk25**

The VIP Mk25 Flange Assembly Drawing Tree is shown Figure A-18.



**Figure A-18: VIP Mk25 Flange Assembly Drawing Tree**

**3.3.2 Technical Data Packages**

The Flange Assembly TDPs provide explicit design specifications through a combination of printed and electronic material, including:

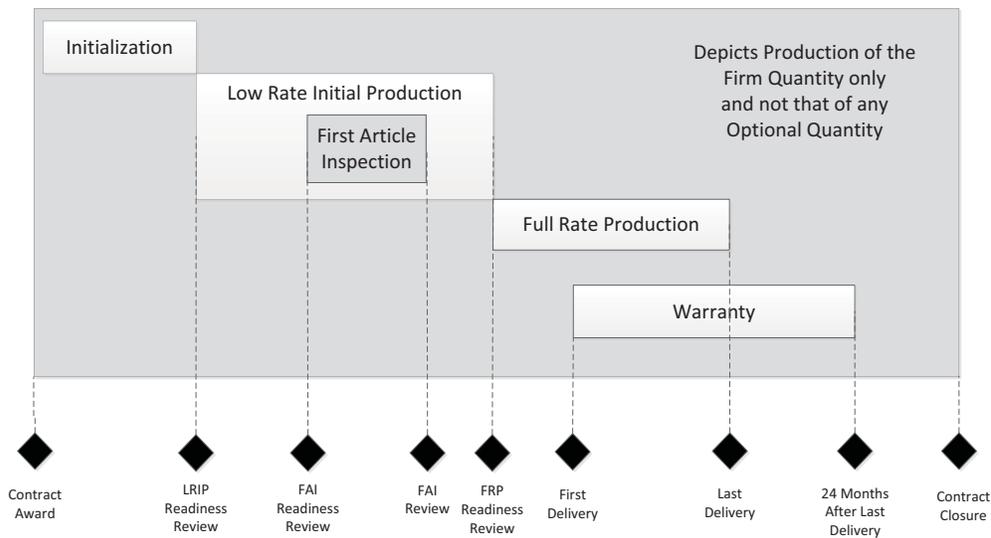
- a. Computer Aided Design (CAD) files (e.g. Mechanical (M)-CAD for metal components, flanges, and brackets);
- b. Drawings and Assembly Drawings (i.e. TLA, Sub-Assemblies, Ground straps, and gasket components);
- c. Parts List (PL);
- d. Data Lists (DL); and
- e. Index.

### 4 Production Requirements

The Contractor must establish and execute VIP Mk25 and Flange Assembly production in accordance with following subparagraphs by way of three sequential phases as follows:

- a. Initialization
- b. Low Rate Initial Production (LRIP), and
- c. Full Rate Production (FRP).

Figure A-19 provides a depiction of the production phases (white boxes), and the major production milestones (black diamonds) that must be achieved in order to progress from one phase to the next (left to right).



**Figure A-19: Production Phases / Milestones**

#### 4.1 General Production Requirements

The following subparagraphs apply to the production of VIP Mk25s, VIP Mk25 Flange Assemblies and VIP Mk25 spare components.

The Contractor must have suitable facilities and experience in build-to-print manufacturing of a customer-specified product.

##### 4.1.1 Quality Plan

The Contractor must provide a Quality Plan per CDRL Item No. 007 and DID SE-001 and make amendments as required throughout the Contract Period to reflect current quality processes. Upon acceptance by DND of the Quality Plan and any amendments, the Contractor must implement the Quality Plan.

Note that CDRL Item No. 007 requires delivery of the first submission of the Quality Plan with the Bidder's bid.

#### **4.1.2 Initialization**

The Initialization Phase involves the following processes:

- a. Verify Contractor qualifications and equipment as necessary.
- b. Establish the manufacturing and assembly lines including:
  - i. Integration and Site Acceptance Test (SAT) of the government-furnished VIP Mk25 TS, and
  - ii. Train Contractor personnel on use of the TS.

##### **4.1.2.1 Contractor Qualifications**

The Contractor must maintain all qualifications and competencies specified in the following subparagraphs throughout all production conducted during the Contract Period and exercised Option Periods.

The Contractor must submit a Human Resources Qualification Plan as part of the Quality Plan in accordance with DID SE-001.

##### **4.1.2.1.1 Workmanship Standards**

The Contractor must follow IPC-A-610 Class 3 standards for the assembly of the VIP Mk25 and follow IPC/WHMA-A-620B Class 3 standards for the assembly of wire harnesses.

The Contractor must provide qualified personnel who have been trained in IPC-A-610 Class 3 and IPC/WHMA-A-620B Class 3 standards for production of the VIP Mk25.

##### **4.1.2.1.2 Printed Circuit Board Standards**

The Contractor must fabricate the VIP Mk25 PCBs in accordance with the TDP (e.g. IPC-6012 Class 3) and IPC-A-600 *Acceptability of Printed Boards*.

##### **4.1.2.1.3 Verification of Qualifications**

The Contractor must provide, at the request of the TA, verification of the qualifications of Contractor and sub-contractor facilities, personnel and equipment that are employed to meet the requirements specified in this SOW, e.g. the qualifications of staff who will assemble CCAs, cable harnesses and the VIP Mk25 TLA, and those that will conduct incoming component inspection, periodic in-process inspection, final product inspection, and staff that train other staff.

##### **4.1.2.1.4 Quality Management**

The Contractor and sub-contractor facilities at which the Work (i.e. all manufacturing, assembly, test, debug, repair and delivery activities needed to fulfill the requirements specified in the Statement of Work) will take place, must be currently certified to, and comply with the requirements of, ISO 9001.

##### **4.1.2.2 Government Furnished Information**

The TA will provide Government Furnished Information (GFI) identified in Appendix A3 to the Contractor at Contract Award.

##### **4.1.2.3 Government Furnished Equipment**

The TA will provide Government Furnished Equipment (GFE) identified in Appendix A4 to the Contractor, within six (6) months after Contract Award. Canada will not provide additional GFE other than the replenishment of consumable spare GFE components.

The Contractor must use, care for and identify GFE in accordance with the “General Conditions” and “Special Test Equipment Owned by Canada” instructions of the Contract.

#### **4.1.2.4 Establishment of Contractor-Provided Infrastructure and Work Environment**

The Contractor must establish and verify the infrastructure and facilities to accommodate all Contractor-provided and government furnished manufacturing, assembly, test, debug, repair and delivery capabilities including:

- a. the necessary clean workspace, electrical power, and appropriate Heating, Ventilation and Air Conditioning (HVAC). The Contractor must ensure that electric power and air quality (i.e. cleanliness) do not negatively impact the conduct of manufacturing and test, or the operation of manufacturing or test equipment. Electrical power provided to the government-furnished VIP Mk 25 TS and the CS must be uninterrupted; and
- b. network infrastructure per Paragraph 5.2.2.14.

The Contractor must submit an Infrastructure and Work Environment Plan as part of the Quality Plan in accordance with DID SE-001.

#### **4.1.2.5 Establishment of Contractor-Provided Production and Test Capabilities**

The Contractor must establish and verify all capabilities and services necessary to manufacture, assemble and deliver product in accordance with Section 4 and the approved Quality Plan.

The Contractor must establish and verify contractor-provided test, debug and repair capabilities in accordance Section 5 and the approved Test Plan.

#### **4.1.2.6 Establishment of Government Furnished Test Capability**

The Contractor must, with TA representative assistance, install and integrate the VIP Mk25 TS, and verify its operation per the Site Survey and System Relocation Plan (SSSRP) for the VIP Mk25 TS, and the System Integration Plan (SIP) for the VIP Mk25 TS, provided as GFI. The Contractor must:

- a. provide a Contractor representative to act as the Point of Contact (POC);
- b. provide TA representatives with access to applicable areas of the Contractor’s test facility per Paragraph 4.1.3.1, and suitable accommodations while working on-site including external network drops, electrical power, lighting and work surfaces. The TA will provide the names of those assisting with the integration at least two (2) weeks in advance of the first on-site work day;
- c. integrate, with TA assistance, the VIP Mk 25 TS with Contractor-provided equipment (e.g. Environmental Stress Screening (ESS) vibration and thermal test equipment, and the CS);
- d. upon completion of VIP Mk 25 TS integration, receive VIP Mk 25 TS operation training from TA representatives per the Training Plan and Materials (TP&M) for the VIP Mk25 TS, provided as GFI. The Contractor must:
  - i. provide an appropriate classroom training area within the test facility to conduct the training. This area must include a computer that is connected to projection equipment and has network connectivity with the CS;
  - ii. ensure that all Contractor personnel that will use the VIP Mk 25 TS during VIP Mk25 manufacturing, and any other personnel deemed necessary, actively participate in the training course for its duration, and are given copies of VIP Mk 25 TS Training Materials provided as GFI;

- iii. provide access to photocopy equipment for use by the course trainer(s).
- e. upon completion of training, use government-furnished known good VIP Mk25 TLAs and CCAs (i.e. Golden Units) to verify:
  - i. the processes and procedures documented in the Test Plan per Paragraph 5.1.1,
  - ii. TS operation, and
  - iii. the interconnection between the VIP Mk 25 TS and the Contractor's equipment.

#### **4.1.3 Production**

The general requirements of the LRIP and FRP Phases are detailed in the following subparagraphs.

##### **4.1.3.1 Audit, Inspection, and Site Access**

The Contractor must provide the TA and TA representatives with escorted access to the Work (i.e. all manufacturing, assembly, test, debug, repair and delivery activities needed to fulfill the requirements specified in the Statement of Work) including:

- a. all locations where the Work is conducted;
- b. all data, metrics and reports associated with the Work;
- c. Contractor personnel performing the Work;
- d. Work-in-process and finished products; and
- e. GFE and GFI.

This requirement must extend to subcontractors engaged by the Contractor to perform portion(s) of the Work.

##### **4.1.3.2 Statistical Process Control**

The Contractor must use Statistical Process Control (SPC) to monitor and control quality during the manufacturing process by examining the relative contribution of different causes leading to reject or failure of TLAs and components. SPC findings must be included in the Technical Report per DID SE-006.

##### **4.1.3.3 Control of Nonconforming Product**

The Contractor must ensure that all nonconforming components, subassemblies, and TLAs are not released to the manufacturing floor or delivered to Canada.

##### **4.1.3.4 Establishment of Technical Report Format and Content**

During LRIP, after sufficient test data has been captured and analysed per Paragraph 5.2.5.2, the Contractor must submit the first Technical Report for review and approval of format and content per CDRL Item No. 014 and DID SE-006. Technical Report format and content must be approved before proceeding to FRP (See Paragraph 4.2.2.10).

##### **4.1.3.5 First Article Inspection**

The purpose of First Article Inspection (FAI) is to demonstrate that the following have been achieved, thereby providing objective evidence that the production processes as implemented during LRIP are acceptable for FRP:

- a. Engineering, design and specification requirements are properly understood, accounted for, verified, and documented by the Contractor.

- b. All manufacturing and test processes are repeatable and can produce VIP Mk25s that meet acceptance and quality control requirements.

FAI affords Canada and the Contractor the opportunity to identify potential issues that could negatively impact FRP, and to address such issues early on, which would be costlier to address in terms of time and/or money if discovered during FRP or even after delivery.

The key elements of the FAI are:

- a. Personnel: FAI will be completed by the Contractor Quality Assurance (QA) group overseen by representatives of the TA including hardware, firmware, test, and Emanations Security (EmSec) subject matter experts that can provide information and guidance support to the Contractor.
- b. Facility: Elements of FAI may be completed at the Contractor's facility, a government facility, or third party facility at the discretion of the TA.
- c. Procedure: The FAI will be conducted in accordance with a First Article Approval Procedure (FAAP) developed by the Contractor. The results of the FAI will be documented in a First Article Inspection Report (FAIR).
- d. Approval: Approval of the FAIR constitutes approval of first articles.

#### **4.1.3.6 Production Line Down Notification**

The Contractor must notify the TA within 48 hours of a production line down situation. The Contractor must specify to the TA:

- a. the reason for the line down situation,
- b. the length of time the production line is expected to be down,
- c. corrective measures being implemented,
- d. expected date of return to partial or full production,
- e. impact on delivery schedule, and
- f. how the Contractor proposes to recover from the reduced deliveries during the line-down situation.

#### **4.1.3.7 Batch Size**

The following batch sizes, also referred to as lot size, must be in effect throughout LRIP and FRP:

- a. The VIP Mk25 batch size must be 100 units.
- b. The PCB batch size must be 100 units.
- c. The CCA batch size must be 100 units.
- d. The Flange Assembly VIP Mk18 to VIP Mk25 batch size may be at the discretion of the Contractor.
- e. The Flange Assembly VIP Mk2 to VIP Mk25 batch size may be at the discretion of the Contractor.
- f. The Flange Assembly VIP Mk3 to VIP Mk25 batch size may be at the discretion of the Contractor.

#### **4.1.4 Delivery**

The Contractor must deliver all line items that have successfully passed all test requirements per the following subparagraphs.

The Contractor must submit Delivery Reports in accordance with CDRL Item No. 015 and DID SE-007.

##### **4.1.4.1 Delivery Schedule**

The Contractor must deliver line items as specified in Table 2 of Appendix A1. It's noted that the monthly quantities specified therein are target quantities.

The Contractor may seek prior authorization from the TA to deliver less or more than the target quantity in a given month. However:

- a. the total quantity must be delivered in the overall specified period, and
- b. any surge in VIP Mk25 production above the target rate must not exceed two (2) calendar weeks in duration (or 85 additional VIP Mk25s), after which the target production rate must be resumed for at least two (2) subsequent calendar weeks.

This is necessary to ensure the VIP Mk25 TS is not subjected to continuous operation without allowance of sufficient time for preventive and/or corrective maintenance.

The Contractor must implement an appropriate number of work shifts to meet specified delivery rate requirements, taking into consideration the VIP Mk 25 TS test times indicated in Paragraph 5.2.3.1.1.1.

##### **4.1.4.2 Preparation for Delivery**

All deliverable items must be prepared for delivery and shipped in accordance with the Preparation for Delivery, Delivery at Destination, Transportation, and Release Document requirements of the Contract.

