

Appendix D Case Study: JIEDDO Counter-IED Culvert Challenge

D.1 Overview

The Joint Improvised Explosive Device Defeat Organization (JIEDDO), now called the Joint Improvised Threat Defeat Agency (JIDA), leads Department of Defense actions to rapidly provide counter-IED capabilities and solutions in support of combatant commanders, the Services, and, as authorized, other federal agencies to enable the defeat of the IED as a weapon of strategic influence. JIDA's strategic vision is to reduce the effectiveness and lethality of IEDs to allow freedom of maneuver for joint forces, federal agencies, and partner nations in current and future operating environments.

JIDA has sought technologies to improve the speed of inspection of culverts and surveillance of nefarious activity in a given vicinity. This has been motivated by lessons learned in Afghanistan and a desire for readily available technology to mitigate the effectiveness of culverts as a location for improvised explosive device (IED) emplacement. JIDA seeks innovative solutions for surveillance and inspection in or around roadway culverts, tunnels and tunneling events under roadways, and roadway craters to defeat IED emplacements. In addition, JIEDDO seeks the ability to defeat IED emplacements and remotely detect and identify objects of interest, specifically IEDs and paraphernalia within and around culvert tunnels, tunneling events under roadways, and roadway craters. JIDA expects effective technologies will also have application to tunnel scenarios. JIDA elected to apply ChBA to this need and devised the Culvert Denial Challenge. JIDA believes ChBA will communicate its problem set to industry and incentivize top performers by offering acquisition opportunities. In coordination with the Army Research Laboratory (ARL) in Adelphi, MD, JIDA worked for several months establishing an IDIQ contract as suggested in MITRE's ChBA Handbook.

D.2 Problem Set

IEDs are the terrorists' weapon of choice because they require limited skills to build and provide dramatic results for very little investment of time, money, and effort. The public relations benefit of a surprising spectacular explosion far outweighs that resulting from attacks using more conventional weapons. Given terrorists' easy access to commercial technologies, internet training, and the ability to either make or obtain explosive materials, IEDs continue to provide the enemy inexpensive, stand-off, precision weapons systems with near-total anonymity. IEDs are the greatest casualty producer in 21st century warfare and a long-standing threat to civilian populations.

IEDs will continue to pose a threat throughout the world that may never go away. They will grow in sophistication and frequency as more enemies of peace realize the potential psychological, social, and political impact a weapon like this provides. No other widely available terror weapon delivers the mass media focus, sheer panic, and strategic influence of the IED.

D.3 Acquisition Approach

ChBA selects solutions based on the quality of demonstrated capability and not the satisfaction of written specifications, requirements, or proposals. Further, ChBA is based on the proposition that acquisitions are best performed if the requirement is described as a challenge and potential providers are free to demonstrate innovative solutions at a challenge event. During the challenge demonstration, the

Government will evaluate proposed solutions and use these evaluations as the basis for making future acquisition determinations such as follow-on contract or task order awards.

The challenge descriptions for both Surveillance and Inspection, provided in the reference material [see Section D.6], are the mechanism by which Offerors will understand both the capability sought by JIEDDO to defeat IEDs and the challenge process. Offerors will determine the technical applicability of their solutions to fill the Government need based on the challenge description. Offerors who believe that their solution will succeed at the challenge event are encouraged to respond to this RFP to compete for an IDIQ contract. If successful and awarded an IDIQ, IDIQ holders will receive a task order to participate in the challenge event. The Government will use evaluations of contractor performance at the challenge event as part of the evaluation criteria for follow-on task orders.

