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**TPSGC**  
**11 Laurier St. / 11, rue Laurier**  
**Place du Portage , Phase III**  
**Core 0A1 / Noyau 0A1**  
**Gatineau**  
**Québec**  
**K1A 0S5**  
**Bid Fax: (819) 997-9776**

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

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

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

**Comments - Commentaires**

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

**Issuing Office - Bureau de distribution**  
Weapons Systems Division/Division des systèmes  
d'arme  
11 Laurier St. / 11, rue Laurier  
8C2, Place du Portage  
Gatineau  
Québec  
K1A 0S5

<b>Title - Sujet</b> PRECISION 7.62MM RIFLE	
<b>Solicitation No. - N° de l'invitation</b> W6399-13EC08/A	<b>Amendment No. - N° modif.</b> 003
<b>Client Reference No. - N° de référence du client</b> W6399-13EC08	<b>Date</b> 2013-04-12
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$BM-015-23485	
<b>File No. - N° de dossier</b> 015bm.W6399-13EC08	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2013-04-30</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Cadotte (bm div), John	<b>Buyer Id - Id de l'acheteur</b> 015bm
<b>Telephone No. - N° de téléphone</b> (819) 956-0218 ( )	<b>FAX No. - N° de FAX</b> (819) 956-5650
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF NATIONAL DEFENCE  NCR REGION (OTTAWA, ONTARIO CANADA)	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<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/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>          <b>Signature</b>          <b>Date</b>	

Solicitation No. - N° de l'invitation

W6399-13EC08/A

Amd. No. - N° de la modif.

003

Buyer ID - Id de l'acheteur

015bm

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

W6399-13EC08

File No. - N° du dossier

015bmW6399-13EC08

CCC No./N° CCC - FMS No/ N° VME

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***Amendment No. 3 to Solicitation W6399-13EC08/A is raised to extend the bid closing date from April 19, 2013 to April 30, 2013 and to revise Annexes A, B, C and D.***

**ADDRESS ENQUIRIES TO:**

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**STATEMENT OF WORK  
FOR THE  
PRECISION (7.62 MM) WEAPON**

**1.0 SCOPE**

1.1 Purpose

The purpose of this Statement of Work is to describe the requirements for the provision of commercial-off-the-shelf Precision (7.62 mm) Weapons (PWs) to the Department of National Defence (DND).

1.2 Background

DND has a requirement for short to medium range (300-800 m (330-880 yd)) high precision weapons to support counter terrorism in both domestic and deployed roles where standard Canadian Forces weapons are unsuitable. This equipment will be referred to as the Precision (7.62 mm) Weapon (PW).

**2.0 DELIVERABLES**

The Contractor shall deliver the following:

- (a) Quantity five (5) PWs in accordance with the Technical and Performance Requirements at Annex B;
- (b) Quantity one (1) PW operator and maintenance manual (English) in electronic format (PDF); and
- (c) A manufacturer's recommended spare parts list to support the PW for a period of three (3) years based on an annual expected usage of up to 5,000 rounds per weapon per year, including the following for each item:
  - i. Manufacturer's part number;
  - ii. NATO stock number (where available);
  - iii. Proposed quantity; and
  - iv. Unit price.

Optional procurements are detailed in Annex D.

**3.0 ENDURANCE TRIAL**

3.1 Trial Procedure

Each of the five (5) PWs will be subjected to an endurance test by DND as follows:

- (a) Each weapon will fire four thousand eight hundred (4800) rounds (in random order) as follows:
  - i. Twelve hundred (1200) MK316 rounds in the suppressed mode;

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- ii. Twelve hundred (1200) MK316 rounds in the un-suppressed mode;
- iii. Twelve hundred (1200) M118LR rounds in the suppressed mode; and
- iv. Twelve hundred (1200) M118LR rounds in the un-suppressed mode;

Note: All ammunition used in the trial will be manufactured by ATK Armaments.

- (b) No more than twenty (20) rounds will be fired per minute;
- (c) The barrel will not be changed during the endurance test;
- (d) The weapon will be cleaned prior to commencing the endurance test;
- (e) The weapon will NOT be cleaned during the endurance test; and
- (f) Oil will be added during the endurance test as required.

Due to security issues, the Contractor will not be permitted to witness the endurance trial. The results of the trial will be provided to the Contractor upon request for their system only.

### 3.2 Stoppages

The weapon-related stoppages will be recorded during the endurance trial (stoppages related to ammunition defects or mis-fires will not be counted) and the outcome will be as follows:

- (a) The five (5) weapons must complete the endurance test with no more than a total of thirty (30) weapon-related stoppages for any single weapon;
- (b) At any point a weapon reaches thirty-one (31) weapon-related stoppages, the endurance test will cease, the test will be deemed a failure, and DND will not be exercising any options; and
- (c) If the endurance test is successful, with each of the five (5) weapons completing the test with less than thirty (30) stoppages, then DND may exercise options as per Annex D.



**TECHNICAL AND PERFORMANCE SPECIFICATIONS  
FOR THE  
PRECISION (7.62 MM) WEAPON**

**1.0 SCOPE**

**1.1 Background**

DND has a requirement for short to medium range (300-800 m (330-880 yd)) high precision weapons to support counter terrorism in both domestic and deployed roles where standard Canadian Forces weapons are unsuitable. This equipment will be referred to as the Precision (7.62 mm) Weapon (PW).

**1.2 Scope**

This specification defines the technical and performance requirements for the Precision (7.62 mm) Weapon (PW).

Note: There are both shall (mandatory) and should (rated) requirements within this specification. At Contract Award, all should statements will be changed to shall statements with the required values reflecting the specific performance achieved by the bidder's weapon.

**2.0 APPLICABLE DOCUMENTS**

**2.1 Applicability**

The following documents form part of this specification to the extent specified herein, and are supportive of the specification when referenced in Section 3.0 and beyond; all other document references are to be considered supplemental information only. Unless otherwise specified, the issue or amendment of documents effective for this contract shall be those in effect on the date of the Contract Award. In the event of a conflict between the documents referenced herein and the contents of the specification, then the contents of the specification shall take precedence.

- MIL-STD-810G - Test Method Standard for Environmental Engineering Considerations and Laboratory Tests ([www.everyspec.com](http://www.everyspec.com))
- STANAG 4694 - NATO Accessory Rail (provided upon request)

**2.2 Acronyms**

AR	Armalite
dB	Decibel
MOA	Minute of Angle
MOLLE	Modular Lightweight Load-Carrying Equipment
MOTS	Military Off-The Shelf
NATO	North Atlantic Treaty Organization
PW	Precision (7.62 mm) Weapon

**2.3 Definitions**

Ambidextrous	Capability to operate the switch or control with either hand without reconfiguration of the weapon.
AR Platform	The AR rifle platform is based upon a design originally developed by Armalite Inc., and is a modular design with a two-piece receiver that permits swap out of upper assemblies of different chambering or configuration.
Positive Apply	A mechanism that controls the operation of the trigger requiring a positive

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Safety	manipulation or action by the shooter to engage and disengage the disabling feature of the safety.
Two-Stage Trigger	The trigger mechanism releases the hammer (firing the weapon) after two distinct amounts of spring and mechanical resistance is overcome by the trigger finger. The initial stage is light and relatively long, and the second stage has noticeable greater resistance but over a shorter distance.

### 3.0 REQUIREMENTS

#### 3.1 Precision (7.62 mm) Weapon

The requirements for the PW are given in the following sections.

##### 3.1.1 Design/Environmental

The PW shall:

- (a) Be designed to have a life expectancy of at least seven (7) years; and
- (b) Be able to operate in MIL-STD-810G, Climatic Conditions A1, A2, A3, B1, B2, B3, C1 and C2 including exposure to climatic conditions ranging from abrasive sand of the desert to the brittle arctic cold and corrosive salt of the ocean.

##### 3.1.2 Performance

The following applies:

- (a) The PW shall:
  - i. Be a semi-automatic, gas operated precision rifle that is designed for prolonged use by the operator in a combat environment under a broad spectrum of conditions ranging from close combat to patrolling;
  - ii. Permit operator task-tailored reconfiguration including attachment and detachment of peripherals including the bipod, laser, sling, optics and suppressor; and
  - iii. Have an accuracy of no more than 1.5 MOA (11.4 cm (4.5 in)) at a range of 274 m (300 yds);
- (b) The PW should have an accuracy of less than 1.5 MOA (11.4 cm (4.5 in)) at a range of 274 m (300 yds).

##### 3.1.3 General Design

The following applies:

- (a) The PW shall:
  - i. Have a maximum weight with empty magazine, flash hider/muzzle brake (without optic or bipod) of 5.34 kg (11.75 pounds);
  - ii. Have a maximum overall length with the butt fully extended and the suppressor attached of no more than 122 cm (48 inches);
  - iii. Have a barrel as follows:
    - a. Threaded to facilitate mounting of a flash hider/muzzle brake;
    - b. A length between 38.1 - 43.2 cm (15 - 17 in);
  - iv. Have an enclosed upper receiver such that all moving components remain within the receiver when fired;
  - v. Have a low profile gas block that does not protrude above, or is incorporated into, the top rail;



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- vi. Have a lower receiver based upon an AR platform;
  - vii. Be semi-automatic, gas operated;
  - viii. Be capable of firing suppressed;
  - ix. Be capable of firing standard NATO 7.62 x 51 mm ammunition as follows:
    - a. M118LR class ammunition; and
    - b. Mk 316 class ammunition;
- (b) The PW should have a maximum weight with empty magazine, flash hider/muzzle brake (without optic or bipod) of 3.4 kg (7.5 pounds).