The Contractor must apply and position markings on shipping containers and interior containers per Paragraphs 3.7.1, 3.10.2, 3.11.1 and 3.11.9 of D-LM-008-002/SF-001 and as detailed below:

- a. on Shipping Containers:
  - i. apply the following markings:
    - (1) Identification Markings:
      - North Atlantic Treaty Organization (NATO) Stock Number,
      - Nomenclature,
      - Quantity / Unit of Issue,
      - Protection and date markings, and
      - Contract Serial Number (as shown on the Contract).
    - (2) Special Markings:
      - Manufacturer's Part Number, and
      - Manufacturer's Batch / Lot Number.
  - ii. apply the following markings using a GS1-128 linear barcode, with the data replicated in human readable form beneath the barcode:

- NATO Stock Number,
  - Contract Serial Number; and
  - Manufacturer's Part Number.
- b. on Interior Containers, including unit packs:
- i. apply the following markings:
    - (1) Identification Markings:
      - NATO Stock Number,
      - Nomenclature,
      - Quantity / Unit of Issue,
      - Protection and date markings,
      - Contract Serial Number (as shown on the Contract), and
      - Serial Number(s).
    - (2) Special Markings:
      - Manufacturer's Part Number, and
      - Unique Item Identifier(s).
  - ii. apply the following markings using a GS1-128 linear bar code, with the data replicated in human readable form beneath the barcode:
    - (1) NATO Stock Number,
    - (2) Contract Serial Number,
    - (3) Manufacturer's Part Number, and
    - (4) Serial Number(s).
  - iii. apply the Unique Item Identifier marking(s) using a PDF 417 barcode in accordance with STANAG 2290.

Barcodes must be applied to the outside of any packaging material through which the barcode is not easily machine-readable.

Refer also to Section 3.2.4 above regarding the value of some of the above markings.

#### **4.1.5 Closeout**

Closeout activities include:

- a. return of GFE and GFI to a location within Canada designated by the TA, and
- b. submission of the Closeout Report.

##### **4.1.5.1 Return of Government Furnished Information and Equipment**

No later than two (2) months prior to Contract completion, the TA will provide the Contractor a list of GFE and GFI to be returned. The Contractor must return all GFE and GFI, shipping paid, in the original shipping containers, per the General Conditions of the Contract.

## **4.2 VIP Mk25 Production Requirements**

The following subparagraphs apply to the production of VIP Mk25s.

### **4.2.1 Initialization**

Refer also to Section 4.1.2 above.

#### **4.2.1.1 LRIP Readiness Review**

Once the Initiation phase activities have been completed, the Contractor must conduct a VIP Mk25 LRIP Readiness Review Meeting with the TA to assess readiness to commence VIP Mk25 LRIP. The VIP Mk25 LRIP Readiness Review must include verification of the following:

- a. Lead Time Review – has been conducted per Paragraph 3.1.5;
- b. Personnel qualifications – have been verified per Paragraph 4.1.2.1.3;
- c. Quality Plan – has been approved per Paragraph 4.1.1;
- d. Test Plan – has been approved per Paragraph 5.1.1;
- e. Contractor-Provided Infrastructure and Work Environment – have been established and verified per Paragraph 4.1.2.4;
- f. Contractor-Provided Production and Test Capabilities – have been established and verified per Paragraph 4.1.2.5,
- g. Government Furnished Test Capabilities – have been established and verified per Paragraph 4.1.2.6; and
- h. Draft VIP Mk 25 First Article Approval Procedure – has been submitted per Paragraph 4.2.2.6.

### **4.2.2 Low Rate Initial Production**

After receiving approval to do so, the Contractor must conduct LRIP per the following subparagraphs for fifty (50) VIP Mk25s.

Should the Contractor choose to produce VIP Mk25 quantities beyond the LRIP batch quantity, before receiving authorization via the FRP Readiness Review to proceed to FRP, the Contractor does so at its own risk. The TA will not accept product delivery until FAI has been successfully completed and all corrective measures, including those involving GFE, have been approved and instituted per Paragraph 4.2.2.10.

#### **4.2.2.1 Overview**

As depicted in Figure A-20, the main manufacturing and test processes for VIP Mk25 LRIP are listed below:

- a. Incoming parts inspection and handling per Paragraph 4.2.2.2;
- b. Manufacture CCAs and components per Paragraph 3.1.1;
- c. Test components per Paragraph 5.2.2;
- d. Assemble Carrier Module and test per 3.1.1;
- e. Manufacture the TLA:
  - i. Assemble the TLA per Paragraph 3.1.1;
  - ii. Initial Acceptance Test Procedure (iATP) per Paragraph 5.2.3.3;

- iii. Seal Test per Paragraph 5.2.2.9;
  - iv. Vibration Test per Paragraph 5.2.3.4;
  - v. Thermal Test per Paragraph 5.2.3.5;
  - vi. Final Acceptance Test Procedure (FATP) per Paragraph 5.2.3.6;
  - vii. TEMPEST Sample Testing per Paragraph 5.2.4; and
  - viii. Post-TEMPEST Acceptance Test Procedure (PATP) per Paragraph 5.2.3.7.
- f. Debug, repair and retest TLAs as necessary per Paragraph 5.2.5.1;
  - g. Conduct Test Data Analysis and Reporting per Paragraph 5.2.5.2 throughout the above processes;
  - h. Conduct FAI per Paragraph 4.2.2.8;
  - i. Conduct Problem Analysis and Resolution as required per Paragraph 5.2.6; and
  - j. Deliver the LRIP batch per Paragraph 4.1.4

#### **4.2.2.2 Incoming Parts Inspection and Handling**

The Contractor must institute an incoming parts inspection program to:

- a. Inspect in-coming components to ensure they meet specifications;
- b. identify and remove faulty components, components past their expiration date and counterfeit components from the production process;
- c. enter supplier test information regarding COTS components, sub-components assembled and tested in-house, or by a third party (Original Equipment Manufacturer (OEM) or other), into a CS database; and
- d. track the following incoming parts at a minimum:
  - i. Ethernet Switch,
  - ii. Power Supply Module,
  - iii. Fibre Optic Transceiver,
  - iv. Fiber Optic CA2 Cable Harness, and
  - v. other components recommended by the Contractor.

The Contractor must track all other components that have undergone testing prior to their assembly within the VIP MK25 via the Contractor's Incoming Parts Inspection system, or another system.

The Contractor must comply with the following approved Moisture Sensitive Devices (MSD) guidelines:

- a. J-STD-020: Joint IPC/JEDEC Standard for Moisture/Reflow Sensitivity Classification for Nonhermetic Solid State Surface-Mount Devices; and
- b. J-STD-033: Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices.

The Contractor must submit an Incoming Parts Inspection Plan as part of the Test Plan in accordance with DID SE-002.

#### **4.2.2.3 Multi-Stage Thermal Oven Profiling**

The Contractor must use a multi-stage thermal oven in the manufacture of CCAs for the VIP Mk25.

The Contractor must profile the oven for each CCA. These profiles must be maintained throughout CCA manufacture. The Contractor may re-profile the oven as deemed necessary to compensate for factors such as facility environmental changes.

If multiple ovens are used, the Contractor must profile each oven separately. If an oven is to be replaced or relocated during production, the Contractor must profile the oven before production recommences.

The Contractor must submit a Multi-Stage Thermal Oven Profiling Plan as part of the Quality Plan in accordance with DID SE-001.

The Contractor must assess whether or not oven re-profiling is required as part of the impact analysis of any CCA design change or deviation under consideration. The Contractor must complete re-profiling specified in all approved design changes and deviations.

#### **4.2.2.4 Commissioning**

The Contractor must work with the TA to commission Government furnished and Contractor-provided capabilities by validating through demonstration per the following subparagraphs that they meet performance requirements necessary to achieve delivery rates specified in Table 2 of Appendix A1.

##### **4.2.2.4.1 Government Furnished Test Capability**

The Contractor must, with the assistance of the TA, commission the VIP Mk25 TS in accordance with the Commissioning Plan for the VIP Mk25 TS provided as GFI. This includes simultaneous validation of the following contractor-provided equipment:

- a. test equipment that has been integrated with TS,
- b. Seal Test capability, and
- c. TLA Debug, Repair and Retest capabilities.

TS commissioning must occur during early VIP Mk25 LRIP, prior to VIP Mk25 FAI, and must involve processing forty (40) VIP Mk25s through the following testing during a five (5) workday period from Monday to Friday:

- a. iATP Test per Paragraph 5.2.3.3;
- b. Seal Test per Paragraph 5.2.2.9;
- c. Vibration Test per Paragraph 5.2.3.4;
- d. Thermal Test per Paragraph 5.2.3.5;
- e. FATP Test per Paragraph 5.2.3.6; and
- f. Debug, repair and retest as necessary per Paragraph 5.2.5.1.

The Contractor must:

- a. appoint a Contractor representative to act as the POC to:
  - i. schedule the initiative; and
  - ii. appoint and supervise all Contractor staff necessary to support the initiative, including operate the VIP Mk25 TS.

- b. provide 40 LRIP VIP Mk25s that have not undergone any TLA testing;

The TA will:

- a. appoint a POC to work with the Contractor's appointed POC; and
- b. provide on-site expertise that may be necessary to make adjustments or repairs to the VIP Mk25 TS.

#### **4.2.2.4.2 Contractor-Provided Capabilities**

The Contractor must validate that the following meet performance requirements specified in the approved Test Plan:

- a. Contractor-provided infrastructure and facilities established per Paragraphs 4.1.2.4; and
- b. Contractor-provided production and test capabilities established per 4.1.2.5, except those already validated per Paragraph 4.2.2.4.1.

A TA representative will witness the above validation.

#### **4.2.2.5 Test, Debug and Repair**

The Contractor must test, debug and repair VIP Mk25 TLAs as specified in Paragraph 5.2.5.1.

#### **4.2.2.6 First Article Approval Procedure**

The Contractor must submit a VIP Mk25 FAAP in accordance with CDRL Item No. 009 and DID SE-003.

Refer also to Paragraph 4.1.3.5 above.

#### **4.2.2.6.1 Sample FAI Units**

The TA will specify the serial numbers of the following, randomly selected from the LRIP batch (See Paragraph 4.2.2 re LRIP batch) as FAI sample units:

- a. ten (10) VIP Mk25s,
- b. ten (10) CCAs of each type,
- c. ten (10) Fibre Optic Transceivers, and
- d. ten (10) Fibre Optic CA2 Cable Harnesses.

These units must *not* have previously undergone testing as part of VIP Mk 25 TS integration per Paragraph 4.1.2.6 or testing per Paragraph 4.2.2.5.

The Contractor must provide the selected FAI sample units for FAI. Canada may request that these samples be forwarded to a Canadian location for further analysis.

#### **4.2.2.7 FAI Readiness Review**

The Contractor must conduct a VIP Mk25 FAI Readiness Review Meeting with the TA to assess readiness to commence FAI. VIP Mk25 FAI Readiness Review must include verification of the following:

- a. Final VIP Mk 25 FAAP – has been approved per Paragraph 4.2.2.6;
- b. LRIP – assembly has been completed per the preceding subparagraphs; and
- c. Sample FAI Units – have been provided per Paragraph 4.2.2.6.1.

#### **4.2.2.8 First Article Inspection**

After receiving approval to do so, the Contractor must conduct FAI in accordance with the approved FAAP and the following subparagraphs. The TA will witness the conduct of FAI.

##### **4.2.2.8.1 Third Party Cleanliness Testing**

As part of FAI, the Contractor must conduct cleanliness testing on each CCA type used in the VIP Mk25. The cleanliness testing must also include reliability testing (i.e. sheer, drop, and pull testing). The Contractor must submit a Third Party Reliability and Cleanliness Report in accordance with CDRL Item No. 013 and DID SE-005.

##### **4.2.2.8.2 FAI Report**

The Contractor must document the FAI in the VIP Mk25 FAIR in accordance with CDRL Item No. 011 and DID SE-004.

TA approval of the VIP Mk25 FAIR constitutes:

- a. successful completion of VIP Mk25 FAI, and
- b. approval to deliver the VIP Mk25 LRIP batch.

##### **4.2.2.8.3 FAI Review**

Once the VIP Mk25 FAI has been completed the Contractor must conduct a VIP Mk25 FAI Review Meeting with the TA. The following must have been completed prior to FAI Review Meeting:

- a. Draft Third Party Reliability and Cleanliness Report – submitted per Paragraph 4.2.2.8.1; and
- b. Draft VIP Mk25 FAIR – submitted per Paragraph 4.2.2.8.2.

The FAI Review meeting will focus on the content of the above reports.

#### **4.2.2.9 Production Facility Baseline**

Once FAI has been successfully completed through approval of the FAIR, the Contractor must not alter Contractor or subcontractor facilities at which the Work is conducted, without prior TA authorization to do so. If changes to this baseline are requested, and approved by the TA, any costs associated with implementing or qualifying the changes (e.g. an additional FAI process) must be borne by the Contractor.

#### **4.2.2.10 FRP Readiness Review**

Once VIP Mk25 LRIP has been completed, the Contractor must conduct a VIP Mk25 FRP Readiness Review Meeting with the TA to assess readiness to commence FRP. The VIP Mk25 FRP Readiness Review must include verification of the following:

- a. Technical Report format and content – has been approved per Paragraph 4.1.3.4.
- b. Government Furnished Test Capabilities – have been commissioned per Paragraph 4.2.2.4.1;
- c. Contractor-Provided Capabilities – have been validated per Paragraph 4.2.2.4.2;
- d. Final Third Party Reliability and Cleanliness Report – has been approved per Paragraph 4.2.2.8.1.
- e. Final VIP Mk25 FAIR – has been approved per Paragraph 4.2.2.8.2, and all corrective measures documented therein have been instituted; and

- f. VIP Mk25 FAI Review Meeting – has been conducted per Paragraph 4.2.2.8.3.

#### **4.2.3 Full Rate Production**

After receiving approval to do so, the Contractor must conduct FRP, employing the processes, less FAI, and the facility configuration established and approved during LRIP per Paragraph 4.2.2.

### **4.3 Flange Assembly Production Requirements**

The following subparagraphs apply to the production of Flange Assemblies.