The following steps summarize the acquisition approach used for this ChBA:

- Offerors will provide a white paper in response to the base IDIQ RFP.
- White paper responses will be evaluated by the Government. Concurrent awards for the Base IDIQ and Task Order 1 will be made. The Base IDIQ is the overarching contract awarded to successful Offerors. Competitive task/delivery orders will be placed against the Base IDIQ. For this multiple award IDIQ, Task Order 1 will cover both the Surveillance and Inspection Challenge efforts.
- The Government will conduct the challenge event and contractors will attend with their proposed solutions. The Government will evaluate contractor performance per the challenge evaluation criteria provided in Section J, Attachments 001 and 002.
- Based on evaluation of contractor challenge performance, additional task orders may be issued to top performers for procurement of solutions in evaluation quantities to undergo U.S. Government testing and evaluation.
- If there are favorable testing and evaluation results, additional task orders may be issued to top performers for solution refinement.
- Following solution refinement, additional task orders may be issued for procurement of solutions in fielding quantities.

D.4 Results and Outcomes

The first IDIQ task order for challenge participation was awarded to 20 vendors in August 2014. Subsequent task orders will allow JIEDDO and ARL to conduct technology development and validation testing.

In coordination with ARL and the Maneuver Center of Excellence, Ft. Benning, GA, JIEDDO conducted the 2014 Culvert Denial Challenge 29 SEP–10 OCT at Ft. Benning, GA. The challenge event had two parts: an inspection challenge and a surveillance challenge, each involving 10 challengers. The 20 vendor challengers included companies from Israel (Roboteam, Elbit) and the United Kingdom (Pearson Engineering) in addition to a mix of small and large domestic businesses.

The inspection challenge required vendors to locate replicated IED threats over a series of culvert scenarios with varying terrain, obstacles, communications limitations, and lighting. The surveillance challenge had vendors perform eight hours of continuous surveillance, spanning day and night, on a

culvert while various scripted activities took place. A key challenge for surveillance was differentiating between benign and nefarious activities while minimizing human attention for monitoring.

Results of the challenge events were compiled and distributed to the vendors. Though promising, no technology distinguished itself as a clear solution ready for JIEDDO acquisition. The challenge served as confirmation that existing technologies do not yet solve the culvert denial need posed by JIEDDO.

Based on results of the challenge, JIEDDO sent a Request for Information (RFI) in November 2014 to the 20 IDIQ vendors seeking estimates for pricing to improve their scores should they compete in a subsequent event. Vendor performance at the challenge, along with estimated vendor pricing from the responses to this RFI, formed the basis for a Task Order 2 to fund awardees for refinements of their technologies.

In December 2015, \$2.6M was awarded to five IDIQ vendors based on their performance in the 2014 Culvert Challenge. These five vendors, two with inspection technologies and three with surveillance technologies, along with three other IDIQ vendors that did not receive Task Order 2 funding, will compete in a repeat of the 2014 Culvert Challenge to be conducted at Ft. Benning in 2016.

D.5 Lessons Learned / Best Practices

- **Ensure buy-in from all stakeholders upfront** – By engaging all stakeholders from both the program office and the supporting contract office upfront, we could gain buy-in from all parties involved. To accomplish this, we held a kick-off meeting where we discussed the strategy for the ChBA, proposed timeline, and expectations for each member of the team. During this session, we allowed an open, free-flowing discussion and revised the strategy and timeline accordingly based on input from the team.
- **Hold an industry day to communicate needs and answer questions** – An industry day was held to explain the ChBA process as well as the Government need to interested vendors. Questions and answers were given and any questions that could not be answered immediately were addressed at a later date. The industry day offered an opportunity for networking among participants and an educational session on challenges and ChBA.
- **Expect the unexpected** – Candidate solutions may include features not conceived by the ChBA team; thus, it is imperative that the challenge evaluation criteria be developed in a manner that will allow for the fair evaluation of all proposed solutions. One must not assume that all solutions proposed will be of a certain type or attack the problem from a singular perspective. In the case of the Culvert Challenge, proposed solutions ranged from Micro-Unmanned Aerial Vehicles (UAVs) to bomb-detecting dogs.

