

**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 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> 002
<b>Client Reference No. - N° de référence du client</b> W6399-13EC08	<b>Date</b> 2013-03-12
<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 2013-04-19</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>

***Amendment No. 2 to Solicitation W6399-13EC08/A is raised to extend the bid closing date from March 21, 2013 to April 19, 2013, to revise Annex A and C and to respond to the following Questions (Q) with the following Answers (A):***

Q1. annex B 3.1.3 states the pw shall have a maximum weight of 11.75 pounds then in section b it states a maximum weight of 7.5 pounds. I am wondering what the actual max weight is ?

***A1. In accordance with Annex B - 3.1.3, the PW shall have a max weight of 11.75 pounds.***

Q2. annex B 3.1.3 vi asks for an ambidextrous cheek piece that is vertically adjustable do they want both collapsible as well as an adjustable cheek piece ?

***A2: The ambidextrous adjustable cheek piece is mandatory. The but shall be either multi-stage collapsible or folding.***

Q3. It states 30 days after awarding the contract 5 rifles to go to Crane. Are these to go with suppressors? This could cause issues with DND purchase and ATF transfers with them staying in the US, causing longer delivery time than the 30 days.

***A3: As per A7B, the five weapons will be the same ones that were used for the trials at Annex C. Delivery will be accepted at Crane. Suppressors are mandatory.***

Q4. It states "Technical Support for Verification and Testing". What is required for this? Do you need a person to travel to the facility or just an email contact?

***A4. The vendor will decide whether technical support during the trials will be done by e-mail/ phone or in person. The vendor assumes all risks with their decision.***

Q5. It doesn't state the number of pouches. Would you need one for each magazine? Or half the amount?

***A5: Annex B Section 3.2 (a) states "Quantity four (4) double pouches that are MOLLE compatible for attachment to a load-carrying vest".***

Q6. Can there be an extension on delivery times since these will have to be approved by US Dept. of State and ATF which could cause a delay with paperwork.

***A6: Extensions of delivery times to the Crane facility due to US Dept of State and ATF approvals will be granted where they do not impede on the timely completion of the trials.***

Q7. In the ref RFP, Annex A, Para 2.0 , it calls for the delivery of quantity five (5) Precision Weapons to be delivered within 30 days of contract award:

A. Question- Can this be amended to provide at least 90-120 days after contract award, due to licensing of the weapons from overseas.

***A7A: As per A7B, the five weapons will be the same ones that were used for the trials at Annex C. Delivery will be accepted at Crane.***

B. Annex C, page 1 , para 2.1.2.1, the compliant Bidder shall provide five (5) Weapons and accessories, Will DND be procuring these weapons for the endurance testing period.

***A7B. Upon completion of the Evaluation Trials detailed in Annex C, in accordance with Annex C - 2.1.3.3, the Bidder with the highest Total Score will then be awarded a contract for five weapons.***

Q8. We request that an extension be given on this RFP by 3 months.

***A8. Due to operational requirements, DND can not entertain a three month extension.***

Q9. Does the ambidextrous controls include hold-open device? (Annex B, page 3)

***A9. Ambidextrous controls refers to the Mode Selector, Cocking (Charging) Handle as mandatory requirements, and the Magazine Release as a rated requirement only.***

Q10. While the top rail should provide 20 MOA, can this be provided in the scope mounts? (Annex B, Page 4)

***A10. The rated requirement is for an angled top rail and does not refer to the scope mounts. The angled top rail is to ensure optical and mechanical alignment of the rifle day scope and any clip-on device (thermal or night device) which will clip-on in front of the day scope. The angled rail is necessary to maximize the rifle day scope's capability at further ranges.***

Q11. Is the requirement for multi-stage, folding or collapsible buttstock (Appendix 1, Annex C, Page 6) in conflict with requirement for ambidextrous, vertically adjustable cheek rest? (Annex B, Page 3)

***A11. A multistage collapsible butt with an ambidextrous adjustable cheek piece would be acceptable.***

Q12. Clarify if the location of the ambidextrous sling mount can be either on the upper or lower receiver, forward of the buttstock.