#### **4.3.1 Initialization**

Refer also to Section 4.1.2 above.

##### **4.3.1.1 LRIP Readiness Review**

Once the applicable Initiation phase activities have been completed, the Contractor must conduct a Flange Assembly LRIP Readiness Review Meeting with the TA to assess readiness to commence Flange Assembly LRIP. Flange Assembly LRIP Readiness Review must include verification of the following:

- a. Lead Time Review – has been conducted per Paragraph 3.1.5;
- b. Quality Plan – has been approved per Paragraph 4.1.1;
- c. Contractor-Provided Production and Test Capabilities – have been established per Paragraph 4.1.2.5; and
- d. Draft Flange Assembly FAAP – has been submitted per Paragraph 4.3.2.4.

#### **4.3.2 Low Rate Initial Production**

After receiving approval to do so, the Contractor must conduct LRIP per the following subparagraphs for:

- a. fifty (50) Flange Assembly VIP Mk18 to VIP Mk25;
- b. five (5) Flange Assembly VIP Mk2 to VIP Mk25; and
- c. five (5) Flange Assembly VIP Mk3 to VIP Mk25;

Should the Contractor choose to produce Flange Assembly quantities beyond the LRIP batch quantities, before receiving authorization via the FRP Readiness Review to proceed to FRP, the Contractor does so at its own risk. The TA will not accept product delivery until FAI has been successfully completed and all corrective measures have been approved and instituted per Paragraph 4.3.2.8.

##### **4.3.2.1 Overview**

The main manufacturing processes for Flange Assembly LRIP are listed below:

- a. Incoming parts inspection and handling per Paragraph 4.3.2.2;
- b. Manufacture Flange Assembly sub-components per Paragraph 3.1.1;
- c. Verify parts/sub-components to dimensions, tolerance and characteristics in the TDP drawings;
- d. Assemble the TLA per Paragraph 3.1.1;

- e. Inspect, verify and repair TLAs as necessary per Paragraph 4.3.2.3;
- f. Conduct First Article Inspection (FAI) per Paragraph 4.3.2.6,
- g. Conduct Problem Analysis as required per Paragraph 5.2.6; and
- h. Deliver the LRIP batch per Paragraph 4.1.4

#### **4.3.2.2 Incoming Parts Inspection and Handling**

The Contractor must institute an incoming parts inspection program to

- a. Inspect incoming components to ensure they meet specifications;
- b. identify and remove faulty components, and counterfeit components from the production process; and
- c. track all components to assembled Flange Assemblies.

#### **4.3.2.3 Inspection, Verification and Repair**

The Contractor must inspect Flange Assemblies, verify that they meet TDP specifications and repair them as necessary as specified in Paragraph 5.3.

#### **4.3.2.4 First Article Approval Procedure**

The Contractor must submit a Flange Assembly FAAP in accordance with CDRL Item No. 010 and DID SE-003.

Refer also to Paragraph 4.1.3.5 above.

##### **4.3.2.4.1 Sample FAI Units**

The TA will identify five (5) Flange Assemblies of each type, randomly selected from the LRIP batches (See Paragraph 4.3.2 re LRIP batches) as FAI sample units. These units must *not* have been inspected and verified per Paragraph 4.3.2.3.

The Contractor must provide the selected FAI sample units for FAI. Canada may request that these samples be forwarded to a Canadian location for further analysis.

##### **4.3.2.5 FAI Readiness Review**

The Contractor must conduct a Flange Assembly FAI Readiness Review Meeting with the TA to assess readiness to commence FAI. Flange Assembly FAI Readiness Review must include verification of the following:

- a. Final Flange Assembly FAAP – has been approved per Paragraph 4.3.2.4;
- b. LRIP – assembly has been completed per the preceding subparagraphs; and
- c. Sample FAI Units – have been provided per Paragraph 4.3.2.4.1.

##### **4.3.2.6 First Article Inspection**

After receiving approval to do so, the Contractor must conduct FAI in accordance with the approved FAAP and the following subparagraphs. The TA will witness the conduct of FAI.

###### **4.3.2.6.1 FAI Report**

The Contractor must document FAI in the Flange Assembly FAIR in accordance with CDRL Item No. 012 and DID SE-004.

TA approval of the Flange Assembly FAIR constitutes:

- a. successful completion of Flange Assembly FAI, and

- b. approval to deliver the Flange Assembly LRIP batches.

#### **4.3.2.6.2 FAI Review**

Once Flange Assembly FAI has been completed the Contractor must conduct a Flange Assembly FAI Review Meeting with the TA. The Draft Flange Assembly FAIR must have been submitted per Paragraph 4.3.2.6.1 prior to the FAI Review Meeting. The FAI Review Meeting will focus on the content of the Draft FAIR.

#### **4.3.2.7 Production Facility Baseline**

Once FAI has been successfully completed through approval of the FAIR, the Contractor must not alter Contractor and subcontractor facilities at which the Work is conducted, without prior TA authorization to do so. If changes to this baseline are requested, and approved by the TA, any costs associated with implementing or qualifying the changes (e.g. an additional FAI process) must be borne by the Contractor.

#### **4.3.2.8 FRP Readiness Review**

Once Flange Assembly LRIP has been completed, the Contractor must conduct a Flange Assembly FRP Readiness Review Meeting with the TA to assess readiness to commence FRP. Flange Assembly FRP Readiness Review must include verification of the following:

- a. Final Flange Assembly FAIR – has been approved per Paragraph 4.3.2.6.1, and all corrective measures documented therein have been instituted; and
- b. Flange Assembly FAI Review Meeting – has been conducted per Paragraph 4.3.2.6.2.

#### **4.3.3 Full Rate Production**

After receiving approval to do so, the Contractor must conduct FRP, employing the processes, less FAI, and the facility configuration established and approved during LRIP per Paragraph 4.3.2.

#### **4.4 VIP Mk 25 Spare Component Production Requirements**

First Level Maintenance spares must be delivered per Paragraph 4.1.4.

Fourth Level Maintenance spares must be delivered in-place per Para 4.1.4 and held by the Contractor as Government Furnished Overhaul Spares (GFOS).

## **5 Test Requirements**

The Contractor must test VIP Mk25s and VIP Mk25 Flange Assemblies per the following subparagraphs.

### **5.1 General Test Requirements**

The following subparagraphs apply to the testing of VIP Mk25s and VIP Mk25 Flange Assemblies.

The Contract must have suitable facilities and experience in product testing using the Contractor's test equipment and customer-furnished test equipment.

#### **5.1.1 Test Plan**

The Contractor must produce a Test Plan per CDRL Item No. 008 and DID SE-002 and make amendments as required throughout the Contract Period to reflect current test procedures. Upon acceptance by DND of the Test Plan and any amendments, the Contractor must implement the Test Plan.

Note that CDRL Item No. 008 requires delivery of the first submission of the Test Plan with the Bidder's bid.

### **5.2 VIP Mk25 Test Requirements**

The following subparagraphs apply to the testing of VIP Mk25s.

#### **5.2.1 Overview**

The VIP Mk25 will undergo rigorous testing before it's delivered to Canada. Test requirements are addressed herein as follows:

- a. Testing with Contractor-Provided Equipment,
- b. Testing with Government Furnished Equipment,
- c. TEMPEST Testing, and
- d. Test Failure Repair and Analysis.

An overview of the testing that must be performed by the Contractor is depicted in Figure A-20.

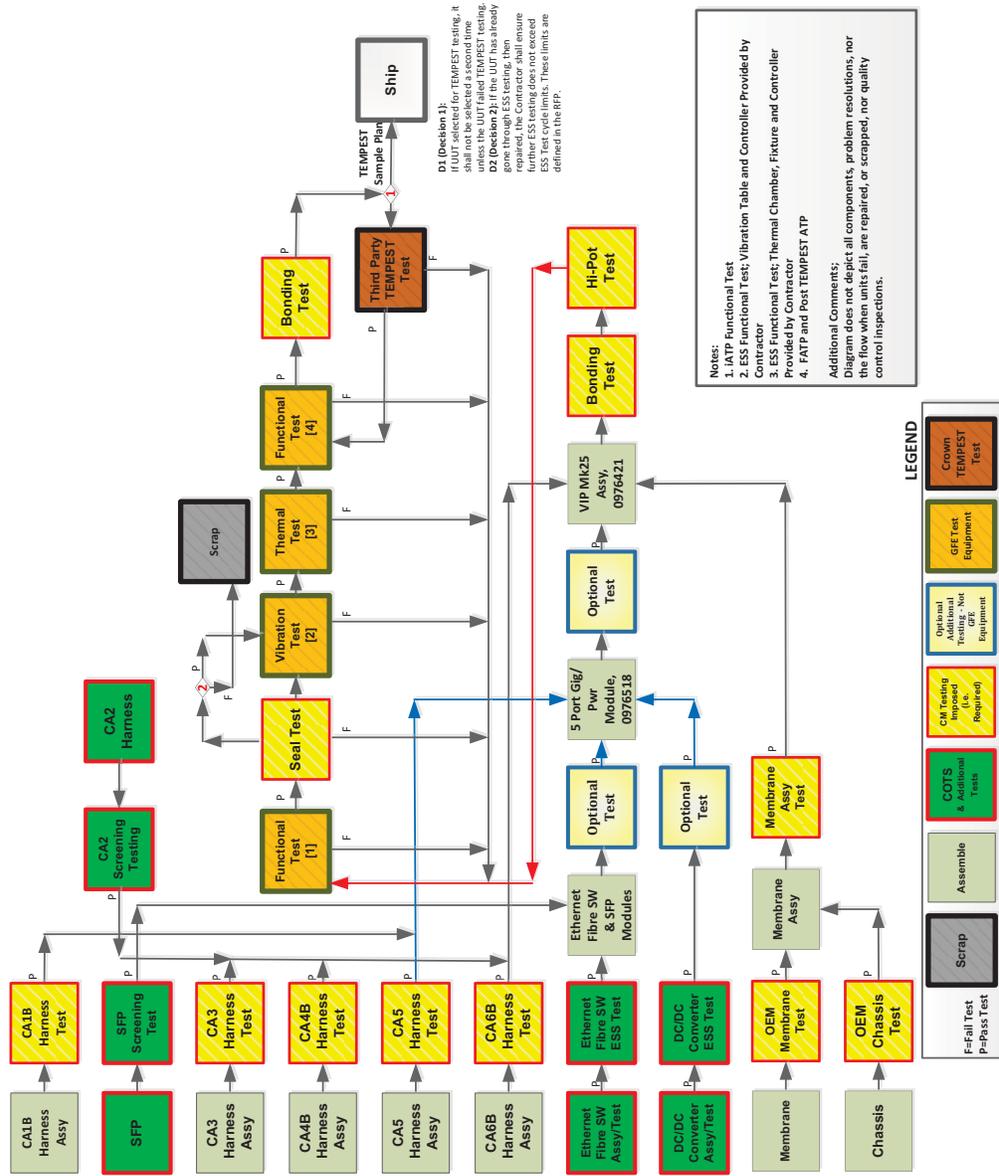


Figure A-20: Manufacturing and Test Process Flow



## 5.2.2 Testing with Contractor-Provided Equipment

The Contractor must test VIP Mk25 TLAs and components in accordance with the following subparagraphs using test equipment provided by the Contractor.

### 5.2.2.1 Membrane Testing

The Contractor must perform Membrane Testing on 100% of all VIP Mk25 membranes (i.e. Label, Light Emitting Diode (LED), VIP Mk25 (See Figure A-21)).

The Contractor must submit a Membrane Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before membranes are tested and mounted in the VIP Mk25.

Membrane Testing must be conducted prior to mounting the membrane in the VIP Mk25 chassis.

The Contractor must provide the necessary membrane testing equipment.

The Contractor must enter membrane test results into the CS in an XML format.



Figure A-21: VIP Mk25 Membrane

### 5.2.2.2 Membrane Enclosure Testing

The Contractor must perform Membrane Enclosure Testing (pressurization testing) on 100% of all membrane enclosures (i.e. “Assembly, Housing VIP Mk25”) in accordance with the TDP drawing “Assembly, Housing VIP Mk25”.

The Contractor must submit a Membrane Enclosure Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before enclosures are tested and assembled as VIP MK25 TLAs.

Membrane Enclosure Testing must be conducted after the membrane has been mounted on the VIP Mk25 chassis.

The Contractor must provide the necessary membrane enclosure testing equipment.

The Contractor must enter membrane enclosure test results into the CS in an XML format.

The tests specified in Paragraphs 5.2.2.1 and 5.2.2.2 may be combined into one test with two sub-tests completed separately.

### **5.2.2.3 Assembly Line Testing**

The Contractor must conduct Assembly Line Testing per the following subparagraphs.

#### **5.2.2.3.1 Paste Inspection and Stencil Cleaning**

The Contractor must apply paste to PCBs in accordance with IPC standards and must employ an automated 2D inspection capability to inspect paste application.

The Contractor must submit a Paste Inspection and Stencil Cleaning Process Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before PCBs may be populated with components.

#### **5.2.2.3.2 Automated Optical Inspection**

The Contractor must perform Automated Optical Inspection (AOI) on 100% of all CCAs during CCA assembly.

The Contractor must provide the necessary AOI equipment.

### **5.2.2.4 PCB and CCA Cleanliness Sample Testing**

The Contractor must conduct Cleanliness Sample Testing per the following subparagraphs.

#### **5.2.2.4.1 Overview**

Cleanliness is crucial to PCB and CCA performance and reliability. Cleanliness analysis focuses on the identification of ionic residues that may be present on PCBs and CCAs and may pose an elevated risk of electromechanical failure. Cleanliness testing must be completed on sample PCBs and CCAs, as well as components and process materials throughout production.

#### **5.2.2.4.2 Sampling Rate**

The following two sampling rates must apply to PCB and CCA Cleanliness Sample Testing:

- a. Normal Sampling Rate: two (2) samples from every batch of PCBs and CCAs; and
- b. Tightened Sampling Rate: four (4) samples from every batch of PCBs and CCAs.