#### 3.1.4. Features

The following components are included in the PW:

- (a) Safety mechanism:
  - i. The PW shall have an external positive apply safety mechanism that has the following characteristics:
    - a. Manually operated by the firer;
    - b. Capable of being checked by both sight and touch;
    - c. Movable between the safe and fire positions by the operator without moving his hands from the shooting position (prone, standing, kneeling, or sitting);
    - d. Prevents the weapon from being fired when:
      - 1. The trigger is depressed with the safety in the "SAFE" position; and
      - 2. The selector is changed to "fire" without depressing the trigger;
    - e. Remains in the position the operator sets it until it is manually changed; and
    - f. Incorporates a mechanical safety that prevents the cartridge from being fired until the bolt is fully closed and locked;
  - ii. The PW safety mechanism should be ambidextrous operational;
- (b) Firing controls:
  - i. The PW shall have ambidextrous firing controls as follows:
    - a. Mode selector; and
    - b. Cocking (charging) handle;
  - ii. The PW should have an ambidextrous magazine release.
- (c) The PW Trigger mechanism shall:
  - i. Be a two stage trigger;
  - ii. Return to its normal forward position upon release after partial or complete trigger pull; and
  - iii. Have a second stage pull force between 2 kg (4.4 pounds) and 2.7 kg (6 pounds);
- (d) Rails:
  - i. The PW shall have NATO Accessory Rail (STANAG 4694) mounts as follows:
    - a. Top Rail - A rail mounted on the top of the upper receiver (centered on the 12 o'clock position) such that:
      - 1. There is no movement between the rail system and the receiver;
      - 2. It provides at least 52 cm (20.5 in) of top space, starting from the cocking handle cut out to the front end of the rail; and
      - 3. It is not clamped or otherwise attached to the barrel such that the barrel can move independently of the rail;

- b. Side Rails - Rails mounted on each side of the upper receiver (left and right sides centered on the 3 and 9 o'clock positions) with no less than 7.6 cm (3 in) of usable rail space each; and
    - c. Bottom Rail - A rail mounted on the bottom of the upper receiver (centered on the 6 o'clock position) as follows:
      - 1. Have no less than 7.6 cm (3 in) of usable rail space; and
      - 2. Capable of being mounted anywhere on the bottom of the upper receiver;
  - ii. The PW Top Rail should be angled from back to front up to 20 MOA;
- (e) Suppressor:
  - i. The PW suppressor shall:
    - a. Be no longer than 25.4 cm (10 in);
    - b. Weigh no more than 0.6 kg (1.3 pound);
    - c. Reduce the un-suppressed firing noise by at least 16 dB with both ammunition types (Mk 316 and M118LR);
    - d. Fit over the flash hider/muzzle brake; and
    - e. Include a positive locking mechanism that prevents the suppressor from coming loose when firing;
  - ii. The PW suppressor should:
    - a. Be no longer than 12.7 cm (5 in); and
    - b. Weigh no more than 0.34 kg (0.75 pound);
- (f) The PW shall:
  - i. Have a non-reflective coyote brown corrosion-resistant finish in accordance with the manufacturer's standard specifications; and
  - ii. Incorporate self-lubricating coatings and materials that do not require grease or lubricants for the operating components;
- (g) The PW shall have a multistage collapsible or folding butt;
- (h) The PW shall have front post and rear aperture sights that are:
  - i. Removable and/or foldable; and
  - ii. Adjustable for range and azimuth;
- (i) The PW shall have an ambidextrous sling mount forward of the butt on the top rear portion of the upper receiver; and
- (j) The PW shall be properly identified with a unique Serial Number.

### 3.2 Accessories

Each PW shall have accessories as follows:

- (a) Quantity eight (8) twenty-round magazines;
- (b) Quantity four (4) double magazine pouches that are MOLLE compatible for attachment to a load-carrying vest;
- (c) Quantity one (1) operator tool/cleaning kit;
- (d) Quantity one (1) Operators Manual, in English; and



- (e) A hard-sided carrying and storage case as follows:
  - i. Sized to hold the weapon and all accessories;
  - ii. Include a weather seal on the mating sides of the case;
  - iii. Equipped with two (2) or more latching devices to provide a water-tight seal when latched;
  - iv. Include two (2) separated securing eyelets of 10 mm (0.4 in) diameter that accept 8 mm (0.3 in) diameter shackle padlocks; and
  - v. Include a one-piece foam insert that fills the void of the case that is not comprised of small tear-away cubes. The insert is not to be pre-cut in order to permit the user to custom cut the insert to suit their individual needs.

**BID EVALUATION PROCESS  
FOR THE  
PRECISION (7.62 MM) WEAPON**

**1.0 GENERAL**

**1.1 Purpose**

This document outlines the bid evaluation process for the Precision (7.62 mm) Weapon.

**1.2 Definitions**

Stoppage	A stoppage is an event during the weapon cycling process that prevents the weapon from being fired. For the purposes of this evaluation, only stoppages as a result of the weapon platform are considered, and ammunition related stoppages are not included.
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**2.0 EVALUATION**

**2.1 Evaluation Process**

To determine the most suitable contending weapon within the competitive bidding process, the Contracting Authority (CA) will base the selection on the highest combined rating of performance and price. The evaluation process will be conducted in phases as detailed in the following sections.

**2.1.1 Phase I: Bid Screening**

The Phase I evaluation will be conducted using the Phase I Bid Requirements Table found in Appendix 1. The Bidder's experience in developing, manufacturing and/or selling precision weapons and their written attestation that they can provide a precision weapon that can meet all of the performance and technical specifications in Annex B will be evaluated. Where the same weapon is submitted by two or more compliant Bidders, only the lowest cost weapon bid will be evaluated. Failure to provide all of the information requested in the table at Appendix 1 for each weapon/variant will deem the bid non-compliant for that weapon/variant. Compliant Bidders will proceed to Phase II.

**2.1.2 Phase II: Evaluation Trials and Performance Scoring**

**2.1.2.1 Bidder Participation**

Compliant Bidders will be asked to provide the following for the Evaluation Trials to be conducted at the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland.:

- (a) Five (5) weapons;
- (b) Eight (8) magazines for each weapon (forty (40) total);
- (c) MOLLE compatible pouches for the magazines (single or double pouches, doubles preferred); and
- (d) Technical support for verification and testing.

**2.1.2.2 Evaluation Trials**

Each of the weapons supplied by the Bidder will be subjected to the DND conducted Evaluation Trials (Appendix 2) as follows:

- (a) Compliance Verification - One (1) weapon chosen randomly from the five (5) weapons provided by each Bidder will be assessed by DND to verify that the weapon meets the mandatory requirements in accordance with the Compliance Verification Checklist at Appendix 3. If the weapon is found to be non-compliant with any one of the mandatory technical requirements, the reasons will be recorded and the bid will be deemed non-compliant and given no further consideration;
- (b) Rated Requirements - The rated (value added) requirements will be determined from measurement and/or observation including the weapon weight, barrel length, ambidextrous features (safety and magazine release), top rail angle, and the suppressor length and weight in accordance with Appendix 4;
- (c) Safety Inspection/Validation - Each weapon provided by the Bidders will be inspected to validate that it is safe to fire. For any weapon that is deemed unsafe to fire, the reasons will be recorded and the bid will be deemed non-compliant and given no further consideration;
- (d) Accuracy Quantification - The accuracy of the weapons will be quantified as follows:
  - i. Threshold Accuracy - If all of the weapons provided by the Bidder do not achieve the minimum threshold accuracy, conducted in the clamped condition, the bid will be deemed non-compliant and given no further consideration; and
  - ii. Scored Accuracy - The compliant weapons will then be assessed for accuracy in both the clamped and shooter conditions. Points will be awarded based on the average accuracy achieved by the five (5) weapons provided by the Bidder over and above the threshold accuracy (Appendix 5);
- (e) Proof of Concept Field Trial/ Human Factors Assessment - The accuracy achieved by the Bidder's five (5) weapons in both the clamped and shooter groupings will be averaged and ranked from the smallest to largest average accuracy. The trial consists of a series of run/shoot relays requiring the operator to fire the weapon from various positions (prone, kneeling, crouching and standing) and in both unobstructed and barricade (obstructed) conditions. Each of the Bidder's five (5) weapons will be trialed by a different participant. Following the trial, each participant will complete a human factor assessment designed to quantify the useability of the weapon in a combat environment (Appendix 6).

#### 2.1.2.3 Performance Scoring

The points achieved during the Evaluation Trials will be as follows:

Requirement	Points	Minimum Points	
Rated Requirements (Appendix 4)	out of 22	26	51
Clamped Accuracy (Appendix 5)	out of 50		
Shooter Accuracy (Appendix 5)	out of 50		
Human Factor Assessment (Appendix 6)	( $\frac{\quad}{325}$ ) x 50 = out of 50		35
Total	out of 172		86

The minimum points must be achieved during the conduct of the trials or the weapon will be deemed non-compliant and given no further consideration as follows:

- (a) A minimum of twenty-six (26) cumulative points must be achieved in the Rated Requirements and the Clamped Accuracy trial;



- (b) A minimum of fifty-one (51) cumulative points must be achieved in the Rated Requirements and the Clamped and Shooter Accuracy trials; and
- (c) A minimum of thirty-five (35) points must be achieved in the Human Factor Assessment.

Performance Score

The Performance Score is the number of points achieved against the maximum points possible (172) as follows:

$$\text{Performance Score} = (\text{Points Achieved}/172)$$

2.1.3 Phase III: Final Evaluation

Once the Performance Score has been determined for each bid, it will be combined with the price as defined below. Best value balances the importance of the technical value of a proposal with the cost of that technical solution, and is determined using the highest combined rating of technical merit and price contractor selection method. Details on the scoring system used to obtain the Technical Merit Score, Price Score and Total Score are provided in following sections.