D.6 Additional Reference Materials, Articles, Publications, and Point of Contact

D.6.1 Pre-Solicitation Notice

Solicitation Number: W911QX-14-R-0002

This pre-solicitation notice is posted to publicize the Government's intent to issue a Multiple Award Indefinite Delivery Indefinite Quantity (MA IDIQ) contract in support of the Counter-IED Culvert Challenge. Large and small business concerns are sought to participate in a ChBA where their technical capabilities, production capacity, prior experience, and competitive pricing will be assessed. Task orders issued under this MA IDIQ ChBA may be awarded as Firm Fixed-Price (FFP), Cost Plus Fixed Fee (CPFF), or a hybrid of the two. There will be task orders for challenge participation, and additional task orders may be awarded based on challenge performance for testing, refinement, and production quantities.

Description of work: Through this MA IDIQ, the Army Research Laboratory (ARL) in collaboration with the Joint Improvised Explosive Devices Defeat Organization (JIEDDO) seeks innovative solutions for surveillance and inspection of Improvised Explosive Devices (IED) emplacements and remote detection and identification of objects of interest, specifically IEDs and paraphernalia within and around culvert tunnels, tunneling events under roadways, and roadway craters.

This solicitation will be issued in electronic format only. Offerors must register in the System for Award Management (SAM) at www.sam.gov prior to submission of proposals. The solicitation will be posted to FedBizOpps at www.fedbizopps.gov and is available to contractors without charge.

D.6.2 Section C – Description/Specification/Statement of Work

1 PURPOSE

The Joint Improvised Explosive Device Defeat Organization (JIEDDO) in collaboration with the Army Research Laboratory (ARL) seeks innovative solutions for surveillance and inspection in or around roadway culverts, tunnels and tunneling events under roadways, and roadway craters to defeat Improvised Explosive Device (IED) emplacements. In addition, JIEDDO seeks the ability to remotely detect and identify objects of interest, specifically IEDs and paraphernalia within and around culvert tunnels, tunneling events under roadways, and roadway craters. This acquisition is to evaluate, test, and produce solutions that are capable of meeting the Government's objectives.

2 MISSION

JIEDDO leads Department of Defense actions to rapidly provide counter-IED capabilities and solutions in support of combatant commanders, the military Services, and as authorized, other federal agencies to enable the defeat of the IED as a weapon of strategic influence. JIEDDO's strategic vision is to reduce the effectiveness and lethality of IEDs to allow freedom of maneuver for joint forces, federal agencies, and partner nations in current and future operating environments. Over the past few years, ARL has worked numerous programs with JIEDDO and will again team with them to provide technical and contractual support for this acquisition.

3 BACKGROUND

IEDs have become the weapon of choice for terrorists. They require limited skills to build and provide dramatic results with very little investment of time, money, and effort. The public relations benefit of a surprising, spectacular explosion far outweighs attacks using more conventional weapons. With easy access to commercial technologies, internet training, and explosive materials, IEDs provide the enemy with inexpensive, stand-off, precision weapons systems while allowing them to maintain near total anonymity.

The IED became the insurgent weapon of choice during Operation Iraqi Freedom (OIF), but they continue to have a devastating effect in Operation Enduring Freedom (OEF) taking place in Afghanistan. Because these threats evolve and adapt quickly and continuously, they also have the potential for posing future risks to other U.S. interests, both domestic and abroad.

4 SCOPE

In order to perform the culvert denial mission, two (2) components have been identified: culvert surveillance and culvert inspection. A successful culvert surveillance system will significantly increase the warfighter's ability to efficiently monitor multiple locations with high degrees of accuracy and minimal effort. A successful culvert inspection system will deploy rapidly to identify the presence or absence of weapons and associated paraphernalia in the vicinity of a culvert. This PWS also addresses evaluation, testing, program management, production, logistical support, and planning requirements for final deployment.

5 PERIOD/PLACE OF PERFORMANCE

The anticipated period of performance is five (5) years from contract award. The work performed under this contract shall be performed at a combination of the contractor and Government facilities.

6 CULVERT DENIAL PROGRAM TASKS

The Government intends to issue task orders in the following task areas:

6.1 CHALLENGE TASKS

The Contractor shall demonstrate a solution to the Challenge in Section 6.1.1 or the Challenge in 6.1.2. If a Contractor wishes to participate in both challenges, then two (2) white paper proposals are required.