The Contractor must sample the first and following PCB and CCA batches using the Normal Sampling Rate. If any sample PCB or CCA fails Cleanliness Sample testing, the Contractor must sample subsequent batches using the Tightened Sampling Rate. The Contractor may return to the Normal Sampling Rate once the sample PCBs or CCAs of two consecutive batches have passed Cleanliness Sample Testing.

See Paragraph 4.1.3.7 for the definition of PCB and CCA batch size.

#### **5.2.2.4.3 Sample Selection**

The Contractor must randomly select test samples from each PCB and CCA batch without regard to their relative quality and with equal probability of selection to all other PCBs/CCAs within the batch.

#### **5.2.2.4.4 Printed Circuit Boards**

The Contractor must perform Cleanliness Sample Testing on unpopulated PCBs throughout production and maintain cleanliness below an IPC upper limit of 10.0  $\mu\text{g NaCl} / \text{in}^2$  or equivalent as calculated using MIL-PRF-31032B.

The Contractor must employ Surface Insulation Resistance (SIR) Test Standards that follow Process Characterization Testing as specified in IEC 61189-5 Method 5E02 and IPC-TM-650, Section 2.6.3.7.

The Contractor must conduct Group B testing in accordance with MIL-PRF-31032B.

#### **5.2.2.4.5 Circuit Card Assemblies**

The Contractor must perform Cleanliness Sample Testing on CCAs (i.e. populated PCBs) throughout production and maintain cleanliness below an IPC upper limit of 10.0 µg NaCl / in<sup>2</sup> or equivalent as calculated using MIL-PRF-31032B.

The Contractor must employ IPC-TM-650, Section 2.3.25 or Modified Resistivity of Solvent Extract (ROSE).

The Contractor may supplement CCA testing. Should the Contractor choose to do so:

- a. the Contractor must submit an Additional Test Plan for CCAs per Paragraph 5.2.2.12 as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before CCAs are tested;
- b. testing must be conducted prior to assembling CCAs into the TLA;
- c. the Contractor must provide the necessary testing equipment; and
- d. the Contractor must enter CCA test results into the CS in an XML format.

#### **5.2.2.5 Optical Component Cleanliness**

Cleanliness of optical components such as the Fibre Optic Transceiver and the Fibre Optic CA2 Cable Harness are crucial to optical performance.

The Contractor must submit an Optical Component Handling Process as part of the Quality Plan in accordance with DID SE-001, which must be approved by the TA before Carrier Module Assemblies are assembled.

#### **5.2.2.6 Cable Harness Testing**

The Contractor must perform Cable Harness Testing on 100% of all cable harnesses listed in Paragraph 3.2.1.5

Cable Harness Testing to be conducted by the Contractor must include the following tests / inspections as a minimum, which must be applied to the various cable harness types as specified in Table A-1. These tests / inspections do not replace other testing that the Contractor may perform on cable harnesses:

- a. Continuity Testing: in accordance with IPC/WHMA-A-620B Section 19.5.1 Class 3;
- b. Shorts Testing: in accordance with IPC/WHMA-A-620B Section 19.5.2 Class 3  
(Note: See Section 19-5 of IPC-620B. It states this test is not required if DWV or IR test is performed);
- c. Dielectric Withstanding Voltage (DWV)/Hi Pot: in accordance with IPC IPC/WHMA-A-620B Section 19.5.3 Class 3;
- d. Insulation Resistance (IR): in accordance with IPC/WHMA-A-620B Section 19.5.4 Class 3;
- e. Mechanical Testing:
  - i. Crimp Height Testing: in accordance with IPC/WHMA-A-620B Section 19.17.1 Class 3;
  - ii. Pull Force/Tensile Testing: in accordance with IPC/WHMA-A-620B Section 19.17.2. Class 3

(Note: CA5 (0976478-2) and CA1B (0976515-2) cables do not meet the IPC-620A – Class 3 standard for pull tests);

- iii. Crimp Force Monitoring: in accordance with IPC/WHMA-A-620B Section 19.17.3 Class 3;
  - iv. Crimp Tool Qualification: in accordance with IPC/WHMA-A-620B Section 19.17.4 Class 3; and
  - v. Contact Retention Verification: in accordance with IPC/WHMA-A-620B Section 19.17.5 Class 3.
- f. Inspection in accordance with IPC/WHMA-A-620B, except for CA2, which requires Optical Inspection Testing.

Cable	Test					
	Continuity	Shorts	Dielectric	Insulation	Mechanical	Inspection
CA1B	✓	✓	✓	✓	See Para. 5.2.2.6.e.ii	✓
CA2						✓
CA3	✓	✓	✓	✓	✓	✓
CA4B	✓	✓	✓	✓	✓	✓
CA5	✓	✓	✓	✓	See Para. 5.2.2.6.e.ii	✓
CA6B	✓	✓	✓	✓	✓	✓

**Table A-1: Cable Harness Test Requirements**

The Contractor must submit a Cable Harness Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before cable harnesses are tested and installed in the VIP Mk25.

Cable Harness testing must be conducted after cable harness assembly and prior to installation in the VIP Mk25.

The Contractor must provide the necessary cable harness testing equipment.

The Contractor must submit a Certificate of Conformance (CofC) for the COTS Fibre Optic CA2 Cable Harness.

If production of a custom cable harness is outsourced, the Contractor must provide a CofC, along with the tests results. These test results must be entered into the CS in an XML format

The Contractor must enter cable harness test results into the CS in an XML format.

**5.2.2.7 Commercial Off The Shelf Component Testing**

The Contractor must provide a CofC for 100% of all Ethernet Switches, Power Supply Modules and Fiber Optic Transceivers, certifying that the product meets specifications, and the OEM has conducted the additional screening as per the specified part number, the latter being above normal OEM testing conducted for such COTS devices.

The Contractor may supplement OEM testing / screening of the Ethernet Switch, Power Supply Module, Fiber Optic Transceiver and Fibre Optic CA2 Cable Harness. Should the Contractor choose to do so:

- a. the Contractor must submit an Additional Test Plan for COTS components per Paragraph 5.2.2.12 as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before these COTS components are tested;
- b. testing must be conducted prior to assembling these COTS components into the Carrier Module Assembly;
- c. the Contractor must provide the necessary testing equipment; and
- d. the Contractor must enter COTS component test results into the CS in an XML format.

#### **5.2.2.8 Hi-Pot Testing**

The Contractor must perform Hi-Pot Testing on 100% of all VIP Mk25s. The test must be a High Voltage/Over Current Protection test, two (2) times the line voltage +1000 volts with the pass criteria being each discrete AC item having less than 20mA ground leakage.

The Contractor must submit a Hi-Pot Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before Hi-Pot testing is conducted.

The Contractor must provide the necessary Hi-Pot testing equipment capable of conducting Hi-Pot tests on the VIP Mk25.

The Contractor must enter Hi-Pot test results into the CS in an XML format.

#### **5.2.2.9 Seal Testing**

The Contractor must perform Seal Testing on 100% of all VIP Mk25 TLAs.

The Contractor must submit a Seal Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before VIP Mk25 chassis are seal tested.

The Contractor must provide the necessary seal tester that must:

- a. conduct depressurization testing (i.e. vacuum decay leak measurement);
- b. have independent control over each of the VIP Mk25's three chamber ports as shown in Figure A-22, thereby facilitating three separate seal tests and isolation of leaks to a specific chamber;
- c. generate a negative pressure of zero (0) to four (4) pounds per square inch (PSI);
- d. provide leak measurement in less than sixty (60) seconds;
- e. have a pressure resolution reading of 0.001 PSI;
- f. use a negative pressure generated by:
  - i. a Pressure Decay Tester using an internal electrical vacuum pump; or
  - ii. a source of pressurized air that creates a test vacuum, in which case the pressurized air supply must be:
    - oil and water free;
    - dry with a minimum sixteen(16) cubic feet per minute desiccant drying;
    - filtered at the final stage with a minimum forty (40) cubic feet per minute to five (5)  $\mu\text{m}$ ; and

- at a minimum pressure of one hundred (100) PSI.

The Contractor must conduct additional tests to further isolate leaks to a specific membrane, O-ring, gasket, connector, or chassis.

The Contractor must provide a workstation that must:

- a. monitor leak test progress and collect test data; and
- b. upload test data, to the CS for each specific test, for each Unit Under Test (UUT). Test data must be in an XML format, and must be linked to the serial number bar coded on each UUT chassis.



**Figure A-22: Three Chambers of the VIP Mk25 Chassis**

Only those UUTs that pass testing may move onto the next test. If the Contractor disassembles the assembly, repairs the fault, and reassembles the UUT, the Contractor must restart testing with iATP.

The Contractor must debug and repair VIP Mk25 TLAs failing seal testing in accordance with Paragraph 5.2.5.1.

#### **5.2.2.10 Bonding Testing**

The Contractor must perform Bonding Testing on 100% of all VIP Mk25s as follows:

- a. Measure the impedance between the VIP Mk25 ground lug and each of the following connectors of the VIP Mk25 separately:
  - i. J1,
  - ii. J2,
  - iii. J5,
  - iv. J6, and
  - v. J7.

- b. A measurement of greater than 2.5 milliohms for any connector constitutes a failure of that connector and of the TLA.
- c. For each failed TLA:
  - i. debug and repair per Paragraph 5.2.5.1,
  - ii. repeat the test for all connectors, and
  - iii. repeat the cycle until all connectors pass.
- d. If the Contractor disassembles the assembly, other than removal and reinstallation of connector jam nuts, to repair a fault, after reassembling the UUT, the Contractor must restart testing with iATP.

The Contractor must perform the above bonding test procedure a minimum two (2) times for each VIP Mk25 TLA, and a minimum three (3) times for each VIP Mk25 TLA selected for TEMPEST Sample testing as follows:

- a. Conduct the bonding test procedure a first time just after each TLA is assembled and before it's further tested.
- b. Conduct the bonding test procedure a second time as part of outgoing inspection just prior to packaging for delivery.
- c. Additionally, conduct the bonding test procedure on all TLAs selected as sample units for TEMPEST Sample Testing, just prior to being shipped for testing.

The Contractor must submit a Bonding Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before bonding testing is conducted.

The Contractor must provide the necessary bonding testing equipment including a calibrated milliohm meter.

The Contractor must record measurements for all bonding tests, including repeat tests conducted on all connectors of all TLAs correlated by TLA serial number and connector identifier, such that the complete bonding testing history of any given connector may be readily examined. The Contractor must make every effort to automate this process so as to minimize measuring and recording errors.

The Contractor must monitor the recorded bonding test measurements for trends per Paragraph 5.2.5.2.3, and must include measurements, and the Contractor's analysis monthly in the Technical Report (DID SE-006).

#### **5.2.2.11 Environmental Stress Screening**

The Contractor must perform Vibration and Thermal ESS per the following subparagraphs.

##### **5.2.2.11.1 Vibration Testing**

The Contractor must perform Vibration Testing in accordance with Paragraph 5.2.3.4 and the following subparagraphs.

The Contractor must submit a Vibration Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before vibration testing is conducted.

###### **5.2.2.11.1.1 Vibration Platform**

The Contractor must provide a vibration platform to function together with the government furnished VIP Mk 25 TS to conduct VIP Mk25 vibration testing.

The vibration platform must:

- a. be capable of vibrating a minimum of four (4) VIP Mk25 TLAs at once,
- b. be capable of vibrating the VIP Mk25 to Input levels of  $\pm 3$ dB at a level of 6.06 gRMS,
- c. provide acceleration (vibration range) up to 50 gRMS, and
- d. provide a serial, Ethernet or I/O communication port.

#### **5.2.2.11.1.2 Vibration Controller**

The VIP Mk25 TS is not designed to interface with a vibration controller.

The Contractor must upload test data, to the CS for each specific test, for each UUT. Test data must be in an XML format, and must be linked to serial number bar coded on the UUT chassis.

#### **5.2.2.11.1.3 Vibration Fixtures**

The Contractor must secure VIP Mk25 TLAs to the Contractor-provided vibration platform during vibration testing using government furnished fixtures. These fixtures have been modelled and characterized.

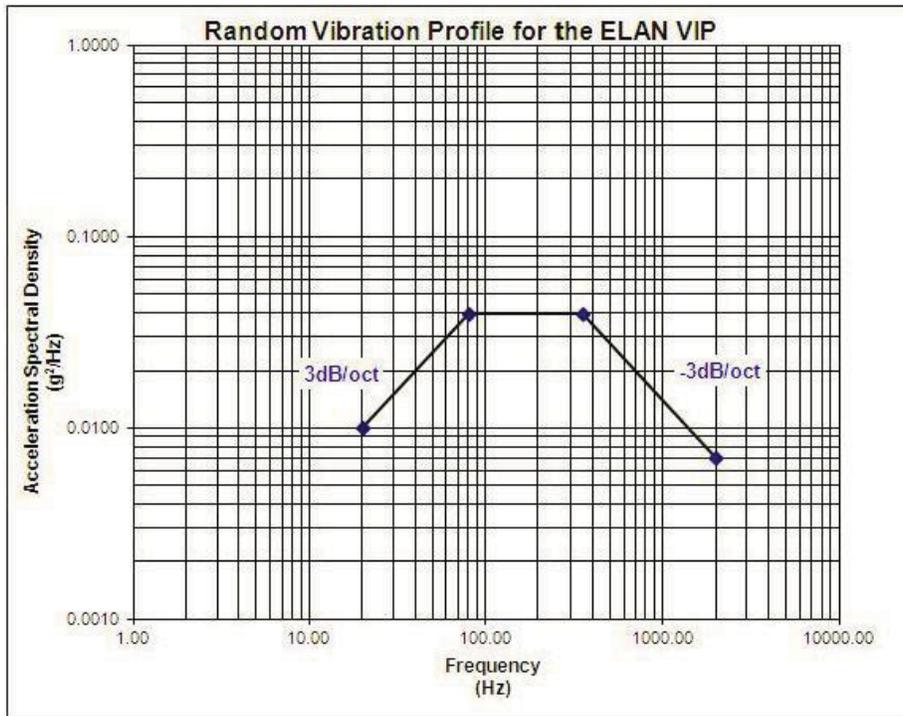
The Contractor must use the government furnished fixtures as built, without modification and in the intended orientation.