2.1.3.1 Technical Merit Score

The Performance Score for each proposal will be multiplied by 100 in order to obtain the Technical Merit Score (out of 100), which is then reduced depending on the number of stoppages during the Accuracy Quantification and Proof of Concept Field Trial as follows:

- (a) Up to ten (10) stoppages - Two (2) points per stoppage will be deducted from the Performance Score; and
- (b) Eleven (11) or more stoppages - The Bidder will be deemed non-compliant and given no further consideration;

$$\text{Technical Merit Score} = (\text{Performance Score} \times 100) - (\# \text{ of Stoppages} \times 2)$$

Note: The reduction in technical merit points due to stoppages is only applied after completion of the trials and is not considered in achieving the minimum points at each stage of the testing.

2.1.3.2 Price Score

The lowest price of the compliant proposals becomes the standard by which the remainder of the proposal's are evaluated. Each proposal is evaluated by taking the lowest proposal price and dividing it by the price of the proposal being evaluated, then multiplying this ratio by 100 in order to get a score out of 100, as follows:

$$\text{Price Score} = 100 \times (\text{Lowest Overall Proposal Price}/\text{Proposal Price})$$

The lowest price of the compliant proposals will have a Price Score of 100, and the remainder of the compliant proposals will have price score of up to 100 based on how much they differ from the lowest price. The lowest cost will be the bid with the lowest overall total cost for all procurements including all options.

2.1.3.3 Total Score

Each proposal's Technical Merit and Price Scores are combined to obtain a Total Score, with the highest overall score representing the proposal with the best value to DND. The assigned weighting factors (70% Technical and 30% Price) represent the extreme significance that DND has placed on the accuracy and

operational useability of the weapon. The formula to calculate the total score for each bid proposal is as follows:

$$\text{Total Score} = (70\% \times \text{Technical Merit Score}) + (30\% \times \text{Price Score})$$

The proposals will then be ranked highest to lowest Total Score. The Bidder with the highest Total Score will then be awarded a contract for five (5) weapons with optional quantities. Optional quantities will only be exercised by DND following a successful pass of the Endurance Test. Detail of the endurance test can be found in Annex A. If the endurance test is unsuccessful, then the Bidder with the next highest Total Score will be awarded a contract for five (5) weapons for endurance testing. This process will be repeated until a successful endurance test is achieved.

## APPENDIX 1 PHASE I BID REQUIREMENTS

A1

### Instructions

Bidders shall be assessed in accordance with the instructions and criteria as detailed within this document. The following instructions shall apply to the Bidder evaluation:

- (a) Mandatory requirements are identified by the word "shall". All mandatory requirements shall be met in order to meet compliance with the requirements;
- (b) For the purposes of this RFP, a Written Attestation is a written statement from the Bidder guaranteeing they will fully comply with the requirement, or portion thereof, identified in the "Requirement" column of Table 1. Canada reserves the right to verify the statements made in the Written Attestation. Written Attestation shall:
  - i. Be on official Bidder's stationery;
  - ii. Be current;
  - iii. Reference the applicable "Requirement" of Table 1;
  - iv. Provide the information identified in the "Proof of Compliance" column of Table 1; and
  - v. Have the original signature of the Bidder's designated representative.
- (c) Documentation provided with the bid shall:
  - i. Be type written (hand written submissions will not be considered); and
  - ii. Be either hard copy or in electronic format (PDF or Word).

The Bidder shall provide the following with the bid:

Table 1: Compliance Matrix

Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
1	N/A	<p><u>Expertise and Proven Design</u></p> <p>The Bidder shall be an established weapon vendor that has significant experience in precision weapons as follows:</p> <p>(d) Manufacturer Qualifications -. The Bidder shall have been in the business of developing, manufacturing and/or selling precision weapons for a minimum of five (5) years;</p>	<p>The Bidder shall provide supporting documentation such as contracts, customer references and brochures that confirm:</p> <p>(1) Years of manufacturing and/or selling precision weapons for a period of at least five (5) years; and</p>	



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Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		(e) and Proven Design - The precision weapon being offered shall be a Commercial-Off-The-Shelf (COTS) product that is in current production.	(2) The weapon is a COTS product that is in current production.	
2	3.1.1	<u>Design/Environmental</u> The PW shall: (a) Be designed to have a life expectancy of at least seven (7) years; and (b) Be able to operate in MIL-STD-810G, Climatic Conditions A1, A2, A3, B1, B2, B3, C1 and C2 including exposure to climatic conditions ranging from abrasive sand of the desert to the brittle arctic cold and corrosive salt of the ocean.	The Bidder shall provide: (1) Written Attestation that the precision weapon being offered is designed with a life expectancy of at least seven (7) years; and (2) Written Attestation that the precision weapon being offered is capable of operating in the environmental conditions specified in Section 3.1.1 (b).	
3	3.1.2	<u>Performance</u> The following applies: (c) The PW shall: i. Be a semi-automatic, gas operated precision rifle that is designed for prolonged use by the operator in a combat environment under a broad spectrum of conditions ranging from close combat to patrolling; ii. Permit operator task-tailored reconfiguration including attachment and detachment of peripherals including the bipod, laser, sling, optics and suppressor; and iii. Have an accuracy of no more than 1.5 MOA (11.4 cm (4.5 in)) at a range of 274 m (300 yds);	The Bidder shall provide Written Attestation that the precision weapon being offered is capable of meeting every aspect of the performance specified in Section 3.1.2 (a).	
4	3.1.3	<u>General Design</u> The following applies: (d) The PW shall: i. Have a maximum weight with empty magazine, flash hider/muzzle brake (without optic or bipod) of 5.34 kg (11.75 pounds); ii. Have a maximum overall length with the butt	The Bidder shall provide Written Attestation that the precision weapon being offered has the general design specified in Section 3.1.3 (a).	

Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		<p>fully extended and the suppressor attached of no more than 122 cm (48 inches);</p> <p>Have a barrel as follows:</p> <ul style="list-style-type: none"> <li>a. Threaded to facilitate mounting of a flash hider/muzzle brake;</li> <li>b. A length between 38.1 - 43.2 cm (15 - 17 in);</li> </ul> <p>iv. Have an enclosed upper receiver such that all moving components remain within the receiver when fired;</p> <p>v. Have a low profile gas block that does not protrude above, or is incorporated into, the top rail;</p> <p>vi. Have a lower receiver based upon an AR platform that includes an ambidextrous cheek piece that is vertically adjustable to achieve proper eye relief;</p> <p>vii. Be semi-automatic, gas operated;</p> <p>viii. Be capable of firing suppressed;</p> <p>ix. Be capable of firing standard NATO 7.62 x 51 mm ammunition as follows:</p> <ul style="list-style-type: none"> <li>a. M118LR class ammunition; and</li> <li>b. Mk 316 class ammunition;</li> </ul>		
5	3.1.4	<p>Features</p> <p>The following components are included in the PW:</p> <p>(e) Safety mechanism:</p> <ul style="list-style-type: none"> <li>i. The PW shall have a positive apply safety mechanism that has the following characteristics: <ul style="list-style-type: none"> <li>a. Manually operated by the firer;</li> <li>b. Capable of being checked by both sight and touch;</li> <li>c. Movable between the safe and fire positions by the operator without moving his hands from the shooting position (prone, standing, kneeling, or sitting);</li> </ul> </li> </ul>	<p>The Bidder shall provide Written Attestation that the precision weapon being offered has the features specified in Section 3.1.4 (a) through (j).</p>	

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Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		<p>d. Prevents the weapon from being fired when:</p> <ol style="list-style-type: none"> <li>1. The trigger is depressed with the safety in the "SAFE" position; and</li> <li>2. The selector is changed to "fire" without depressing the trigger;</li> </ol> <p>e. Remains in the position the operator sets it until it is manually changed; and</p> <p>f. Incorporates a mechanical safety that prevents the cartridge from being fired until the bolt is fully closed and locked;</p> <p>(f) Firing controls:</p> <ol style="list-style-type: none"> <li>i. The PW shall have ambidextrous firing controls as follows: <ol style="list-style-type: none"> <li>a. Mode selector; and</li> <li>b. Cocking (charging) handle;</li> </ol> </li> </ol> <p>(g) PW trigger mechanism shall:</p> <ol style="list-style-type: none"> <li>i. Be a two stage trigger;</li> <li>ii. Return to its normal forward position upon release after partial or complete trigger pull; and</li> <li>iii. Have a second stage pull force between 2 kg (4.4 pounds) and 2.7 kg (6 pounds);</li> </ol> <p>(h) Rails:</p> <ol style="list-style-type: none"> <li>i. The PW shall have NATO Accessory Rail (STANAG 4694) mounts as follows: <ol style="list-style-type: none"> <li>a. Top Rail - A rail mounted on the top of the upper receiver (centered on the 12 o'clock position) such that: <ol style="list-style-type: none"> <li>1. There is no movement between the rail system and the receiver;</li> <li>2. It provides at least 52 cm (20.5 in) of top space, starting from the cocking handle cut out to the</li> </ol> </li> </ol> </li> </ol>		



Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		<p>front end of the rail; and</p> <p>3. It is not clamped or otherwise attached to the barrel such that the barrel can move independently of the rail;</p> <p>b. Side Rails - Rails mounted on each side of the upper receiver (left and right sides centered on the 3 and 9 o'clock positions) with no less than 7.6 cm (3 in) of usable rail space each; and</p> <p>c. Bottom Rail - A rail mounted on the bottom of the upper receiver (centered on the 6 o'clock position) as follows:</p> <ol style="list-style-type: none"> <li>1. Have no less than 7.6 cm (3 in) of usable rail space; and</li> <li>2. Capable of being mounted anywhere on the bottom of the upper receiver;</li> </ol> <p>(i) Suppressor:</p> <ol style="list-style-type: none"> <li>i. The PW suppressor shall: <ol style="list-style-type: none"> <li>a. Be no longer than 25.4 cm (10 in);</li> <li>b. Weigh no more than 0.6 kg (1.3 pound);</li> <li>c. Reduce the un-suppressed firing noise by at least 16 dB with both ammunition types (Mk 316 and M118LR);</li> <li>d. Fit over the flash hider/muzzle brake; and</li> <li>e. Include a positive locking mechanism that prevents the suppressor from coming loose when firing;</li> </ol> </li> <li>(j) The PW shall: <ol style="list-style-type: none"> <li>i. Have a non-reflective coyote brown corrosion-resistant finish in accordance with the manufacturer's standard specifications; and</li> <li>ii. Incorporate self-lubricating coatings and materials</li> </ol> </li> </ol>		

Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		<p>that do not require grease or lubricants for the operating components;</p> <p>(k) The PW shall have a multistage collapsible or folding butt;</p> <p>(l) Have front post and rear aperture sights that are:</p> <ol style="list-style-type: none"> <li>Removable and/or foldable; and</li> <li>Adjustable for range and azimuth;</li> </ol> <p>(m) The PW shall have an ambidextrous sling mount forward of the butt on the top rear portion of the upper receiver; and</p> <p>(n) The PW shall be properly identified with a unique Serial Number.</p>		
6	3.1.5	<p>Accessories</p> <p>Each PW shall have accessories as follows:</p> <p>(o) Quantity eight (8) twenty-round magazines;</p> <p>(p) Quantity four (4) double magazine pouches that are MOLLE compatible for attachment to a load-carrying vest;</p> <p>(q) Quantity one (1) operator tool/cleaning kit;</p> <p>(r) Quantity one (1) Operators Manual, in English; and</p> <p>(s) A hard-sided carrying and storage case as follows:</p> <ol style="list-style-type: none"> <li>Sized to hold the weapon and all accessories;</li> <li>Include a weather seal on the mating sides of the case;</li> <li>Equipped with two (2) or more latching devices to provide a water-tight seal when latched;</li> <li>Include two (2) separated securing eyelets of 10 mm (0.4 in) diameter that accept 8 mm (0.3 in) diameter shackle padlocks; and</li> <li>Include a one-piece foam insert that fills the void of the case that is not comprised of small tear-away cubes. The insert is not to be pre-cut in order to permit the user to custom cut the insert to suit their individual needs.</li> </ol>	<p>The Bidder shall provide Written Attestation that the precision weapon being offered will be supplied with the accessories specified in Section 3.1.5 (a) through (e).</p>	

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Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
7		vi.  Brochures	<p>The Bidder shall provide a brochure(s) that provides the details of the following (minimum):</p> <ul style="list-style-type: none"> <li>- Make</li> <li>- Model</li> <li>- Calibre</li> <li>- Barrel (length, construction, material, rifling, twist)</li> <li>- Trigger design</li> <li>- Safety mechanisms</li> <li>- Receiver (make, model, construction)</li> <li>- Gas regulator (design and operation)</li> <li>- Suppressor</li> <li>- Stock design</li> <li>- Rails</li> </ul>	



## APPENDIX 2 EVALUATION TRIALS

A2

A3

### A3.1 Scope

This appendix details the evaluation trials for the Precision (7.62 mm) Weapon (PW).

### A3.2 Bidder Participation

The compliant Bidders shall provide five (5) weapons and accessories, as detailed in Annex C Section 2.1.1 for testing, to be conducted by DND at the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland. Additional equipment (optics, bipod, etc.) will be provided and installed by DND. A maximum of four hundred (400) rounds will be fired from each weapon to complete the evaluation trials. Each Bidder may, at their discretion, provide support to DND during testing. The evaluation testing is planned for approximately four (4) days per Bidder. The Bidder's personnel will be permitted to witness and assist (at the discretion of DND) the Compliance Verification, Safety Inspection/Validation and Accuracy Quantification portions of the trials for their weapon only, and the results of these trials may be provided to each Bidder upon request for their weapon only. The Bidder's personnel will not be permitted to witness any portion of the field trials; however, the overall results from the trials will be provided to each Bidder upon request for their weapon only. At any point the Bidder's weapons are found non-compliant, they will be returned to the Bidder immediately. Weapons that are found fully compliant in all trial phases and scored will be retained at Crane until a successful Endurance Trial is achieved (see Annex A) and the optional procurement contract is awarded (see Annex D). The weapons provided by the Bidders for the evaluation trials will be used for the Endurance Trial.

### A3.3 Evaluation Trials

The Evaluation Trials include the following:

- (a) Compliance Verification;
- (b) Rated Requirements;
- (c) Safety Inspection/Verification;
- (d) Accuracy Quantification; and
- (e) Proof of Concept Field Trial/ Human Factors Assessment.

Each of these is detailed in the following sections.

#### A3.3.1 Compliance Verification

The weapons provided by each Bidder will be assessed by the DND technical team, consisting of subject matter experts lead by the DND Technical Authority (TA) at the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland. One (1) weapon will be chosen at random from the five (5) weapons provided by the Bidder to be assessed against the mandatory technical requirements in the Compliance Verification Checklist at Appendix 3. The assessment will include measurement, weighing and physical examination of each component of the weapon in order to verify that the weapon meets the mandatory requirements. If the weapon is found to be non-compliant with any one of the mandatory technical requirements, the reasons will be recorded and the bid will be deemed non-compliant and given no further consideration.

#### A3.3.2 Rated Requirements

The rated (value added) requirements from Annex B will then be determined by DND, and scored in accordance with Appendix 4.

#### A3.3.3 Safety Inspection/Validation

Prior to firing any weapon, a complete safety inspection will be conducted by a qualified DND Weapons Technician. For any weapon that is deemed unsafe to fire, the reasons will be recorded and the bid will be deemed non-compliant and given no further consideration. The safety inspection will include the following:

- (a) Design safety and suitability assessment to include;
  - i. Firing pin protrusion (must meet gauging limits for the weapon – min/max);
  - ii. Firing pin energy (enough to prevent misfire);
  - iii. Headspace (verified with go/no go gauge); and
  - iv. Barrel bore straightness (gauge shall pass freely through the barrel);
- (b) Feed system safety (determination of the possibility of double feeding); and
- (c) Interchangeability of parts that precludes misfire due to a changed part.

#### A3.3.4 Accuracy Quantification

Weapons that are deemed safe to fire will then undergo a series of accuracy trials, conducted by DND, on the indoor test firing range the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland as follows:

- (a) Threshold Accuracy as follows (Pass/Fail):
  - i. Threshold Accuracy will be conducted with the weapon in the clamped condition utilizing a forestock and butt clamp on an adjustable mount with a recoil buffer;
  - ii. All five (5) weapons provided by each Bidder will fire four (4) target groupings of five (5) rounds of MK316 ammunition, for a total of twenty (20) rounds per weapon, at a range of 274 m (300 yds);
  - iii. DND reserves the right to reshoot any grouping if there was an anomaly in the grouping compared to the other groupings by that weapon;
  - iv. Stoppages attributable to the weapon will be recorded;
  - v. All grouping sizes will be determined by measuring the extreme spread interior to exterior as verified by DND, and recorded on the Accuracy Trial Test Sheet at Appendix 5;
  - vi. To be successful, all four (4) groupings for each of the five (5) weapons must be less than 11.43 cm (4.5 in) otherwise the weapon will be deemed non-compliant and given no further consideration; and
  - vii. The weapons will be cleaned after completion of the Threshold Accuracy trial;
- (b) Clamped Accuracy as follows (Scored):
  - i. Clamped Accuracy will be conducted with the weapon in the clamped condition utilizing a forestock and butt clamp on an adjustable mount with a recoil buffer;
  - ii. All five (5) weapons provided by each Bidder will fire eight (8) target groupings of five (5) rounds of MK316 ammunition, for a total of forty (40) rounds per weapon, at a range of 274 m (300 yds);
  - iii. DND reserves the right to reshoot any grouping if there was an anomaly in the grouping compared to the other groupings by that weapon;



- iv. Stoppages attributable to the weapon will be recorded;
  - v. All grouping sizes will be determined by measuring the extreme spread interior to exterior as verified by DND, and recorded on the Accuracy Trial Test Sheet at Appendix 5;
  - vi. If one (1) or more weapons has a grouping of more than 11.43 cm (4.5 in), the weapon will be deemed non-compliant and given no further consideration; and
  - vii. The weapons will be cleaned after completion of the Clamped Accuracy trial;
- (c) Shooter Accuracy as follows (scored):
- i. Shooter Accuracy will be conducted with the weapon in the hands of a DND sniper from the prone position;
  - ii. All five (5) weapons provided by each Bidder will fire eight (8) target groupings of five (5) rounds of MK316 ammunition, for a total of forty (40) rounds per weapon, at a range of 274 m (300 yds);
  - iii. DND reserves the right to reshoot any grouping if there was an anomaly in the grouping compared to the other groupings by that weapon;
  - iv. Stoppages attributable to the weapon will be recorded;
  - v. All grouping sizes will be determined by measuring the extreme spread interior to exterior as verified by DND, and recorded on the Accuracy Trial Test Sheet at Appendix 5. Only the top six (6) groupings will be evaluated for purposes of Performance Scoring;
  - vi. If one (1) or more weapons has a grouping of more than 11.43 cm (4.5 in), the weapon will be deemed non-compliant and given no further consideration; and
  - vii. The weapons will be cleaned after completion of the Shooter Accuracy trial.