6.1.1 Surveillance Challenge Task

In a controlled environment, the Contractor shall demonstrate the ability of their solution to remotely monitor a culvert in near real-time and detect and identify nefarious activities with a minimal amount of human attention in order to determine when and where activities associated with the implantation of IEDs has taken place (see PWS - Attachment A for challenge description and Section J Attachment 001 for evaluation criteria). The Government will present scenarios and evaluate the contractor-proposed solution performance at the challenge event.

6.1.1.1 Personnel

Participants shall provide necessary personnel to support their solution before, during, and after execution of the challenge event. Participants may send a maximum of five (5) personnel to support challenge event participation. Participants will be provided a stipend to cover the travel of two (2) individuals to support their solution for one (1) week at Ft. Benning, GA during execution of the culvert surveillance challenge event. Personnel in attendance shall be limited to those who have the technical expertise and appropriate skill sets necessary to operate each participant vendor's proposed solution for the duration of the challenge event.

6.1.1.2 Materials

Participants shall provide all necessary supplies, spare parts, tools, test equipment, consumables, hardware, software, and other applicable materials required for the use

of their IED surveillance solution during execution of the challenge event. Participants will not have an opportunity to repair or maintain equipment during the surveillance challenge event itself.

6.1.1.3 Facilities

Performance under this task order will be primarily conducted at Ft. Benning, Georgia.

6.1.2 Inspection Challenge Task

In a controlled environment, the Contractor shall demonstrate the ability of their solution to remotely detect and identify objects of interest, specifically IEDs and paraphernalia within and around a culvert (see PWS - Attachment B for challenge description and Section J Attachment 002 for evaluation criteria). The Government will present scenarios and evaluate the contractor-proposed solution performance at the challenge event.

6.1.2.1 Personnel

Participants will provide necessary personnel to support their solution before, during, and after execution of the challenge event. Participants may send a maximum of five (5) personnel to support challenge event participation. Participants will be provided a stipend to cover the travel of two (2) individuals to support their solution for one (1) week at Ft. Benning, GA during execution of the culvert IED inspection challenge event. Personnel in attendance shall be limited to those who have the technical expertise and appropriate skill sets necessary to operate each participant vendor's proposed solution for the duration of the challenge event.

6.1.2.2 Materials

Participants shall provide all necessary supplies, spares, tools, test equipment, consumables, hardware, software, and other applicable materials required for the use of their culvert IED inspection solution during execution of the Inspection Challenge event. However, participants will not have an opportunity to repair or maintain equipment during the culvert IED inspection challenge event itself.

6.1.2.3 Facilities

Performance under this task order will be primarily conducted at Ft. Benning, Georgia.

6.2 TESTING TASK

6.2.1 The Contractor shall deliver enough fully functional challenge-proven solutions to perform successful inspection or surveillance operations at five (5) culverts simultaneously to the U.S. Government Test and Evaluation facility.

6.2.1.1 At the scheduled testing start up, the Contractor shall provide, in person, instructions to operate the solution units as well as demonstrations on how the technology functions to the Government officials executing the testing. The Contractor shall ensure that the Government testing officials are able to operate the technology without assistance when Contractor-furnished instructions are followed, and no malfunctioning occurs. The Contractor shall ensure that enough Contractor operators are present to initially train and assist the Government officials for all five (5) solutions.

6.2.1.2 The Contractor shall remain at the testing and evaluation facility for the remainder of the testing exercise, which is estimated to last between forty-five (45) and sixty (60) days.

6.3 REFINEMENT TASK

The Contractor shall refine the solution to meet JIEDDO and ARL objectives based on results of prior test and evaluation and/or challenge(s) and in preparation for operational evaluation (see C.6.2). The Contractor shall ensure that these refinements are small in scope and not fundamental to the overall technology.

6.4 PRODUCTION/FIELDING TASKS

6.4.1 The Contractor shall produce and deliver enough fully functional, challenge-proven, and tested solutions to perform successful inspection or surveillance operations at twenty (20) culverts simultaneously for field evaluation purposes.