The Contractor must configure the Contractor's vibration platform (i.e. head expander) to accommodate the government furnished fixtures, as attachment of the fixtures to the head expander does not employ the standard four-inch spacing. The bolt hole pattern drawing is provided as GFI per Appendix A3.

The Contractor must ensure that vibration testing setup does not create undue wear and tear on government furnished cables or the UUT. UUT cables must be suspended above the vibration platform and be supported in cable trays between the VIP Mk 25 TS and the vibration platform.

#### **5.2.2.11.1.4 Vibration Profile**

The Contractor must use the random vibration profile shown in Figure A-23, tailored as required per MIL-HDBK-2164A guidelines. The vibration profile must have Input levels of  $\pm 3$ dB at a level of 6.06 gRMS. The vibration stimulus must be a flat Power Spectral Density (PSD) spectrum between 20 to 2000 Hz and with a tolerance on the input levels of  $\pm 3$ db at a level of 6.06 gRMS.



**Figure A-23:** Vibration Profile

#### 5.2.2.11.1.5 Vibration Setup Verification

The Contractor must verify the vibration profile and vibration platform configuration on the first LRIP VIP Mk25 by placing accelerometers in strategic locations on and inside the unit and checking for resonance. These locations must be proposed by the Contractor and approved by the TA.

The Contractor must remove (notch) any resonance or excessive vibration from the input PSD to protect the VIP Mk25 from damage whilst undergoing vibration testing.

Vibration setup verification must be performed on a single axis random vibration shaker at room temperature for ten (10) minutes. The vibration axis must be perpendicular to the VIP Mk25 CCA planes.

#### 5.2.2.11.2 Thermal Testing

The Contractor must perform Thermal Testing in accordance with Paragraph 5.2.3.5 and the following subparagraphs.

The Contractor must submit a Thermal Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before thermal testing is conducted.

##### 5.2.2.11.2.1 Thermal Chamber

The Contractor must provide a thermal chamber to function together with the government furnished VIP Mk25 TS to conduct VIP Mk25 thermal testing.

The thermal chamber must:

- a. accommodate a minimum of four (4) Mk25 TLAs at once,

- b. be capable of testing the VIP Mk25 thermal profile over a twelve (12) hour duration,
- c. have a minimum ramp rate of no less than 5 degrees Celsius (°C) per minute,
- d. have a temperature range from plus 55 °C to minus 40 °C,
- e. continuously monitor its internal temperature and make measured temperature values available via the communication port, and,
- f. provide a serial, Ethernet or I/O communication port.

#### **5.2.2.11.2.2 Thermal Controller**

The VIP Mk25 TS is designed to interface with a Thermotron 6800, 7800 or 8800 Controller.

If the Contractor uses a Thermotron 6800, 7800 or 8800 controller:

- a. Canada will work with the Contractor to interface the controller with the VIP Mk 25 TS per Paragraph 4.1.2.6. This will facilitate automatic uploading of thermal test data from the thermal controller to the CS; and
- b. the Contractor must provide the data cable between the Contractor's thermal controller and the VIP Mk 25 TS ESS Test Station.

If the Contractor uses a thermal controller other than a Thermotron 6800, 7800 or 8800:

- a. Canada may work with the Contractor to interface the controller with the VIP Mk 25 TS per Paragraph 4.1.2.6. This will facilitate automatic uploading of thermal test data from the thermal controller to the CS; and
- b. the Contractor must provide the data cable between the Contractor's thermal controller and the VIP Mk 25 TS ESS Test Station.

If the Contractor does not use a thermal controller:

- a. the Contractor must manually start and stop the thermal chamber at the beginning and end of each test. The VIP Mk 25 TS ESS Test Station will be unaware of thermal chamber temperature and thermal controller failures and will continue to cycle the test firmware with the UUT until manually stopped by the operator; and
- b. the Contractor must upload test data, to the CS for each specific test, for each UUT. Test data must be in an XML format, and must be linked to serial number bar coded on the UUT chassis.

#### **5.2.2.11.2.3 Thermal Fixtures**

The Contractor must properly secure VIP Mk25 TLAs in the thermal chamber during thermal testing.

The Contractor must ensure that thermal testing setup does not create undue wear and tear on government furnished cables or the UUT. UUT cables must be supported in cable trays between the VIP Mk 25 TS and the thermal chamber.

#### **5.2.2.11.2.4 Thermal Profile**

The Contractor must use the thermal profile shown in Table A-2. The thermal profile operates between minus 40°C and +55°C, over 3 cycles, taking approximately 12 hours to complete.

Step	Temperature (°C)	Description	Duration	
			Incremental	Cumulative
1	22	Start Thermal Test	0	0
2		Sanity Check (See Note)	17	17
3		Start Thermal Cycle	0	17
4		Transition (at 5°C per minute)	13	30
5	-40	Stabilization	50	80
6		Operation and Functional Test	48	128
7		Transition (at 5°C per minute)	19	147
8	55	Stabilization	50	197
9		Operation and Functional Test	48	245
10		Transition (at 5°C per minute)	19	264
11	-40	Stabilization	50	314
12		Operation and Functional Test	48	362
13		Transition (at 5°C per minute)	19	381
14	55	Stabilization	50	431
15		Operation and Functional Test	48	479
16		Transition (at 5°C per minute)	19	498
17	-40	Stabilization	50	548
18		Operation and Functional Test	48	596
19		Transition (at 5°C per minute)	19	615
20	55	Stabilization	50	665
21		Operation and Functional Test	48	713
22		Transition (at 5°C per minute)	7	720
23	22	End Thermal Cycle	0	0
<b>Total (3 cycles)</b>			<b>720 minutes</b>	
			<b>12 hours</b>	

Note: Sanity check confirms that all UUTs and cabling are connected properly.

**Table A-2: Thermal Profile**

#### 5.2.2.11.2.5 Thermal Setup Verification

The Contractor must verify the thermal profile and thermal chamber configuration on the first LRIP VIP Mk25 by placing thermocouples in strategic locations on and inside the unit and checking for temperature. These locations must be proposed by the Contractor and approved by the TA. The Contractor must ensure that the internal temperature of the UUT reaches the upper and lower limit of the temperature profile.

#### 5.2.2.12 Additional Testing

The Contractor may, at no additional cost to Canada, conduct additional component, assembly and/or TLA testing to enhance the test coverage on the VIP Mk25 with the aim of improving quality and reducing risk. Should the Contractor choose to do so:

- a. the Contractor must submit an Additional VIP Mk25 Test Plan as part of the Test Plan in accordance with DID SE-002, which must be approved by the TA before any additional testing is conducted;
- b. the Contractor must provide the necessary testing equipment and must test 100% of all VIP Mk25 TLAs or components thereof; and
- c. the Contractor must enter additional test results into the CS in an XML format.

#### **5.2.2.13 Test, Debug and Repair Equipment**

The Contractor must provide test, debug and repair equipment to augment the government furnished VIP Mk25 TS and Contractor-provided test equipment to conduct test failure analysis and repair in accordance with Paragraph 5.2.5.

#### **5.2.2.14 Network Infrastructure**

The Contractor must provide and maintain a network encompassing, routers, wireless devices, cabling, power, etc. as necessary to:

- a. interconnect the government furnished VIP Mk 25 TS and all Contractor-provided workstations as depicted in Figure A-24; and
- b. provide Virtual Private Network (VPN), or equivalent remote access to the CS and the VIP Mk25 TS for the TA and TA representatives, to facilitate remote TS maintenance per Paragraph 5.2.3.2.5.

The Contractor must submit a Network Operations Plan as part of the Quality Plan in accordance with DID SE-001.

##### **5.2.2.14.1 Central Server**

The Contractor must provide and maintain a CS that:

- a. stores all test results, test reports and applications that generate reports;
- b. has redundant storage media, and
- c. has sufficient storage capacity to accommodate all test data that will be generated for the duration of the Contract.

The Contractor must back up the data on the CS daily, and keep a copy of the backup at a secure off-site storage facility. Backed up data must not be deleted from the CS.

The Contractor must submit a CS Operations Plan as part of the Quality Plan in accordance with DID SE-001.

##### **5.2.2.14.2 Workstations**

The Contractor must provide workstations in accordance with the following subparagraphs. Although three separate workstation functions are described, the Contractor may combine or split functionality, to form less or more than three physical workstations.

###### **5.2.2.14.2.1 Incoming Inspection Workstation Functionality**

The Contractor must maintain an Incoming Inspection capability in accordance with Paragraph 4.2.2.2 and 4.3.2.2. This functionality may be accomplished via an Incoming Inspection Workstation.

#### **5.2.2.14.2.2 Assembly Workstation Functionality**

The Contractor must maintain traceability of VIP Mk25 components in accordance with Paragraph 3.2.4. This functionality may be accomplished via an Assembly Workstation.

#### **5.2.2.14.2.3 Debug and Repair Workstation Functionality**

The Contractor must maintain a Debug and Repair capability in accordance Paragraph 5.2.5.1. This functionality may be accomplished via a Debug/Repair Workstation.

#### **5.2.2.15 Calibration and Maintenance**

The Contractor must perform all required preventive and corrective maintenance on Contractor-provided equipment used for VIP Mk25 production or testing so as to ensure high production quality and minimize disruption.

At the request of the TA, the Contractor must provide the preventive maintenance schedule for any Contractor-provided equipment used in VIP Mk25 production or testing, and verification that maintenance and calibration has been completed.

Should calibration or maintenance intervals need to be shortened, or lengthened for any reason, the Contractor must provide this information to the TA when known.

### **5.2.3 Testing with Government Furnished Equipment**

The Contractor must test VIP Mk25 TLAs and components in accordance with the following subparagraphs using Government furnished test equipment.

#### **5.2.3.1 Government Furnished Equipment**

Canada will provide the GFE described in the following subparagraphs.

##### **5.2.3.1.1 VIP Mk25 Test Station**

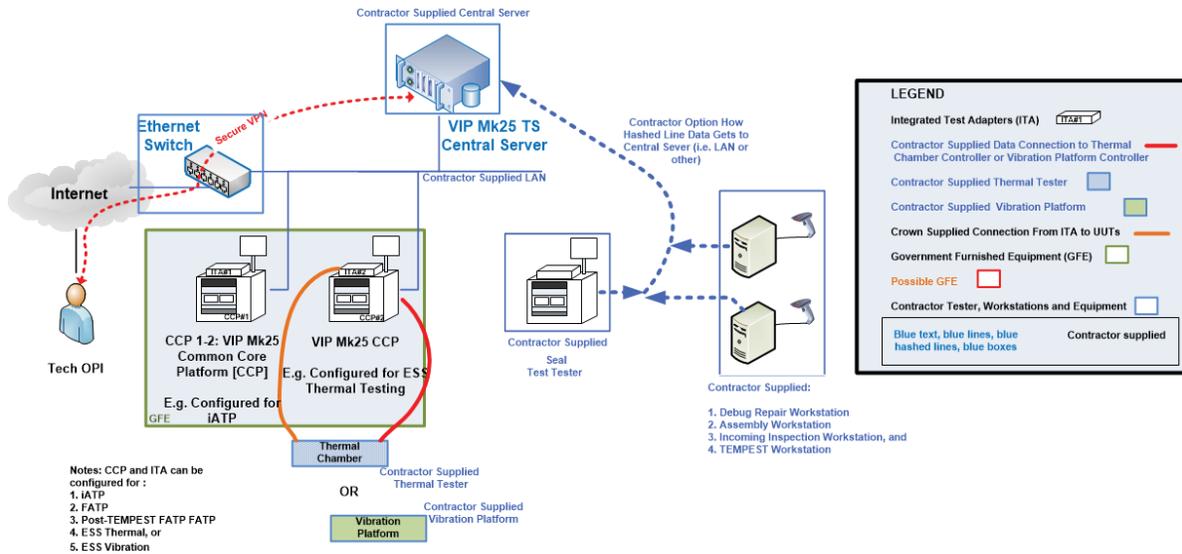
The VIP Mk25 TS provides VIP Mk25 functional test, debug and data capture capabilities to work together with equipment and infrastructure provided by the Contractor per Paragraph 5.2.2. The VIP Mk 25 TS will be integrated into the Contractor's facility per Paragraph 4.1.2.6. A depiction of the integrated VIP Mk 25 TS is shown in Figure A-24.

The VIP Mk 25 TS includes two identical Test Stations. Each Test Station is made up of one Test Station Rack, one Integrated Test Adapter (ITA), and four Test Cables:

- a. **Test Station Rack:** The Test Station Rack is portable and contains all test equipment and software applications necessary to simultaneously test one, two, three or four VIP Mk25 TLAs. The Test Station Rack includes a monitor, keyboard and wireless bar code scanner to facilitate data entry in any enterable data field.
- b. **Integrated Test Adapter:** The ITA is a swappable fixture that mounts on the Test Station Rack and interfaces it through cabling with up to four VIP Mk25 UUTs.
- c. **Test Cables:** Test Cables provide connectivity between the ITA and VIP Mk25 UUTs. Test Cables are comprised of a number of individual cables bundled together in a removable jacket to reduce wear and tear, and are approximately twenty (20) feet long. The ITA-end of the cable has a single connector and the UUT-end has several connectors that mate with the various VIP Mk25 connectors.

The VIP Mk25 Test Station indicates the general areas of failure and validates the firmware version on the UUT. Test results data is generated and saved for review and analysis. The VIP Mk25 TS generates test results data in XML format on the CS.