#### A3.3.5 Proof of Concept Field Trial/Human Factors Assessment

The aim of the Proof of Concept (POC) trial is to evaluate the impact of the weapon on the soldier mobility, survivability and lethality. The trials will consider both the soldiers ability to effectively move and fire the weapon under simulated combat conditions. The trial will be conducted on the outdoor test firing range at the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland. The trial will be rated qualitatively through the use of a systematic user rating (Appendix 6).

##### A3.3.5.1 Participant Assessment

There will be five (5) DND participants conducting the Proof of Concept Field trial, and each participant will conduct the trial with each of the Bidder's weapons such that each of the five weapons provided by the Bidder are trialed by a different participant. Each participant will provide an evaluation at the completion of the Proof of Concept Field Trial for each of the weapons trialed. The participant evaluations will be recorded on the Participant Assessment form given in Appendix 6. The score assigned to the Bidder will be the sum of the five (5) individual assessments from the participants. The participants' evaluations will be captured by individual ratings of various criteria using a non-biased approach to collecting subjective perception. Participant rating will be based upon a 5-point scale (Table 2) for general task compatibility criteria which provides a clear and understandable quantification of the participants' perceptions in a controlled manner that does not rely on unbridled opinion.

Table 2: 5-Point Scale

Rating	Subjective Perception
1	Completely Unacceptable
2	Reasonably Unacceptable
3	Borderline
4	Reasonably Acceptable
5	Completely Acceptable



#### A3.3.5.2 Trial Conduct

The participants will complete the Proof of Concept Field Trial as follows:

- (a) Each participant will wear Canadian Forces issue combat dress, boots and helmet, and a load carrying vest to hold the magazine pouches required for the trial;
- (b) Weapons will be trialed in a random order of Bidders and no more than two (2) weapons from two (2) separate Bidders will be trialed by a participant on the same day;
- (c) Additional days will be allocated in case of inclement weather that would affect the outcome of the trials;
- (d) Each Target Point will have two (2) target frames that are 122 cm x 122 cm (4 ft x 4 ft);
- (e) Barricades will be available at each firing point to simulate firing from either shoulder around an obstacle;
- (f) Each participant will complete the POC Relay Course (Figure 1) **without** barricades as follows:
  - i. Begin at the Start Point with the weapon and eight (8) magazines loaded with ten (10) rounds of MK 316 ammunition;
  - ii. Sprint to the Fire Point (Prone), adopt the prone position and fire two (2) magazines of ten (10) rounds each into the left target frame at Target Point 1;
  - iii. Sprint to the Fire Point (Kneeling), adopt the kneeling position and fire two (2) magazines of ten (10) rounds each into the right target frame at Target Point 1;
  - iv. Sprint to the Fire Point (Crouching), adopt the crouching position and fire two (2) magazines of ten (10) rounds each into the left target frame at Target Point 2; and
  - v. Sprint to the Fire Point (Standing), from a standing position fire two (2) magazines of ten (10) rounds each into the right target frame at Target Point 2;

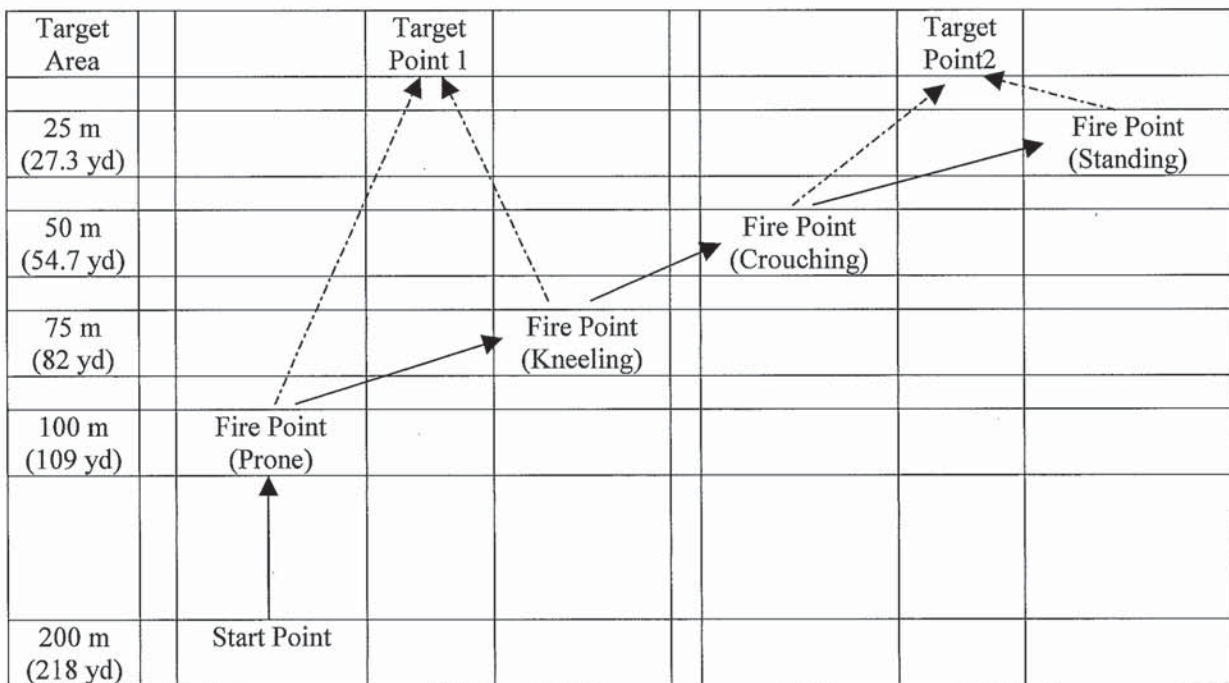


Figure 1: POC Relay Course

- (g) Each participant will complete the relay course (Figure 1) **with** barricades as follows:
  - i. Begin at the Start Point with the weapons and eight (8) magazines loaded with ten (10) rounds of MK 316 ammunition;
  - ii. Sprint to the Fire Point (Prone), adopt the prone position and fire two (2) magazines of ten (10) rounds each into the left target frame at Target Point 1 with one (1) magazine fired from the right hand side of the barricade and the other magazine from the left hand side of the barricade;
  - iii. Sprint to the Fire Point (Kneeling), adopt the kneeling position and fire two (2) magazines of ten (10) rounds each into the right target frame at Target Point 1 with one (1) magazine fired from the right hand side of the barricade and the other magazine from the left hand side of the barricade;
  - iv. Sprint to the Fire Point (Crouching), adopt the crouching position and fire two (2) magazines of ten (10) rounds each into the left target frame at Target Point 2 with one (1) magazine fired from the right hand side of the barricade and the other magazine from the left hand side of the barricade;
  - v. Sprint to the Fire Point (Standing), from a standing position fire two (2) magazines of ten (10) rounds each into the right target frame at Target Point 2 with one (1) magazine fired from the right hand side of the barricade and the other magazine from the left hand side of the barricade; and
  - vi. Each participant will then complete the evaluation questionnaire at 0
- (h) Stoppages - During the course of the Evaluation Trial, including both the accuracy trials and the Proof of Concept field trials, the weapon-related stoppages that are not attributable to the ammunition will be recorded; and
- (i) The weapons will be cleaned prior to return to the vendor;

Note: All ammunition used in the accuracy and field trials will be manufactured by ATK Armaments.



### APPENDIX 3 COMPLIANCE VERIFICATION CHECKLIST

All requirements are mandatory.

Item	Requirement	Compliant (Y/N)
3.1.2 (a)	i. Be a semi-automatic, gas operated precision rifle	
	ii. Permit attachment and detachment of peripherals including the bipod, laser, sling, optics and suppressor	
3.1.3(a)	i. Have a maximum weight with empty magazine, flash hider/muzzle brake (without optic or bipod) of 5.34 kg (11.75 pounds)	
	ii. Have a maximum overall length with the butt fully extended and the suppressor attached of no more than 122 cm (48 inches)	
	iii. Have a barrel as follows: a. Threaded to facilitate mounting of a flash hider/muzzle brake; b. A length between 38.1 - 43.2 cm (15 - 17 in)	
	iv. Have an enclosed upper receiver such that all moving components remain within the receiver when fired	
	v. Have a low profile gas block that does not protrude above, or is incorporated into, the top rail	
	vi. Have a lower receiver based upon an AR platform that includes an ambidextrous cheek piece that is vertically adjustable to achieve proper eye relief	
3.1.4(a)	i. The shall have a positive apply safety mechanism that has the following characteristics: a. Manually operated by the firer; b. Capable of being checked by both sight and touch; c. Movable between the safe and fire positions by the operator without moving his hands from the shooting position (prone, standing, kneeling, or sitting); d. Prevents the weapon from being fired when: 1. The trigger is depressed with the safety in the "SAFE" position; and 2. The selector is changed to "fire" without depressing the trigger; e. Remains in the position the operator sets it until it is manually changed; and f. Incorporates a mechanical safety that prevents the cartridge from being fired until the bolt is fully closed and locked	
3.1.4(b)	i. The PW shall have ambidextrous firing controls as follows: a. Mode selector; and b. Cocking (charging) handle	
3.1.4(c)	The PW trigger mechanism shall: i. Be a two stage trigger; ii. Return to its normal forward position upon release after partial or complete trigger pull; and iii. Have a second stage pull force between 2 kg (4.4 pounds) and 2.7 kg (6 pounds)	
3.1.4(d)	i. The PW shall have NATO Accessory Rail (STANAG 4694) mounts as follows: a. Top Rail - A rail mounted on the top of the upper receiver (centered on the 12 o'clock position) such that: 1. There is no movement between the rail system and the receiver:	