C.6.4.1.1 In order to support field evaluation, the Contractor shall travel to locations selected by the Government to conduct training, support, and repairs

6.4.2 Upon successful field evaluation and at the request of the Government, the Contractor shall produce and deliver enough fully functional, challenge-proven, and tested solutions to perform successful inspection or surveillance operations at up to two hundred (200) culverts for further operational testing and evaluation.

6.4.2.1 In order to support operational testing and evaluation, the Contractor shall travel to locations selected by the Government to conduct training, support, and repairs.

6.5 PROGRAM MANAGEMENT REQUIREMENTS

6.5.1 The Contractor shall produce and deliver status reports, schedules, and deliverables in support of the coordination of efforts and performance for each task order throughout the period of performance by milestones specified in each Task Order (TO)/Delivery Order (DO).

D.6.3 PWS – Attachment A - Task Order 1 – Surveillance Challenge

PURPOSE

The Surveillance Challenge task order, Task Order 1, and associated challenge event seek to support the acquisition of IED surveillance technology for use in support of JIEDDO's counter-IED mission. The challenge event will assess technologies designed to remotely monitor a culvert in near real-time and detect and identify nefarious activities (e.g., personnel carrying weapons) with a minimal amount of human interaction. Furthermore, this challenge will assess participants' ability to remotely survey the area within and around a culvert to determine when and where activities associated with the implantation of IEDs has taken place.

SURVEILLANCE CHALLENGE DESCRIPTION

Participants shall perform near real-time, remote surveillance of a culvert from an Operations Area (OA) that does not afford direct visual access to a Named Area of Interest (NAI). The NAI will represent a typical remote culvert area without available power. The OA environment will be a temporary facility located within one (1) kilometer of the NAI. It will have 110v AC power and shelter from precipitation. Participants

shall be responsible for communications between the NAI and OA. Participants will not be allowed to run cable of any type between the OA and the NAI. The OA will not be in line-of-sight of the NAI. Participants will be given free access to the NAI for up to two (2) hours prior to the event to install any needed surveillance equipment. After the equipment installation period, a contiguous eight (8) hour surveillance period begins. The surveillance period may include both light and darkness. Challenge participants shall not be permitted to directly observe the NAI during the surveillance period. Participants shall conduct surveillance from the OA. When suspicious or nefarious activity is detected during the surveillance period, participants shall expeditiously report their findings to a challenge administrator. Participants shall not report activities that are not considered suspicious or nefarious. All findings must be reported within five (5) minutes after the end of the eight (8) hour surveillance period.

Suspicious or nefarious activities are defined as follows:

- A person within three (3) meters of a culvert opening not on the road
- Physical disturbance within five (5) meters of a culvert such as digging, drilling, or sawing
- A person carrying a weapon along the road or within ten (10) meters of a culvert (Weapons will be simulated AK-47s and simulated hand-carried Rocket-Propelled Grenade (RPG) launchers)
- A person placing any item within three (3) meters of a culvert opening

TECHNICAL OBJECTIVES FOR SURVEILLANCE CHALLENGE

The Contractor shall provide IED Surveillance technology to be rigorously evaluated during the challenge to determine the best overall culvert IED surveillance solution. Viable solutions will have the following characteristics:

- Identifies the greatest number of suspicious and nefarious activities with a minimum number of false positives
- Reports suspicious and nefarious events quickly (low latency) with the greatest time accuracy
- Consumes the smallest amount of human attention
- Operates with the smallest surveillance team size
- Requires the least amount of setup time with the fewest resources

The evaluation criteria for the solution characteristics above are found in Section J, Attachment 001 – SURVEILLANCE CHALLENGE EVALUATION.

D.6.4 PWS – Attachment B - Task Order 1 – Inspection Challenge

PURPOSE

The Inspection Challenge task order, Task Order 1, and associated challenge event seek to support the acquisition of IED inspection technology for use in support of JIEDDO's Counter-IED mission. The purpose of this challenge is to assess technologies designed to remotely detect and identify objects of interest, specifically IEDs and paraphernalia within and around a culvert.