**VIP Mk25 TS Network Diagram  
V1.5 dated 10 Aug 2015**



**Figure A-24: VIP Mk 25 Test Station Integrated in the Contractor’s Infrastructure**

**5.2.3.1.1.1 Test Station Configuration**

The VIP Mk 25 TS is designed to perform the following tasks:

- a. **Functional Testing:** The following functional tests are all the same except they occur at different stages of the test process. It’s estimated that Functional Testing will take approximately twelve (12) minutes to complete, not including setup and takedown. A Test Station configured to perform these tests is referred to as a Functional Test Station (FTS):
  - i. Initial Acceptance Test Procedure (iATP) is performed after assembly and before ESS Testing.
  - ii. Final Acceptance Test Procedure (FATP) is performed after ESS Testing.
  - iii. Post-TEMPEST Acceptance Test Procedure (PATP) is conducted only for those TLAs that are selected as sample units for TEMPEST Sample Testing, and is performed after TEMPEST Testing has been completed.
- b. **Environmental Stress Screening (ESS) Testing:** The following tests, which are performed while a UUT is subjected to environmental stresses, are very similar to the functional tests above, except that two tests steps requiring operator input (1. LED on or off, and 2. Press Status button) are omitted:
  - i. Vibration Testing is performed after iATP. During Vibration Testing, functional tests are executed once while the UUT is subjected to an established vibration profile. It’s estimated that Vibration Testing will take approximately ten (10) minutes to complete, not including setup and takedown. A Test Station configured to perform vibration testing is referred to as a Vibration Test Station (VTS).

- ii. Thermal Testing is performed after Vibration Testing. During Thermal Testing, functional tests are executing numerous times while the UUT is subjected to an established thermal profile. It's estimated that Thermal Testing will take approximately twelve (12) hours to complete, not including setup and takedown. A Test Station configured to perform thermal testing is referred to as a Thermal Test Station (TTS).

The VIP Mk 25 TS has a great deal of flexibility in that either Test Station can be configured to perform any of the above tasks. The Contractor may configure / reconfigure Test Stations to any of the above configurations as necessary to meet the delivery rate requirements specified in Paragraph 4.1.4.1.

#### **5.2.3.1.2 Test Station Spare Components**

Canada will provide VIP Mk25 TS spares per the VIP Mk25 TS Sparing Plan (See Appendix A3) to be used by the Contractor to perform preventive maintenance per Paragraph 5.2.3.2.3 and/or by the TA's VIP Mk25 TS support agent to conduct corrective maintenance per Paragraph 5.2.3.2.5.

These 'spares' are composed of consumable spares, repairable spares and the VIP Mk 25 Qualification Test Stack. The Contractor must store all spares for the Contract Period, and must track and report the status of selected spares per Paragraph 5.2.3.2.4.

Consumable spares are used to replace unserviceable components that are not repairable and must be disposed of as directed by the TA.

Repairable spares are used to replace unserviceable components that may be economically repairable as directed by the TA on a case-by-case basis.

The VIP Mk25 Qualification Test Stack may be utilized by the Contractor with TA approval.

#### **5.2.3.1.3 Known Good Units**

Canada will provide known-good VIP Mk25s as GFE per Appendix A4 to be used by the Contractor as Golden Units. With TA approval the Contractor may disassemble up to half of these units. Any disassembled component may also be used as a golden unit.

The Contractor must track and report the status of Golden Units per Paragraph 5.2.3.2.4.

#### **5.2.3.2 Government Furnished Equipment Responsibilities**

TA and Contractor responsibilities regarding GFE, and in particular the VIP Mk25 TS, are detailed in the following subparagraphs.

##### **5.2.3.2.1 Technical Authority Responsibilities**

The TA will:

- a. provide GFE including:
  - i. the VIP Mk 25 TS per Paragraph 4.1.2.3;
  - ii. consumable and repairable spare VIP Mk 25 TS components per Paragraph 5.2.3.1.2; and
  - iii. Golden Units per Paragraph 5.2.3.1.3.
- b. provide and revise as required GFE documentation, including the System Operation and Maintenance Manual (SOMM) for the VIP Mk25 TS per Paragraph 4.1.2.2;

- c. assist the Contractor to install and integrate the VIP Mk 25 TS within the Contractor's facilities per Paragraph 4.1.2.6;
- d. provide one-time VIP Mk 25 TS operator introductory training for the initial cadre of Contractor staff per Paragraph 4.1.2.6; and
- e. conduct on-going GFE corrective maintenance and calibration, per Paragraph 5.2.3.2.5.

#### **5.2.3.2.2 Contractor Responsibilities**

The Contractor must:

- a. provide the infrastructure and facilities to accommodate the VIP Mk 25 TS per Paragraph 4.1.2.4;
- b. install and integrate the VIP Mk 25 TS within Contractor facilities and verify its operation per Paragraph 4.1.2.6;
- c. integrate the VIP Mk 25 TS into a contractor-provided network per Paragraph 5.2.2.14 and provide ongoing operation and maintenance of the network;
- d. operate the VIP Mk 25 TS in accordance with the SOMM and government-provided training;
- e. provide VIP Mk 25 TS operator *refresher* training for the initial cadre of Contractor staff, and VIP Mk 25 TS operator *introductory* training for new or replacement Contractor staff as required;
- f. conduct on-going GFE preventative maintenance per Paragraph 5.2.3.2.3; and
- g. track and report GFE state per Paragraph 5.2.3.2.4.

#### **5.2.3.2.3 Contractor-Provided Maintenance**

The Contractor must perform preventive maintenance and limited corrective maintenance on all GFE in accordance with Paragraph 4.1.2.3, and in particular on the VIP Mk25 TS in accordance with the SOMM.

The Contractor must track usage of items with a specified life (i.e. maximum number of insertions for connectors) and ensure they do not exceed their life.

Should it become apparent to the Contractor that established preventive maintenance procedures or intervals are inadequate, the Contractor must advise the TA when such issues become known, and provide recommendations for their resolution.

#### **5.2.3.2.4 Status Tracking and Reporting**

In order that the TA may remain aware of the state of GFE, and work proactively to prevent any potential GFE inoperability or unavailability from impacting VIP Mk25 production, the TA will provide the Contractor with a list of those significant items of GFE and components thereof, for which their operational state must be regularly tracked and reported by the Contractor.

The Contractor must, for each listed GFE item:

- a. check its state *daily* against established and mutually agreed-upon indicators (such as fully, partially or not operable / available);
- b. report its current state to the TA *continuously* via a Contractor-provided, web based capability; and

- c. notify the TA *immediately*, via email, of all changes of state. When a change of state involves a situation whereby a significant item of GFE has become inoperable or unavailable, the Contractor must include in the notification:
  - i. the events leading up to the situation,
  - ii. how the situation was detected,
  - iii. actions taken by the Contractor to prevent and/or rectify the situation, and
  - iv. recommendations regarding resolution of the situation.

#### **5.2.3.2.5 Government Furnished Maintenance**

The TA will perform corrective maintenance and calibration, and any necessary perfective or adaptive maintenance on all GFE at a single Contractor location throughout the Contract Period, and in particular on the VIP Mk25 TS in accordance with the SOMM.

Upon receipt of notification per Paragraph 5.2.3.2.4.c, that an item of GFE has become inoperable or unavailable, the TA will respond within 48 hours, Monday through Thursday and next business day if notified on Friday, to render the GFE operable and available. As this activity may occur at the Contractor's facility or may require removal of GFE from the Contractor's facility, and may involve the services of a contracted agent of the TA, the Contractor must:

- a. provide the TA's agent with access to applicable areas of the Contractor's test facility and the GFE per Paragraph 4.1.3.1,
- b. work together with the TA's agent to diagnose and resolve the situation, and
- c. use the trouble reporting system of the TA's agent to track resolution of the situation.

Should it become apparent to the Contractor that established corrective maintenance and calibration procedures or intervals are inadequate, the Contractor must advise the TA when such issues become known, and provide recommendations for their resolution.

#### **5.2.3.3 Initial Acceptance Test Procedure Testing**

The Contractor must perform iATP Testing on 100% of all VIP Mk25 TLAs using the government furnished VIP Mk 25 TS as follows:

- a. The Contractor must perform iATP testing on a UUT only after it has been fully assembled.
- b. The Contractor must repair each UUT failing iATP testing in accordance with Paragraph 5.2.5.1 and retest the UUT commencing with iATP.
- c. The Contractor may utilize the VIP Mk 25 TS as required to assist in debugging faults.

#### **5.2.3.4 Vibration Testing**

The Contractor must perform Vibration Testing on 100% of all VIP Mk25 TLAs using the government furnished VIP Mk 25 TS and equipment provided by the Contractor per Paragraph 5.2.2.11.1 as follows:

- a. The Contractor must perform Vibration testing on a UUT only after it has passed iATP.
- b. The Contractor must repair each UUT failing vibration testing in accordance with Paragraph 5.2.5.1 and retest the UUT commencing with iATP.
- c. The Contractor may utilize the VIP Mk 25 TS as required to assist in debugging faults.

- d. The Contractor must not subject any VIP Mk25 to more than three (3) vibration tests. In the event that faults are found after vibration testing a unit a third time, the unit must be sent to the Contractor's Manufacture Review Board (MRB) for disposal.
- e. While the VIP Mk 25 TS will record the functional test results on the CS, the Contractor must enter the corresponding vibration results (i.e. vibration started, the vibration profile that executed, and vibration ended), into the CS in an XML format. The functional test results and the vibration results must be correlated.

#### **5.2.3.5 Thermal Testing**

The Contractor must perform Thermal Testing on 100% of all VIP Mk25 TLAs using the government-furnished VIP Mk 25 TS and equipment provided by the Contractor per Paragraph 5.2.2.11.2 as follows:

- a. The Contractor must perform Thermal testing on a UUT only after it has passed Vibration testing.
- b. The Contractor must repair each UUT failing thermal testing in accordance with Paragraph 5.2.5.1 and retest the UUT commencing with iATP.
- c. The Contractor may utilize the VIP Mk 25 TS as required to assist in debugging faults.
- d. The Contractor must not subject any VIP Mk25 to more than three (3) thermal tests. In the event that faults are found after thermal testing a unit a third time, the unit must be sent to the MRB for disposal.
- e. While the VIP Mk 25 TS will record the functional test results on the CS, the Contractor must enter the corresponding thermal results (i.e. thermal started, the thermal profile that executed, and thermal ended), into the CS in an XML format. The functional test results and the thermal results must be correlated.

#### **5.2.3.6 Final Acceptance Test Procedure Testing**

The Contractor must perform FATP Testing on 100% of all VIP Mk25 TLAs using the government furnished VIP Mk 25 TS as follows:

- a. The Contractor must perform FATP testing on a UUT only after it has passed Vibration and Thermal testing.
- b. The Contractor must repair each UUT failing FATP testing in accordance with Paragraph 5.2.5.1 and retest the UUT commencing with iATP.
- c. The Contractor may utilize the VIP Mk 25 TS as required to assist in debugging faults.
- d. The Contractor must not deliver a VIP Mk25 TLA until after it has passed FATP testing.

#### **5.2.3.7 Post-TEMPEST Acceptance Test Procedure Testing**

The Contractor must perform PATP Testing as follows:

- a. The Contractor must perform PATP testing only on VIP Mk25 samples that have undergone TEMPEST Sample Testing.
- b. The Contractor must repair each UUT failing PATP testing in accordance with Paragraph 5.2.5.1 and retest the UUT commencing with iATP.
- c. The Contractor may utilize the VIP Mk 25 TS as required to assist in debugging faults.
- d. The Contractor must not deliver a UUT that has undergone TEMPEST Sample Testing until after it has passed PATP testing.

## **5.2.4 TEMPEST Sample Testing**

The Contractor must conduct TEMPEST Sample Testing per the following subparagraphs.

### **5.2.4.1 Overview**

The VIP Mk25 is a Certified TEMPEST Product (CTP) which must meet applicable CID/09/15A TEMPEST standards. As this certification may only be provided by an accredited test facility, VIP Mk25 sample units must be shipped from the Contractor's facilities to an independent, government-designated facility within Canada for TEMPEST Sample Testing.

### **5.2.4.2 Sampling Rate**

The follow two sampling rates must apply to VIP Mk25 TEMPEST Sample Testing:

- a. Normal Sampling Rate: two (2) samples from every batch of VIP Mk 25s; and
- b. Tightened Sampling Rate: four (4) samples from every batch of VIP Mk 25s.

The Contractor must sample the first and following VIP Mk25 batches using the Normal Sampling Rate. If any sample unit fails TEMPEST Sample testing, the Contractor must sample subsequent batches using the Tightened Sampling Rate. The Contractor may return to the Normal Sampling Rate once the sample units of two consecutive batches have passed TEMPEST Sample Testing.

See Paragraph 4.1.3.7 for the definition of VIP Mk25 batch size.

### **5.2.4.3 Sample Selection**

The Contractor must:

- a. randomly select TEMPEST test samples from each VIP Mk25 batch without regard to their relative quality and with equal probability of selection to all other units within the batch that have passed FATP per Paragraph 5.2.3.6;
- b. conduct Bonding Testing per Paragraph 5.2.2.10 on all sample units prior to shipping them for TEMPEST Sample Testing;
- c. prepare, preserve, package and mark sample units for shipping in conformance with the Preparation for Delivery requirements of the Contract;
- d. ship samples to the government-designated TEMPEST Test Facility via the most direct and economical means, and bear the cost of same; and
- e. advise the TA of the serial numbers and batch number(s) of sample units when shipped.

### **5.2.4.4 Test Result Notification**

The TA will notify the Contractor of TEMPEST Sample Testing results in terms of Pass or Fail within ten (10) working days after receipt of a sample unit at the TEMPEST Test Facility.

The Contractor must not deliver any VIP Mk25, until notified by the TA that all sample units selected from the VIP Mk25's batch have passed TEMPEST Sample Testing.

#### **5.2.4.4.1 Pass Results**

When notified by the TA that all samples selected from a given batch have passed TEMPEST Sample Testing, the Contractor must process the sample units and the batch from which the sample units were selected as detailed in the following subparagraphs.

#### **5.2.4.4.1.1 Passed Sample Handling**

The TEMPEST Test Facility will return sample units that passed TEMPEST Sample Testing to the Contractor's facility, shipping paid, within ten (10) working days after test result notification. The first-in / first out (FIFO) method will normally be used.

Upon receipt of sample units from the TEMPEST Test Facility that have passed TEMPEST Sample Testing, the Contractor must:

- a. conduct PATP Testing per Paragraph 5.2.3.7 to ensure that returned sample units have not been damaged during the TEMPEST Sample Testing or shipping;
- b. not reuse a sample unit that has previously passed TEMPEST Sample Testing for any subsequent TEMPEST Sample Testing; and
- c. deliver sample units that pass PATP Testing per Paragraph 4.1.4.