	<p>2. It provides at least 52 cm (20.5 in) of top space, starting from the cocking handle cut out to the front end of the rail; and</p> <p>3. It is not clamped or otherwise attached to the barrel such that the barrel can move independently of the rail;</p> <p>b. Side Rails - Rails mounted on each side of the upper receiver (left and right sides centered on the 3 and 9 o'clock positions) with no less than 7.6 cm (3 in) of usable rail space each; and</p> <p>c. Bottom Rail - A rail mounted on the bottom of the upper receiver (centered on the 6 o'clock position) as follows:</p> <ol style="list-style-type: none"> <li>1. Have no less than 7.6 cm (3 in) of usable rail space; and</li> <li>2. Capable of being mounted anywhere on the bottom of the upper receiver;</li> </ol>	
3.1.4(e)	<p>i. The PW suppressor shall:</p> <ol style="list-style-type: none"> <li>a. Be no longer than 25.4 cm (10 in);</li> <li>b. Weigh no more than 0.6 kg (1.3 pound);</li> <li>d. Fit over the flash hider/muzzle brake; and</li> <li>e. Include a positive locking mechanism that prevents the suppressor from coming loose when firing</li> </ol>	
3.1.4(f)	The PW shall have a multistage collapsible or folding butt	
3.1.4(g)	<p>Have front post and rear aperture sights that are:</p> <ol style="list-style-type: none"> <li>i. Removable and/or foldable; and</li> <li>ii. Adjustable for range and azimuth</li> </ol>	
3.1.4(h)	The PW shall have an ambidextrous sling mount forward of the butt on the top rear portion of the upper receiver	
3.1.4(i)	<p>The PW shall have a finish (PW and all of its components) as follows:</p> <ol style="list-style-type: none"> <li>i. A non-reflective coyote brown corrosion-resistant finish in accordance with the manufacturer's standard specifications; and</li> <li>ii. Incorporate self-lubricating coatings and materials that do not require grease or lubricants for the operating components</li> </ol>	
3.1.4(j)	The PW shall be properly identified with a unique Serial Number.	

#### APPENDIX 4 RATED REQUIREMENTS

Item #	Requirement	Verification (Measured/Observed)	Points
3.1.3(b)	<u>General Design</u> The PW should have a maximum weight with empty magazine, flash hider/muzzle brake (without optic or bipod) of 3.4 kg (7.5 pounds).	Weight: _____ kg	_____ out of 10
3.1.4(a)ii	<u>Safety</u> The PW safety mechanism should be ambidextrous operational.	No / Yes	_____ out of 0.5
3.1.4(b)ii	<u>Firing Controls</u> The PW should have an ambidextrous magazine release.	No / Yes	_____ out of 0.5
3.1.4(d)ii	<u>Top Rail Angle</u> The PW Top Rail should be angled from back to front up to 20 MOA.	Angle: _____ MOA	_____ out of 3
3.1.4(e)ii	<u>Suppressor</u> The PW suppressor should: Be no longer than 12.7 cm (5 in);  Weigh no more than 0.34 kg (0.75 pound).	Length: _____ cm  Weight: _____ kg	_____ out of 4  _____ out of 4
Total			_____ out of 22

Note: Item # refers to the relevant section in Annex B.

The points awarded are as follows:

Weight (Weapon)					
Weight (Less Than)	5.34 kg (11.75 lbs)	4.43 kg (9.75 lbs)	4.09 kg (9 lbs)	3.75 kg (8.25 lbs)	3.41 kg (7.5 lbs)
Points	0.5	1.5	4	7	10
Ambidextrous Safety AND Ambidextrous Magazine Release					
Ambidextrous	No	Yes			
Points (each)	0	0.5			
Top Rail Angle					
Rail Angle (More Than)	0 MOA	10 MOA	20 MOA		
Points	0	1.5	3		
Suppressor					
Length (Less Than)	25.4 cm (10 in)	22.86 cm (9 in)	19.69 cm (7.75 in)	12.7 cm (5 in)	
Points	0.5	1	2	4	
Weight (Less Than)	0.6 kg (1.3 lbs)	0.5 kg (1.1 lbs)	0.4 kg (0.9 lbs)	0.34 kg (0.75 lbs)	
Points	0.5	1	2	4	

## APPENDIX 5 ACCURACY TRIAL TEST SHEET

The information in this Appendix is provided for completeness and the Bidder shall not fill in the tables.

### **Threshold Accuracy**

For compliance, all groupings must be less than or equal to 11.43 cm (4.5 in). No points are awarded for threshold accuracy.

Weapon Serial #	1st Grouping	2nd Grouping	3rd Grouping	4th Grouping	Compliant (Y/N)
Company Compliant					

### **Stoppages (Threshold Accuracy)**

Weapon Serial #	Stoppages
Total	

### **Clamped Accuracy**

For compliance, all groupings must be less than or equal to 11.43 cm (4.5 in).

Weapon Serial #	Grouping								Average cm (in)
	1 (cm)	2 (cm)	3 (cm)	4 (cm)	5 (cm)	6 (cm)	7 (cm)	8 (cm)	
Bidder Average									
Bidder Points									

Grouping (Less Than)	11.43 cm (4.5 in)	9.53 cm (3.75 in)	7.62 cm (3 in)	5.72 cm (2.25 in)	3.81 cm (1.5 in)
Points	15	17.5	25	35	50





APPENDIX 6 HUMAN FACTORS ASSESSMENT

Weapon: \_\_\_\_\_  
Participant: \_\_\_\_\_

Rate the following:	Compatibility Assessment					Remarks
	☹	☺	☺	☺	☺	
	1	2	3	4	5	
Weapon ease of firing in all positions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weapon loading and reloading in all positions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cartridge ejection pattern.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heat transfer from weapon to operator.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blast noise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Effect of recoil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Butt length, shape and adjustability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shape of the handgrip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shape of the trigger.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Evenness of trigger pull.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Size, shape, positioning, accessibility and ease of operation of safety and firing controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Operator maintenance (strip and clean).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Overall performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total	_____ out of 65					

ASSESSMENT SCALE				
1	2	3	4	5
Completely Unacceptable	Reasonably Unacceptable	Borderline	Reasonably Acceptable	Completely Acceptable

DEFINITIONS	
1	Completely Unacceptable The weapon did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.
2	Reasonably Unacceptable The weapon met the minimal requirements for the task and had some limitations that may prevent the

3	Borderline	operator from completing the task. The weapon met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with limitations on range of use.
4	Reasonably Acceptable	The weapon met most of the requirements for the task and performed well in the hands of the operator with only minor limitations.
5	Completely Acceptable	The weapon met or exceeded all requirements for the task and performed in every way expected by the operator.

**Human Factors Summary**

The summary of all participant's assessments are as follows:

Participant	Score
1	out of 65
2	out of 65
3	out of 65
4	out of 65
5	out of 65
Total	out of 325



**OPTIONAL PROCUREMENTS  
FOR THE  
PRECISION (7.62 MM) WEAPON SYSTEM**

**1.0 SCOPE**

1.1 Purpose

The purpose of this document is to describe the optional procurements for Precision (7.62 mm) Weapons (PWs).

**2.0 APPLICABLE DOCUMENTS**

2.1 Applicability

The following documents form part of this document to the extent specified herein, and are supportive of this document when referenced in Section 3.0 and beyond; all other document references are to be considered supplemental information only. Unless otherwise specified, the issue or amendment of documents effective for this contract shall be those in effect on the date of the Contract Award. In the event of a conflict between the documents referenced herein and the contents of this document, then the contents of this document shall take precedence.

- CFTO D-01-400-002/SF-000 Specification for Levels of Engineering Drawings and Associated Lists (provided upon request)
- MILHDBK-61A Configuration Management Guidance ([www.everyspec.com/](http://www.everyspec.com/))

**2.2 Acronyms**

DND Department of National Defence  
ISO International Standards Organization  
NATO North Atlantic Treaties Organization  
NSN NATO Stock Number  
PA Procurement Authority  
RMA Return Material Authorization  
TA Technical Authority  
TDP Technical Data Package

**3.0 DELIVERABLES**

DND is under no obligation to purchase any additional Precision (7.62 mm) Weapon Systems. Should DND decide to exercise additional options, the Contractor shall deliver the following:

- (a) Year 1 optional deliverables (to be exercised within twelve (12) months of Contract Award) to be delivered within ninety (90) days of receipt of order:
  - i. Thirty (30) PWs in accordance with the Technical and Performance Requirements at Annex B;
  - ii. Three (3) maintenance gauge tool kits;

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- iii. A Technical Data Package (TDP) as detailed in Section 3.2; and
  - iv. In-Service Support as detailed in Section 4.2.
- (b) Year 2 optional deliverables (to be exercised within twenty-four (24) months of Contract Award) to be delivered within ninety (90) days of receipt of order:
- i. Up to thirty (30) PWs in accordance with the Technical and Performance Requirements at Annex B; and
  - ii. Up to quantity three (3) maintenance gauge tool kits.

### 3.1 Kickoff Meeting

The Contractor shall hold a kickoff meeting at its facilities within two (2) weeks of Contract Award. This meeting will be used to introduce the DND project team and to discuss production timelines, Quality Assurance processes, and delivery options and locations.