***A12. Change Annex B, Para 3.1 (I) from " The PW shall have an ambidextrous sling mount forward of the butt on the top rear portion of the upper receiver" to the following "The PW shall have an ambidextrous sling mount on the butt, or forward of the butt on the top rear portion of the lower receiver"***

Q13. To where will the deliveries (bids, PW) be made, and by when? (Annex D). Is there a requirement to deliver 5 systems at time of bid (21ST of February)? Will this delivery location be DND in Ottawa?

***A13. The bid delivery to PWGSC is in accordance with the directions in the RFP. There is no requirement for delivery of weapons with the bid.***

Q14. Will the ballistic specification for the Mk316 ammunition be released to contractors? And by when?

***A14. Ballistic performance information would have to be obtained by the Bidder from the manufacturer as it is controlled under ITAR and DND does not have the authority to release this information.***

Q15. Appendix 2 to Annex C – Section A3.2 speaks of 5 weapons and accessories being provided to the Naval Service Warfare Centre – Crane Division, Crane Indiana. Please confirm that the 5 weapons referred to in this section are the same 5 weapons referred to in Annex A Statement of Work, section 2.0.

***A15. Correct, it is DND's intention to procure the weapons to conduct the endurance trial in Annex A. This will be in done turn depending on the performance achieved in the trials until a successful endurance trial is achieved and the optional procurement contract (Annex D) is awarded. All weapons that are not procured under this process will be returned to the Bidders.***

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;
  - 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.

The Contractor will be allowed to observe the endurance trial but will not be permitted to interact with the DND Trial Team. At their discretion, the DND Trial Team may request information from the Contractor if they are present. The results of the trial will be provided to the Contractor upon request.

### 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.

**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 Naval Surface Warfare Center - Crane Division, Crane, Indiana:

- (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		35
Human Factor Assessment (Appendix 6)	( /325) x 50 = out of 50		
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	Expertise and Proven Design The Bidder shall be an established weapon vendor that has significant experience in precision weapons as follows: (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;	The Bidder shall provide supporting documentation such as contracts, customer references and brochures that confirm: (1) Years of manufacturing and/or selling precision weapons for a period of at least five (5) years; and	

Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		and (e) 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>iii. <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> </li> <li>iv. Have an enclosed upper receiver such that all moving components remain within the receiver when fired;</li> <li>v. Have a low profile gas block that does not protrude above, or is incorporated into, the top rail;</li> <li>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;</li> <li>vii. Be semi-automatic, gas operated;</li> <li>viii. Be capable of firing suppressed;</li> <li>ix. Be capable of firing standard NATO 7.62 x 51 mm ammunition as follows: <ul style="list-style-type: none"> <li>a. M118LR class ammunition; and</li> <li>b. Mk 316 class ammunition;</li> </ul> </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>	

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> <li>e. Remains in the position the operator sets it until it is manually changed; and</li> <li>f. Incorporates a mechanical safety that prevents the cartridge from being fired until the bolt is fully closed and locked;</li> </ol> <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>3. front end of the rail; and 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><u>Accessories</u></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>	

Item #	Ref. (Annex B)	Requirement	Proof of Compliance	Compliant (Y/N)
		vi.		
7		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 Naval Surface Warfare Center - Crane Division, Crane, Indiana. 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 will be expected to provide support to DND during testing consisting of a minimum of one (1) individual to a maximum of two (2) individuals. The evaluation testing is planned for approximately one (1) day per Bidder, with a second day in case of inclement weather. 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 and the results of these trials may be provided to each Bidder for their weapon only. The Bidder's personnel may be on site for the Proof of Concept Field Trial, but will not be permitted to witness any portion of the trials and the Participant Assessment's from the trials will not be provided. 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 Naval Surface Warfare Center - Crane Division, Crane, Indiana. 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 Naval Surface Warfare Center - Crane Division, Crane, Indiana as follows:

- (a) Threshold Accuracy as follows (Pass/Fail):
  - i. Threshold Accuracy will be conducted with the weapon in the clamped condition utilizing an "Over the Top" clamp on a fixed 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 an "Over the Top" clamp on a fixed 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 Naval Surface Warfare Center - Crane Division facility. 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;

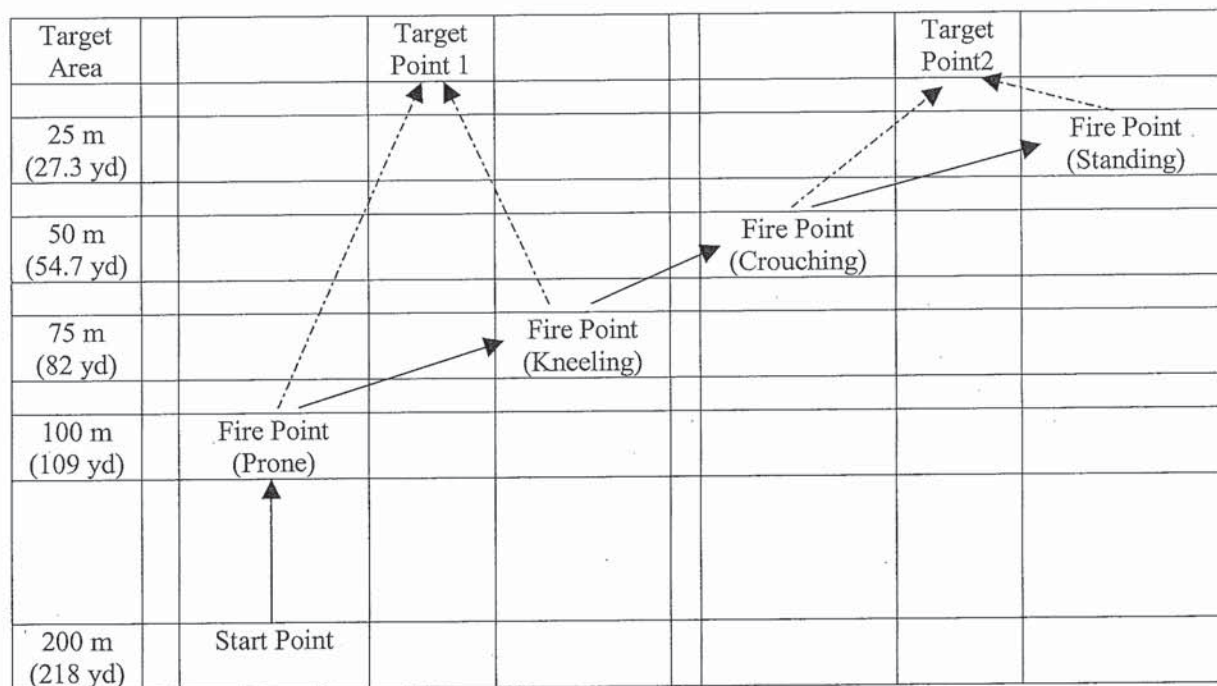


Figure 1: POC Relay Course

- (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 5 to ANNEX C to W6399-12-EC08  
22 November 2012

### Stoppages (Clamped Accuracy)

Weapon Serial #	Stoppages
Total	

### Shooter Accuracy

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

Weapon Serial #	Grouping								Average cm (in) (Best 6 only)
	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	10	15	25	37.5	50

### Stoppages (Shooter Accuracy)

Weapon Serial #	Stoppages
Total	

Note: All stoppages will be included from all eight (8) groupings.

### Stoppages Summary

Threshold Accuracy	
Clamped Accuracy	
Shooter Accuracy	
Proof of Concept Field Trial	
Total	

## 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

		operator from completing the task.
3	Borderline	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