#### **5.2.4.4.1.2 Passed Batch Handling**

Upon receiving notification from the TA that all sample units selected from a given batch have passed TEMPEST Sample Testing the Contractor must deliver that batch per Paragraph 4.1.4.

#### **5.2.4.4.2 Fail Results**

When notified by the TA that a sample unit has failed TEMPEST Sample Testing, the Contractor must process the failed sample unit and the batch from which the failed sample unit was selected, and participate in a failure investigation, as detailed in the following subparagraphs.

##### **5.2.4.4.2.1 Failed Sample Handling**

The TEMPEST Test Facility will return sample units that failed TEMPEST Sample Testing to the Contractor's facility, shipping paid, as directed by the TA.

Upon receipt of a sample unit from the TEMPEST Test Facility that has failed TEMPEST Sample Testing the Contractor must place the sample unit in quarantine pending direction from the TA.

Once corrective measures, as determined per Paragraph 5.2.4.4.2.3, have been completed for a sample unit that has failed TEMPEST Sample Testing, the Contractor must process the sample unit and return it to the TEMPEST Test Facility per Paragraph 5.2.4.3 for retesting.

##### **5.2.4.4.2.2 Failed Batch Handling**

Upon receiving notification from the TA that a sample unit has failed TEMPEST Sample Testing the Contractor must quarantine the batch from which the failed sample unit was selected pending further direction from the TA.

If the Investigation conducted per Paragraph 5.2.4.4.2.3 reveals that the cause of the failure is a manufacturing error or a defective component, impacting other VIP Mk25 units in addition to the failed sample unit:

- a. the Contractor must implement the corrective measures resulting from the investigation at the Contractor's expense, and
- b. any Waiver resulting from the investigation will be implemented per Paragraph 3.1.2 at the Contractor's expense.

If the Investigation conducted per Paragraph 5.2.4.4.2.3 reveals that the cause of the failure is a design error, impacting all VIP Mk25s, any Design Change or Deviation resulting from the investigation will be implemented per Paragraph 3.1.2 at Canada's expense.

Once corrective measures, as determined per Paragraph 5.2.4.4.2.3, have been carried out on all affected units of the batch from which the failed unit was selected, the Contractor must deliver that batch per Paragraph 4.1.4.

#### **5.2.4.4.2.3 Failure Investigation**

As soon as possible, and not later than twenty (20) working days after providing notification of the failure, the TA:

- a. will provide the Contractor with a TEMPEST Failure Report that presents the pertinent details of the TEMPEST Sample Test failure including:
  - i. the nature of the failure, and
  - ii. the suspected cause of the failure.
- b. may provide additional resources to assist the Contractor in resolving the problem.

The Contractor must:

- a. conduct an initial assessment and submit a written report to the TA within five (5) working days after receipt of the TEMPEST Failure Report, including:
  - i. the determined or probable root cause of the failure;
  - ii. the determined or probable scope of the problem e.g. the failed sample unit only, specific units from the batch from which the failed sample unit was selected, other batches, etc.;
  - iii. suggested corrective measures; and
  - iv. a recommendation whether production and/or delivery should be suspended until corrective measures have been implemented.
- b. arrange a meeting with the TA to occur within seven (7) days after receipt of the TEMPEST Failure Report, to address the Contractor's initial assessment;
- c. conduct Problem Resolution per Paragraph 5.2.6;
- d. if directed by the TA, suspend production and/or delivery per Paragraph 5.2.7.

#### **5.2.5 Test Failure Repair and Analysis**

The Contractor must conduct test failure repair and analysis per the following subparagraphs.

The Contractor must process product that is recalled for rework due to defects discovered after delivery in the same manner as faulty pre-delivery product, unless Canada approves a waiver per Paragraph 3.1.2.

The Contractor must submit a Test Failure Repair, Analysis and Problem Resolution Plan as part of the Test Plan in accordance with DID SE-002.

##### **5.2.5.1 Test Failure Debug and Repair**

The Contractor may use the VIP Mk25 TS to assist in debugging.

The Contractor must repair components, CCAs and TLAs in accordance with IPC standards referenced in Paragraphs 5.2.2 and 5.2.3.

The Contractor must, upon completion of repairs, re-enter the repaired components, CCAs or TLAs into the manufacturing and test process as detailed in the applicable paragraph of Section 5 and depicted in Figure A-20.

The Contractor must document the nature of all repairs, correlated to the serial number of the faulty component, CCA or TLA, and the associated test failure stored on the CS.

#### **5.2.5.2 Test Data Capture, Analysis and Reporting**

The Contractor must capture and analyze all test data and produce reports per the following subparagraphs.

##### **5.2.5.2.1 Overview**

Test data capture, analysis and reporting is essential to any quality manufacturing process. Accurate test data from all steps in the test process facilitates analysis and the early identification of negative trends, which in turn permits early identification of the root cause(s) and the implementation of appropriate corrective measures, thereby minimizing undesirable consequences.

##### **5.2.5.2.2 Test Data Capture**

The Contractor must enter test results for testing as specified throughout Section 5, into the CS in an XML format.

##### **5.2.5.2.3 Test Data Analysis and Reporting**

The Contractor must provide the hardware, software and expertise necessary to:

- a. host and organize all test data captured per Paragraph 5.2.5.2.2;
- b. generate the sub-reports of the Technical Report per DID SE-006;
- c. analyze the sub-reports so as to:
  - i. demonstrate compliance with testing requirements; and
  - ii. identify trends, both negative and positive.

#### **5.2.6 Problem Resolution**

Following a recognized problem solving technique, such as the one described in Paragraph 5.2.6.1, the Contractor must perform and document problem resolution of:

- a. production process problems encountered;
- b. test failures for which debugging per Paragraph 5.2.5.1 has been unsuccessful; and
- c. negative test data trends identified per Paragraph 5.2.5.2.3;

so as to:

- a. identify the root cause(s) of such problems, failures and negative trends, and
- b. develop corrective measures that resolve the problems and failures, and reverse the negative trends, and will prevent with certainty their reoccurrence.

The Contractor must complete each such Problem Resolution within thirty (30) working days after identification of the problem, failure or trend. The Contractor may request a fifteen (15) day extension no more than twice from the TA, after the initial thirty (30) days have expired.

##### **5.2.6.1 Root Cause Analysis**

Root Cause Analysis (RCA) is a problem resolution method used for identifying the root causes of faults or problems. A factor is considered a root cause if removal thereof from the problem-fault-sequence prevents the undesirable consequence from recurring; whereas a causal factor

is one that affects an event's outcome, but is not a root cause. Though removing a causal factor can benefit an outcome, it does not prevent its recurrence within certainty.

RCA forms the most critical part of determining successful corrective measures by directing the corrective measures at the true root cause of the problem. Knowing the root cause is secondary to the goal of prevention, as it is not possible to determine an absolutely effective corrective measure for the defined problem without knowing the root cause. The general process for performing and documenting a RCA is as follows:

- a. Define the problem or failure to be prevented in the future.
- b. Gather data and evidence, classifying it along a timeline of events to the problem or failure. For every behaviour, condition, action and inaction, specify in the "timeline" what should have been done when it differs from what was done.
- c. Ask "why" and identify the causes associated with each sequential step towards the defined problem or failure. "Why" is taken to mean "What were the factors that directly resulted in the effect?"
- d. Classify causes into two categories: causal factors that relate to an event in the sequence; and root causes that interrupted that step of the sequence chain when eliminated.
- e. Identify all other harmful factors that have equal or better claim to be called "root causes." If there are multiple root causes, which is often the case, reveal those clearly for later optimum selection.
- f. Identify corrective measure(s) that will, with certainty, prevent recurrence of each harmful effect and related outcomes or factors. Check that each corrective action would, if pre-implemented before the event, have reduced or prevented specific harmful effects.
- g. Test the recommended corrective measure(s).

### **5.2.7 Stop Work Action**

The Contracting Authority may at any time, by written notice, order the Contractor to suspend or stop the Work or part of the Work in accordance with the General Conditions of the Contract. This may be exercised under advisement of the Technical Authority should any of the following occur:

- a. the number of test failures experienced during Vibration or Thermal testing exceeds five (5) percent of the number of Vibration or Thermal tests performed over any period of twenty (20) working days or more, excluding retests of any given VIP Mk25;
- b. the number of test failures experienced during iATP or FATP testing exceeds five (5) percent of the number of iATP or FATP tests performed over any period of twenty (20) working days or more, excluding retests of any given VIP Mk25;
- c. PCB or CCA Cleanliness Sample Testing experiences a sample failure in two (2) or more successive batches;
- d. any VIP Mk25 TEMPEST Sample Test failure; or
- e. problem resolution has not been conducted per Paragraph 5.2.6 to the satisfaction of the TA for those failures that occurred in the previous month, and greater than 10% of those that failed two months past still need to be repaired.

### **5.3 Flange Assembly Test Requirements**

The Contractor must inspect and measure five (5) percent of each Flange Assembly batch to confirm compliance with all physical characteristics detailed in their respective TDP. See Paragraph 4.1.3.7 for the definition of batch size.

## 6 Warranty

6.1 The Contractor must provide warranty services in accordance with the General Conditions of the Contract, Chapter 9 of A-LM-184-001/JS-001 and the following subparagraphs.

6.1.2 The Contractor must, for each VIP Mk25 returned under warranty:

- a. conduct Functional Testing per Paragraph 5.2.3.6;
- b. conduct Test Failure Debug and Repair per Paragraph 5.2.5.1;
- c. re-conduct Functional Testing per Paragraph 5.2.3.6;
- d. capture test data per Paragraph 5.2.5.2; and
- e. provide a Warranty Repair Report in accordance with CDRL Item No. 019 and DID ISS-001.

6.1.3 The Contractor must, for each VIP Mk25 Flange Assembly returned under warranty:

- a. Inspect, repair and verify the item per Paragraph 4.3.2.3; and
- b. provide a Warranty Repair Report in accordance with CDRL Item No. 019 and DID ISS-001.

6.1.4 The Contractor must analyze accumulated warranty test, debug and repair data per Paragraph 5.2.5.2, and report all negative trends to the TA.

6.1.5 The Contractor must conduct a Problem Analysis per Paragraph 5.2.6 for all negative trends identified per Paragraph 6.1.4.

## **7 Environmental, Health and Safety**

The Contractor must comply with the following Environmental Health and Safety (EHS) requirements:

- a. The Contractor and subcontractors must comply with applicable EHS legislation.
- b. The VIP Mk25 must not contain Polychlorinated Biphenyls (PCBs) or asbestos.
- c. The VIP Mk25 must comply with Products Containing Mercury Regulations.
- d. If any Lithium or Lithium-polymer batteries are used, then the procedures in C-02-008-001/TS-000, General Safety Lithium Batteries Handling, Storage Preservation and Disposal Instructions must be used.
- e. The Contractor must ensure that all Contract deliverables are reviewed for EHS risks, and must include appropriate labels, warnings and instructions to mitigate the EHS risks.
- f. The Contractor must be responsible for the change of any products used in VIP Mk25 that are not in compliance with the applicable EHS legislation at their expense.
- g. The Contractor should have an Environmental Management System (EMS) to control impacts resulting from their activities, products or services that is consistent with ISO 14001 - Environmental Management Systems; Requirements with Guidance for Use. Certification to this standard is preferred but not necessary.
- h. The Contractor should implement and maintain an Occupational Health and Safety Management System (OHSMS) consistent with the principles presented in OHSAS 18001. Certification to this standard is preferred but not necessary.
- i. The EMS and OHSMS requirement is applicable to the Contractor. The Contractor must make a reasonable effort to monitor and ensure that all subcontractors are in compliance with applicable EHS legislation.
- j. The Contractor must keep accurate and complete EHS records and documentation for the work performed under this Contract. EHS documentation must be maintained within the project file throughout the life of this Contract and made available to the TA upon request.

## **ANNEX B**

### **Basis of Payment**



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**1. Introduction**

The Basis of Payment is established herein for the following considerations:

- a. Payment for Deliveries,
- b. Payment for Design Changes and Deviations,
- c. Payment for Additional Work, and
- d. Payment for Holdback.

**2. Basis of Payment**

**2.1 Payment for Deliveries**

Payment for deliveries will be made in accordance with the Multiple Payment provisions of the Contract upon receipt of a claim for payment for CLINs that have been delivered and accepted. Such payments will be made no more frequently than once per month.

Except for costs associated with design changes and deviations per Paragraph 2.2 below, and costs associated with additional work per Paragraph 2.3 below, all Contractor costs must be included within the firm unit prices specified in Table 1 below, and as described in the following subparagraphs.