### 3.2 Technical Data Package (TDP)

The Contractor shall provide an initial TDP to DND, in English, no later than two (2) weeks prior to initial delivery of equipment (Address to be provided after contract award). The TDP package shall include:

- (a) Two (2) hard copies and one (1) electronic copy (MS Word or PDF format) of the Operators Manual. A hard copy of the Operators Manual shall also be included with each PW delivered;
- (b) Two (2) hard copies and one (1) electronic copy (MS Word or PDF format) of the Maintenance/Repair Manual;
- (c) Two (2) hard copies of the system drawing(s) for the PW down to the component and sub-component level (Level 2 in accordance with D-01-400-002/SF-000), with the following information in electronic format (MS Excel) for each item:
  - i. Official Item Name;
  - ii. NCage (Manufacturer Code);
  - iii. Manufacturer Part Number;
  - iv. Price;
  - v. Volume of Item;
  - vi. Weight of Item; and
  - vii. Shelf Life of Item.
- (d) A list of all Special Tools and Test Equipment required to operate and/or maintain the PW, with the following information in electronic format (MS Excel) for each item:
  - i. Official Item Name;
  - ii. NCage (Manufacturer Code);
  - iii. Manufacturer Part Number;
  - iv. Price;
  - v. Volume of Item;
  - vi. Weight of Item; and



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vii. Shelf Life of Item.

**3.2.1 Reproduction/Translation Rights**

The Contractor shall provide an authorizing letter granting the Government of Canada permission to translate and print copies of the TDP for Canada's internal use only.

**4.0 REQUIREMENTS**

**4.1 Quality Assurance**

The Contractor shall:

- (a) Establish, implement, document and maintain a quality system that ensures conformance to contractual requirements and meets the objectives of the ISO 9001 or equivalent quality system model during performance of this contract; and
- (b) Conduct Quality Conformance Inspections and Tests during manufacture in accordance with the Contractor's standard acceptance test plan. Details of the test plan, and documentation of all inspections/tests, are to be provided to DND upon request. DND reserves the right to send a representative(s) to witness production acceptance testing for all PWs.

**4.1.1 Testing**

The Contractor shall make available (upon request) for DND's review, all previous and current test results concerning the performance, reliability, maintainability, availability, environmental conditions and safety of the PW.

**4.1.2 Performance and Failure Reporting**

Prior to delivery, and for the period of the contract, the Contractor shall maintain records of all equipment failures and notify DND of any and all performance related issues that would either positively or negatively impact the reliability, maintainability, availability and/or supportability of the PW. In support of reliability improvement, mass system failures are to be analyzed in order to determine corrective actions.

**4.1.3 Configuration Management (CM)**

The Contractor shall have an established, DND verifiable, Configuration Management (CM) Program with control systems in place in accordance with MIL-HDBK-61A, and shall provide configuration identification, control and status accounting of all new and/or modified hardware, firmware, software and documentation. All PWs delivered shall have the same product baseline and support interchangeability/interoperability of parts. The established product baseline shall be maintained during repair and any deviation from the baseline shall be approved in advance by the TA.

**4.1.4 Production Performance Verification**

Prior to the delivery of any PWs, DND reserves the right to perform a Quality Assurance Performance Verification test. The verification test will be conducted by DND and will take place at the US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen Maryland



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under the same conditions and using the same ammunition (both type and lot number) as the accuracy trials conducted during the bid evaluation. Production Performance Verification testing will be against a randomly selected group of weapons (maximum five (5) weapons) from the delivery lot. The accuracy of the weapons must be within +10% of the average accuracy achieved by the weapon systems during the bid evaluation accuracy trials (clamped), without exceeding the threshold accuracy of 11.4 cm (4.5 in) at a range of 274 m (300 yds), for the delivery lot to be considered acceptable. The Contractor shall not deliver any PWs to DND locations from a delivery lot until an acceptable Production Performance Verification test has been achieved and release of the lot has been authorized by the PA. Failure of the Production Performance Verification test will result in the requirement to modify the weapon system and re-testing or, in the case of repeated test failure, cancellation of the Contract.

### 4.2 Warranty

The Contractor shall provide a warranty on the PW against manufacturer defects and workmanship for twelve (12) months following delivery of the unit, including parts and labour, at no additional cost to DND. The warranty period for each delivery is to be based on the date the delivery is shipped from the Contractor's facilities to the DND final delivery point.

### 4.3 TDP Support

The Contractor shall produce and maintain the PW TDP, including updated drawings and manuals, to the currently approved configuration and provide to the TA (when requested), during the warranty period, updated versions of the TDP. All updates to the TDP are to be approved by the DND TA prior to being promulgated.



National Défense  
Defence nationale



**NOTICE**

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document shall continue to apply.

**AVIS**

Cette documentation a été révisée par l'autorité technique et ne contient pas des marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

D-01-400-002/SF-000

2011-03-01

**SUPERSEDES/REMPLECE**

D-01-400-002/SF-000

1983-11-30

**SPECIFICATION**

**FOR**

**LEVELS OF ENGINEERING DRAWINGS AND  
ASSOCIATED LISTS**

**1. SCOPE**

**1.1 Purpose.** This specification provides guidance for the acquisition and maintenance of engineering drawings and associated lists in support of Department of National Defence (DND) weapon systems and materiel. Reference to engineering drawings, as used in this specification, includes engineering drawings and associated lists.

**1.2 Application.** The requirements of this specification are applicable to engineering drawings.

**1.3 Classification.** Engineering drawings shall be acquired and/or maintained in one or more of three levels.

- (a) LEVEL 1 Conceptual and Developmental Design.
- (b) LEVEL 2 Production Prototype and Limited Design.
- (c) LEVEL 3 Production.

**SPÉCIFICATION**

**POUR**

**NIVEAUX DE DESSINS TECHNIQUES ET DE  
LISTES CONNEXES**

**1. PORTÉE**

**1.1 Objet.** La présente spécification se veut un guide pour l'acquisition et la tenue de dessins techniques et de listes connexes pour appuyer les systèmes et le matériel d'armement du ministère de la Défense nationale (MDN). Les références aux dessins techniques, telles qu'elles sont utilisées dans la présente spécification, comprennent les dessins techniques et les listes connexes.

**1.2 Application.** Les exigences de la présente spécification sont valables pour les dessins techniques.

**1.3 Classification.** Il faut se procurer ou tenir les dessins techniques dans un ou plusieurs parmi trois niveaux.

- (a) NIVEAU 1 Étude de définition et de développement.
- (b) NIVEAU 2 Prototype de production et étude limitée.
- (c) NIVEAU 3 Production.

OPI/BPR DMPP 5/DPPM 5  
OCI/BC DSCO 4/DOCA 4

Issued on Authority of the Chief of the Defence Staff  
Publiée avec l'autorisation du Chef d'état-major de la Défense

Canada



**1.3.1 Levels.** The level to be used in the acquisition and/or maintenance of the engineering drawings shall be defined by the DND Technical Authority (TA) and stipulated in the procurement instrument, e.g. contract (external) or tasking (internal).

## 2. APPLICABLE DOCUMENTS

### 2.1 DND/CF engineering drawings

C-01-000-001/AG-000 Technical Data Package (TDP)

D-01-400-001/SG-000 Engineering Drawing Practices

### 2.2 Commercial and foreign government engineering drawings

#### Canada

CSA B78.1-M83-CAN3 Technical Drawings – General Principles

#### United States

MIL-STD-100G Department of Defense Standard for Engineering Drawing Practices

MIL-STD-31000 Department of Defense Standard Practice, Technical Data Packages (TDP)

ASME Y14.100M Engineering Drawing Practices

#### International Standards Organization (ISO)

ISO Standards Technical Drawings Handbook, ISBN 92-67-10371-7

#### United Kingdom

British and International Manual of Engineering Drawing Handbook, ISBN: 0750651202

#### Other

Other standards may be considered if deemed acceptable by the DND TA for a specific application.

**1.3.1 Niveaux.** Le niveau à utiliser pour l'acquisition ou la tenue des dessins techniques doit être défini par le responsable technique (RT) du MDN et stipulé dans l'instrument d'approvisionnement, p. ex. contrat (externe) ou attribution des tâches (interne).

## 2. DOCUMENTS PERTINENTS

### 2.1 Dessins techniques du MDN et des FC

C-01-000-001/AG-000 Jeu de documents techniques

D--01-400-001/SG--000 Pratiques des dessins techniques

### 2.2 Dessins techniques commerciaux et de gouvernements étrangers

#### Canada

CSA B78.1-M83-CAN3 Dessins techniques – Principes généraux

#### États-Unis

MIL-STD-100G Department of Defense Standard for Engineering Drawing Practices

MIL-STD-31000 Department of Defense Standard Practice, Technical Data Packages (TDP)

ASME Y14.100M Engineering Drawing Practices

#### Organisation internationale de normalisation (ISO)

ISO Standards Technical Drawings Handbook, ISBN 92-67-10371-7

#### Royaume-Uni

British and International Manual of Engineering Drawing Handbook, ISBN: 0750651202

#### Autres

On peut considérer d'autres normes si elles sont jugées acceptables par le RT du MDN pour une application particulière.



### 3. REQUIREMENTS

3.1 **General.** The procurement instrument will identify the level(s) of engineering drawings to be acquired.

3.2 **Commercial and/or foreign government existing engineering drawings.** Engineering drawings prepared prior to the application of this specification are acceptable if prepared in accordance with the standards such as those detailed in paragraph 2.2. As a minimum they must meet the following criteria:

- (a) Are identified by name and address of design agent or NATO Supply Code of Manufacturers (NSCM) number or Commercial Agency Government Entity (CAGE) Code, drawing nomenclature, and drawing number.
- (b) Drawing practices and symbols used (including the use of legends/explanations for non-standard symbols) are such that their intent and interpretation are clear and unambiguous.
- (c) Provides the necessary design disclosure information for the level of drawing for which they are furnished.
- (d) Are clear and legible in the media provided.
- (e) Intellectual property/data rights are clearly marked on all engineering drawings.
- (f) Engineering drawings that contain "Controlled Goods" are clearly marked.