**Table 1 – Firm Unit Prices**

Contract Line Item		Firm Unit Price				
CLIN	Description	Firm Quantity	Price Breakpoint Quantity	Optional Additional Quantities		
				Contract Period	Option Year 1	Option Year 2
001	Vehicle Interface Panel Mk25	\$	up to 99	\$	\$	\$
			100 or more	\$	\$	\$
002	Mk18 Flange Assembly	\$	up to 99	\$	\$	\$
			100 or more	\$	\$	\$
003	Mk2 Flange Assembly	\$	up to 49	\$	\$	\$
			50 or more	\$	\$	\$
004	Mk3 Flange Assembly	\$	up to 49	\$	\$	\$
			50 or more	\$	\$	\$
<b>First Level Repair Spares</b>						
005	Front Gasket	\$		\$	\$	\$
006	Protective Cap	\$		\$	\$	\$
007	Protective Cap	\$		\$	\$	\$
008	Protective Cap	\$		\$	\$	\$
009	Steel Coil Ring	\$		\$	\$	\$
<b>Fourth Level Repair Spares</b>						
010	Module Ethernet Switch Gigabit	\$		\$	\$	\$
011	Transceiver Electro-Optical	\$		\$	\$	\$
012	DC/DC Converter	\$		\$	\$	\$
013	CA1B Harness Assembly	\$		\$	\$	\$
014	CA2 Cable Assembly	\$		\$	\$	\$
015	CA3 Harness Assembly	\$		\$	\$	\$
016	CA4B Harness Assembly	\$		\$	\$	\$
017	CA5 Harness Assembly	\$		\$	\$	\$
018	CA6B Harness Assembly	\$		\$	\$	\$
019	Membrane, Front Panel	\$		\$	\$	\$
020	O-Ring Gasket, EMI/EMP, Shell Size	\$		\$	\$	\$
021	O-Ring Gasket, EMI/EMP, Shell Size 8	\$		\$	\$	\$
022	Ground Stud	\$		\$	\$	\$
023	Flat Washer M8	\$		\$	\$	\$
024	Lock Washer Helical 8mm	\$		\$	\$	\$
025	Wing Nut, M8x1.25, 18-8 SS	\$		\$	\$	\$
026	Spring Tension Pin 3/32"	\$		\$	\$	\$

Contract Line Item		Firm Unit Price				
CLIN	Description	Firm Quantity	Price Breakpoint Quantity	Optional Additional Quantities		
				Contract Period	Option Year 1	Option Year 2
027	Binding Post Red	\$		\$	\$	\$
028	Binding Post Black	\$		\$	\$	\$
029	SFP Retainer Bracket	\$		\$	\$	\$
030	Isolator Mount Multiplane Static Load	\$		\$	\$	\$
031	SCR SKT HD Captive Assy 4-40	\$		\$	\$	\$
032	SCR SHT 6-32	\$		\$	\$	\$
033	Flat Washer SAE #6	\$		\$	\$	\$
034	Lock Washer Helical #6	\$		\$	\$	\$
035	SCR SKT HD Captive Hex Assy 8-32 L=.625in SST	\$		\$	\$	\$
036	Upper Rear Gasket	\$		\$	\$	\$
037	Lower Rear Gasket	\$		\$	\$	\$
038	Cable Tie Mini 2.5mm Wide	\$		\$	\$	\$
039	Tie Strap 25.4x12.7mm Max Tie WdD4.8mm ROHS	\$		\$	\$	\$
040	Alarm Overvoltage Protection	\$		\$	\$	\$
041	Tel Interconnect	\$		\$	\$	\$
042	Spark Gap Assy	\$		\$	\$	\$
043	Spark Gap Assy	\$		\$	\$	\$
044	Lock Washer #10 EXT-TTH SS-PA 410	\$		\$	\$	\$
045	Nut Pln Hex 10-32 SS	\$		\$	\$	\$
046	Screw SHC MA CAPT HSWR HEX 6- 32x0.250 SST	\$		\$	\$	\$
047	EMI Filter	\$		\$	\$	\$

### 2.1.1 Firm Quantity

The unit price for each Firm Quantity Contract Line Item is specified in Table 1 above as follows:

- The Contract Line Item columns identify the items to be delivered. See Table 1 in Appendix A1 to Annex A for the Part Number, NCAGE and NSN / PSCN of each Contract Line Item Number (CLIN).
- The Firm Unit Price [for] Firm Quantity column specifies the Firm Unit Price for the Firm Quantity of each CLIN that will be in effect throughout the Contract Period.

### 2.1.2 Optional Quantities during the Contract Period

The unit prices for Optional Quantities during the Contract Period are specified in Table 1 above as follows:

- The Contract Line Item columns identify the items to be delivered. See Table 1 in Appendix A1 to Annex A for the Part Number, NCAGE and NSN / PSCN of each CLIN.
- The Price Breakpoint Quantity column lists the price break point quantity ranges for CLINs 001 to 004.

- c. The Firm Unit Price [for] Optional Quantities [during the] Contract Period column specifies the Firm Unit Prices for each CLIN and Price Breakpoint Quantity combination that will be in effect throughout the Contract Period, subject to adjustment due to:
  - i. recurring costs associated with authorized design changes and deviations listed in Table 3 of Appendix A1 to Annex A, and
  - ii. associated last-time-buys listed in Table 4 of Appendix A1 to Annex A.

If an option is exercised for optional quantities during the Contract Period, the applicable Firm Unit Price from Table 1 above will be adjusted by the sum of the Unit Price Impacts of applicable CLIN design changes / deviations from Table 3 of Appendix A1 to Annex A and applicable CLIN component last-time-buys from Table 4 of Appendix A1 to Annex A.

### **2.1.3 Optional Quantities during the Option Periods**

The unit prices for Optional Quantities during the Option Periods are specified in Table 1 above as follows:

- a. The Contract Line Item columns identify the items to be delivered. See Table 1 in Appendix A1 to Annex A for the Part Number, NCAGE and NSN / PSCN of each CLIN.
- b. The Price Breakpoint Quantity column lists the price break point quantity ranges for CLINs 001 to 004.
- c. The Firm Unit Price [for] Optional Quantities [during] Option Year 1 and 2 columns specify the Firm Unit Prices for each CLIN and Price Breakpoint Quantity combination that will be in effect throughout the Option Years, subject to adjustment due to:
  - i. recurring costs associated with authorized design changes and deviations listed in Table 3 of Appendix A1 to Annex A, and
  - ii. associated last-time-buys listed in Table 4 of Appendix A1 to Annex A.

If an option is exercised for optional quantities during the Option Periods, the applicable Firm Unit Price from Table 1 above will be adjusted by the sum of the Unit Price Impacts of applicable CLIN design changes / deviations from Table 3 of Appendix A1 to Annex A and applicable CLIN component last-time-buys from Table 4 of Appendix A1 to Annex A.

### **2.1.4 Reduction for Holdback**

A ten (10) percent holdback must be applied to all Deliverable Payment Claims.

## **2.2 Payment for Design Changes and Deviations**

Payment for authorized design changes and deviations will be made in accordance with the Progress Payment provisions of the Contract. Canada will reimburse the Contractor for authorized design changes and deviations as follows:

- a. Approval to conduct design changes and deviations must be gained following the procedure specified in Paragraph 3.1.2 of Annex A by way of an authorized Design Change / Deviation Form DND 672 specified in Annex E.
- b. Labour charges must be based on Firm Fixed Hourly Labour Rates in Table 2 below.

- c. Payment of claims for the recurring and non-recurring costs associated with design changes and deviations will be made after they have been approved and the Contract has been amended following the procedure specified in Paragraph 6 of Appendix A1.
- d. Paid invoices are not necessary to support a claim for payment for design changes and deviations.

## 2.3 Payment for Additional Work Arisings

Payment for Additional Work Arisings will be made in accordance with the Progress Payment provisions of the Contract. Should there be a requirement for additional work beyond the established scope of this contract Canada will reimburse the Contractor as follows:

- a. Approval to conduct additional work must be gained following the procedure specified in Paragraph 3.1.2 of Annex A by way of an authorized Task Authorization Form DND 626 specified in Annex C.
- b. Labour charges must be based on Firm Fixed Hourly Labour Rates in Table 2 below.

### 2.3.1 General

#### 2.3.1.1 Pricing Options

- a. Firm Price: For AWAs, the Contractor must submit a "Firm Price" excluding travel and living expenses to the PA when the scope of Work is clearly understood by both parties and no changes are anticipated in the scope of the Work. Where a firm price has been established, the Contractor will be obliged to complete the Work for the specified firm price. Travel and living expenses will be paid based on actual expenditure incurred by the Contractor in accordance with the Basis of Payment.
- b. Ceiling Price: AWAs, the Contractor may submit a "Ceiling Price" quote excluding travel and living expenses to the PA when the scope of the Work cannot be clearly defined. The term Ceiling Price is the maximum price that is to be paid to the Contractor and beyond which the Contractor will not receive additional compensation for the defined Work and in return for which the Contractor is obligated to complete the Work. No additional funds will be made available. When the "Ceiling Price" approach is used both parties agree prior to the Work authorization that the price is subject to downward revision on completion of the task, based on the actual cost and verification of the actuals. Travel and living expenses will be paid based on actual expenditure incurred by the contractor IAW the Basis of Payment. Each Task Authorization for AWAs must clearly state whether the price is a "Firm Fixed Price" or a "Ceiling Price".
- c. Limitation of Expenditure Price: When it is not possible for the Contractor to submit a "Firm Price" or a "Ceiling Price" as described above, the Contractor may submit a "Limitation of Expenditure" quote.
- d. The "Firm Price", "Ceiling Price" and/or the "Limitation of Expenditure" quote must be based on the rates in Canadian Funds. All proposed prices and cost estimates must be supported by a detailed cost breakdown.
- e. For a task which is subject to a "Limitation of Expenditure" as described in Sub-paragraph c. above, the Contractor must notify the proper authority in writing as to the inadequacy of its "Limitation of Expenditure" when:

- i. the resources required for its timely completion reaches 75% of the authorized task funding; or
  - ii. if during the execution of the authorized tasking it appears to the Contractor that the Scope of Work is greater than had been anticipated and that the funds provided for a task are inadequate.
- f. When providing the notification described in Sub-article e. above, the Contractor must, as a minimum, identify:
- i. estimated labour hours and schedule forecast to complete;
  - ii. work around plan; and
  - iii. risk assessment.
- g. A revised proposal and proper justification for the requested amendment must be submitted to the proper approval Authority for consideration. Under no circumstance is the authorized level of expenditure to be exceeded. Canada is under no obligation to pay for any Work that exceeds the authorized funding limitation.
- h. All amounts charged on a "Ceiling price" or "Limitation of Expenditure" basis must be subject to Government audit before or after payment of an invoice.

#### **2.3.1.2 Task Subject to Limitation of Expenditure**

For a task which is subject to a "Limitation of Expenditure" the Contractor must:

- a. monitor the cost of Work and advise the PA (one copy to the CA) when 75% of the funds authorized for each task have been expended, and provide an estimate with backup support indicating if the remaining 25% will be sufficient to cover the balance of the Work forecasted for the task;
- b. if at any time during the Work it becomes evident to the Contractor that the authorized level of expenditure will be exceeded, the Contractor must immediately submit a written request for a Task Authorization Amendment in accordance with the Contract sub-article entitled "Tasking Procedure";
- c. when expenditures reach the authorized level of the DND 626, the Contractor must stop Work, notify the PA and await further written instructions from the PA and/or CA. Under no circumstances must the authorized level of the DND 626 be exceeded without prior written approval by the PA and/or CA; and
- d. the Contractor must not be obliged to perform any Work or provide any services that would cause the total liability of Canada to be exceeded without the prior written approval of the PA and/or CA in accordance with the Contract article entitled "Limitation of Expenditure".

#### **2.3.1.3 Task Completion/Closure Procedures**

The Contractor must monitor all tasks issued under the Contract. If at any time the Contractor believes that a specific task has been completed or has been inactive for a period of at least one (1) month, the Contractor must proceed as follows to request closure:

- a. The Contractor must determine the final costs to Canada, itemized as necessary for each individual task being considered for closure.

- b. The Contractor must submit a letter to the PA (one copy each to Technical Authority and CA) requesting closure of the task with reference to reports or letters concerning the task as applicable.
- c. In cases where authorized funds were not all expended to complete specific tasks, these funds are considered returned to the Contract funding baseline for re-issuance/re-distribution as necessary.

### 2.3.1.4 Consolidation of Task Authorizations for Administrative Purposes

For administrative purposes, the Contract will be amended by the CA from time to time to reflect all TAs issued and approved to date under the Contract.

### 2.3.1.5 Canada's Obligation – Portion of the Work – Task Authorizations

Canada's obligation with respect to the portion of the Work under the Contract that is performed through TAs is limited to the total amount of the actual authorized tasks performed by the Contractor.

Canada reserves the right, at any time, to acquire the requested Work by other means including by selecting other suppliers. For example, Canada may decide to acquire the requested Work by other means when the Contractor provides a written proposal that has been rejected by Canada.

**Table 2 – Firm Fixed Hourly Labour Rates for Additional Work Arisings**

Item No.	Labour Category	Hourly Labour Rate				
		Contract Award to 31 Dec 2017	1 Jan 2018 to 31 Dec 2018	1 Jan 2019 to 31 Dec 2019	1 Jan 2020 to 31 Dec 2020	1 Jan 2021 to 31 Dec 2021
1	Junior Assembler	\$	\$	\$	\$	\$
2	Senior Assembler	\$	\$	\$	\$	\$
3	Production Associate	\$	\$	\$	\$	\$
4	Production Supervisor	\$	\$	\$	\$	\$
5	Junior Technician	\$	\$	\$	\$	\$
6	Senior Technician	\$	\$	\$	\$	\$
7	Junior Technologist	\$	\$	\$	\$	\$
8	Senior Technologist	\$	\$	\$	\$	\$
9	Junior Engineer	\$	\$	\$	\$	\$
10	Senior Engineer	\$	\$	\$	\$	\$
11	Project Manager	\$	\$	\$	\$	\$

### 2.3.2 Last-Time-Buys

Canada will reimburse the Contractor for authorized last-time-buys as follows:

- a. The Contractor must report obsolescence issues per Paragraph 3.1.6 of Annex A, and gain approval to conduct last-time-buys by way of a Task Authorization (DND 626) per Paragraph 2.3 above.
- b. Payment of claims for the component last-time-buys will be made after they have been approved and the Contract has been amended following the procedure detailed in Paragraph 7 of Appendix A1.

- c. Payment claims for component last-time-buys must be supported by paid invoices.

### **2.3.3 Re-establishment of Production Line**

Canada will pay the Contractor a fee for the re-establishment the VIP Mk25 production line as follows.

- a. In the event that there is a gap in VIP Mk25 production in excess of 30 calendar days, the Contractor may claim the pre-determined amount of \$\_\_\_\_\_ to re-establish the production line, provided that the gap is not as a result of a Stop or Suspend Work order from the CA due to Contractor default.
- b. The gap will be measured as the time between the issue date of a contract amendment for an Optional Quantity, and the final Delivery Date of the preceding Firm Quantity or Optional Quantity.
- c. Authority to claim for payment for re-establishment of the VIP Mk-25 production line must be gained by way of a Task Authorization (DND 626) per Paragraph 2.3 above.
- d. Paid invoices are not necessary to support a claim for payment for the re-establishment of the VIP Mk25 production line.

### **2.4 Payment for Holdback**

Payment for holdback will be made in accordance with the Progress Payment provisions of the Contract. Canada will make progress payment(s) totalling the amount held back per Paragraph 2.1.4 above, upon completion and delivery of all Work if the Work has been accepted by Canada and a final claim for the payment is submitted.