### 3.3 Levels

3.3.1 **Level 1, Conceptual and developmental design.** Engineering drawings prepared to this level shall, as a minimum, disclose engineering design information sufficient to evaluate an engineering concept as meeting stated military requirements, and may provide information sufficient to fabricate developmental hardware. These types of drawings generally consist of simple sketches, models, artist's renderings and/or basic textual data.

### 3. EXIGENCES

3.1 **Généralités.** L'instrument d'approvisionnement déterminera le ou les niveaux de dessins techniques à acquérir.

3.2 **Dessins techniques commerciaux ou de gouvernements étrangers.** Les dessins techniques préparés avant l'application de la présente spécification sont acceptables s'ils ont été préparés conformément aux normes telles que celles détaillées au paragraphe 2.2. Ils doivent au moins satisfaire aux critères suivants :

- (a) Les dessins comportent le nom et l'adresse de l'agent de dessin ou le code OTAN des fabricants (NSCM) ou le code Commercial Agency Government Entity (CAGE) américain, la nomenclature de dessin et le numéro de dessin.
- (b) Les pratiques et les symboles de dessin utilisés (y compris l'usage des légendes et des explications pour les symboles non standard) sont présentés de sorte que leur but et leur interprétation soient clairs et non ambigus.
- (c) Les dessins comportent les renseignements de divulgation nécessaires pour le niveau de dessin pour lequel ils ont été fournis.
- (d) Les dessins sont clairs et lisibles sur le support fourni.
- (e) La propriété intellectuelle et les droits en matière de données sont clairement indiqués sur tous les dessins techniques.
- (f) Les dessins techniques qui contiennent des « marchandises contrôlées » sont clairement identifiés.

### 3.3 Niveaux

3.3.1 **Niveau 1, Étude de définition et de développement.** Les dessins techniques préparés à ce niveau doivent, au moins, divulguer des renseignements de dessin technique suffisant pour évaluer si un concept technique satisfait aux exigences militaires et peuvent offrir des renseignements suffisants pour fabriquer le matériel de développement. Ces types de dessins se composent généralement d'ébauches simples, de modèles, de rendus d'artiste ou de données textuelles de base.



3.3.1.1 Intended use of this level is as follows:

- (a) **Conceptual design.** Verifies preliminary design and engineering to confirm that the technological requirements are realistic and that the design concept is useful in meeting stated military requirements.
- (b) **Developmental design.** Developmental design is directed toward hardware for test and experimentation and provides for a specific design approach. In addition, the data shall be suitable for analytical evaluation of the inherent ability of the preliminary design item to attain the required performance.
- (c) **Restrictions.** Level 1, Conceptual and Developmental Design Drawings shall not be used for manufacturing or DND cataloguing purposes the following should be marked on each prepared Level I drawing in order to alert the user and releasing agency accordingly. The note shall read as follows:

***"CAUTION NOTE" This Level 1 drawing shall not be used for manufacturing or DND cataloguing purposes.***

**3.3.2 Level 2, Production prototype and limited production.** Engineering drawings prepared to this level shall disclose directly or by reference a design approach suitable to support the manufacture of a production prototype and limited production models. Engineering drawings shall include, as applicable, parts lists, detail and assembly drawings, interface control data, diagrams, performance characteristics, critical manufacturing limits, and details of new materials and processes.

**3.3.2.1 Intended use of this level is as follows:** Designs that approach the final form factor, employ standard parts (or non-standard parts approved by the agency concerned), take into consideration full military requirements with respect to performance, and can support limited production of models in final form and suitable for field test employment and logistic support.

3.3.1.1 L'usage prévu de ce niveau est le suivant :

- (a) **Étude de définition.** L'étude de définition vérifie le dessin et la technique préliminaires afin de confirmer que les exigences technologiques sont réalistes et que la définition du concept est pratique pour satisfaire aux exigences militaires énoncées.
- (b) **Étude de développement.** L'étude de développement vise le matériel d'essai et d'expérimentation et prévoit une approche particulière pour le dessin. De plus, les données doivent être pertinentes pour l'évaluation analytique de l'habileté inhérente du dessin préliminaire à réaliser le rendement exigé.
- (c) **Restrictions.** Niveau 1, Dessins d'étude de définition et de développement ne doivent pas servir à la fabrication ni au catalogage pour le MDN. Il faut indiquer ce qui suit sur chaque dessin de niveau 1 préparé afin d'alerter en conséquence l'utilisateur et l'agence de publication. La note doit se lire ainsi :

***« NOTE D'AVERTISSEMENT » Ce dessin de niveau 1 ne doit pas être utilisé à des fins de fabrication ou de catalogage pour le MDN.***

**3.3.2 Niveau 2, Prototype de production et production limitée.** Les dessins techniques préparés à ce niveau doivent divulguer directement ou par référence une approche de dessin appropriée pour permettre la fabrication d'un prototype de production et des modèles à production limitée. Les dessins techniques doivent comprendre, le cas échéant, des listes de pièces, des dessins de détail et d'ensemble, des données de contrôle d'interface, des diagrammes, des caractéristiques de rendement, des limites de fabrication critiques et des détails sur les nouveaux matériaux et processus.

**3.3.2.1 L'usage prévu de ce niveau est le suivant :** Les dessins qui approchent le facteur de forme final, utilisent des pièces standard (ou des pièces non standard approuvées par l'agence concernée), tiennent compte de toutes les exigences militaires relativement au rendement et peuvent permettre la production limitée de modèles sous forme finale et appropriée pour les essais sur le terrain et le soutien logistique.

**3.3.3 Level 3, Production.** Engineering drawings prepared to this level shall provide engineering definition sufficiently complete to enable a competent manufacturer to produce and maintain quality control of item. These engineering drawings reflect the end product. They reflect the approved, tested, and accepted configuration of the defined delivered item and provide the necessary data to permit competitive procurement or reprourement.

**3.3.3.1 Intended use of this level is as follows:** To provide sufficient engineering data in support of an unlimited production to permit competitive procurement or reprourement of items substantially identical to original items. These engineering drawings reflect technical data possessing the highest level of confidence.

**3.3.3.2 These engineering drawings shall include but not limited to:**

- (a) details of unique processes when essential to design and manufacture;
- (b) details of performance rating;
- (c) dimensional and tolerance data;
- (d) critical manufacturing assembly sequences;
- (e) tolerance input and output parameters;
- (f) diagrams;
- (g) mechanical and electrical connections;
- (h) physical characteristics, including form and finish;
- (i) details of material identification;
- (j) inspection, test and evaluation criteria;
- (k) calibration information; and
- (l) quality control data.

**3.3.3 Niveau 3, Production.** Les dessins techniques préparés à ce niveau doivent présenter une définition technique suffisamment complète pour permettre à un fabricant compétent de produire l'article et entretenir le contrôle de sa qualité. Ces dessins techniques reflètent le produit final. Ils reflètent la configuration approuvée, testée et acceptée de l'article livré défini et présentent les données nécessaires pour permettre un approvisionnement ou réapprovisionnement concurrentiel.

**3.3.3.1 L'usage prévu de ce niveau est le suivant :** Présenter suffisamment de données techniques pour appuyer une production illimitée afin de permettre un approvisionnement ou réapprovisionnement concurrentiel d'articles presque identiques aux articles originaux. Ces dessins techniques reflètent les données techniques qui présentent le plus haut niveau de fiabilité.

**3.3.3.2 Ces dessins techniques doivent comprendre, mais sans s'y limiter :**

- (a) les détails sur les processus uniques lorsque ceux-ci sont essentiels à la conception et à la fabrication;
- (b) les détails d'évaluation du rendement;
- (c) les données dimensionnelles et de tolérance;
- (d) les séquences d'assemblage de fabrication critiques;
- (e) les paramètres d'entrée et de sortie de tolérance;
- (f) les schémas;
- (g) les raccords mécaniques et les branchements électriques;
- (h) les caractéristiques matérielles, y compris la forme et la finition;
- (i) les détails d'identification des matériaux;
- (j) les critères d'inspection, d'essai et d'évaluation;
- (k) les renseignements d'étalonnage;
- (l) les données de contrôle de la qualité.



**3.4 Items covered by existing specifications and standards.** Engineering drawings shall not be prepared or submitted for items that are defined by Government specifications, standards or nationally recognized industry association specifications or standards.

**3.5 Reference documents.** Contractor documents referenced on engineering drawings are considered reference documents and shall be furnished as part of the level(s) ordered as an integral part of the engineering drawing package. When first generation references do not provide the essential technical information, the contractor's subordinate reference shall be provided to the extent necessary to meet the technical disclosure requirements of the level ordered. However, technical manuals, procedural manuals, maintenance manuals and company drafting manuals are not considered reference documents.

**3.4 Articles couverts par les spécifications et les normes existantes.** Il ne faut pas préparer ou soumettre de dessins techniques pour les articles qui sont définis par des spécifications ou des normes gouvernementales ou encore des spécifications ou des normes d'association de l'industrie nationalement reconnues.

**3.5 Documents de référence.** Les documents d'entrepreneur cités en référence sur les dessins techniques sont considérés des documents de référence et doivent être fournis avec le ou les niveaux commandés à titre de partie intégrante de la trousse de dessins techniques. Lorsque les références de première génération ne présentent pas les renseignements techniques essentiels, la référence subordonnée de l'entrepreneur doit être offerte dans la mesure où elle est nécessaire pour satisfaire aux exigences de divulgation technique du niveau commandé. Toutefois, les manuels techniques, les manuels de procédure, les manuels d'entretien et les manuels de dessin d'entreprise ne sont pas considérés comme des documents de référence.