INSPECTION CHALLENGE DESCRIPTION

In this event, participants will use their technology to determine if IEDs have been implanted in a Named Area of Interest (NAI) containing a culvert. Simulated IEDs, their associated trigger devices, and other

objects of interest may be located anywhere in the NAI. Their nature and placement will mimic known enemy techniques and devices used to attack mounted and dismounted traffic. Prior to the event, participants will be shown examples of what devices to expect and given reference documentation.

Existing knowledge of IED appearance is not expected and will not affect performance. Participants perform their determination while remaining outside an exclusion zone (EZ) containing the NAI for the duration of the event but can deploy equipment into the EZ and NAI. The EZ will require a standoff distance between fifty (50) and three hundred (300) meters from the NAI. A fielded system for inspection of culverts will need to be quickly deployed and have minimal impact on convoy logistics. The challenger team must demonstrate the speed and ease of deployment by having a single individual from the vendor team carry all equipment that will be deployed into the EZ and NAI 100 meters in a single pass, in less than 5 minutes, prior to the start of the event. The Inspection Challenge will consist of two (2) components, Culvert Clearance and Culvert Investigation. These components will each result in a score as described in the Inspection Challenge Evaluation section (see Section J – Attachment 002). The scores for these components will be evaluated separately and will result in two winners, one for Culvert Clearance and one for Culvert Investigation.

The Culvert Clearance component will evaluate the efficiency of system clearing capabilities by assessing the amount of time required for the system to determine if it is safe for mounted traffic to continue over the culvert. This will be considered completed when the operator communicates the number of culverts and the presence or absence of a weapon inside each. Upon effective communication of the initial inspection finding, the system will begin the second component, Culvert Investigation, immediately. In Culvert Investigation, the system will demonstrate wider-area inspection capabilities by reporting the location of inert weapons or other objects of interest located in the NAI with an accuracy of one (1) meter or better. This will be marked on an NAI map furnished by the challenge administrator at the time of the event. If a participant elects to produce their own map in lieu of the administrator- provided map, it must allow position determination of identified items with one (1) meter accuracy or better. Completed maps will be given to the challenge administrator within ten (10) minutes of the completion of the event.

Innovation is sought in the method by which inspection results are quickly and effectively communicated to the system operator. Time will stop when the operator declares that they have discovered all items of interest within the NAI. Participants will have a maximum of ninety (90) minutes total to complete both components at each event location. The challenge will include up to three (3) event locations. The challenge may include events in both light and darkness.

TECHNICAL OBJECTIVES FOR INSPECTION CHALLENGE

The Contractor shall provide IED inspection technology to be rigorously evaluated during the challenge to determine the best overall culvert IED inspection solution. Viable solutions will have the following characteristics:

Provides the greatest culvert clearance speed

- Identifies and reports the location of inert weapons or other objects of interest (greatest number of items found) with the greatest accuracy
- Reports accurate findings in the minimum amount of time (completion speed)
- Requires the smallest inspection team size.

The evaluation criteria for the solution characteristics above are found in Section J, Attachment 002 – INSPECTION CHALLENGE EVALUATION.

D.6.5 Section J – Attachment 001 – Surveillance Challenge Evaluation

EVALUATION CALCULATION

For the purpose of comparison and ranking, challenger performance is summarized by a single numerical value computed as follows:

EVALUATION FACTORS

Suspicious or nefarious activity identified (SNA) – Contractor surveillance team members will report the time of each activity they identify as suspicious or nefarious to the event administrator. Time will be in Coordinated Universal Time (UTC) to the nearest minute. Suspicious and nefarious activities are restricted to those specifically identified in PWS Attachment A. Score for this criterion is the sum of correctly identified activities reported or recorded within five (5) minutes after the actual event time.

False positive (FP) – Total number of reported or recorded suspicious or nefarious activities without correspondence to, or beyond five (5) minutes after, an actual suspicious or nefarious activity.

$$Score = (SNA \times 100) - (FP \times 50) + (5 - STS) \times 50 + (480 - HA)$$

Surveillance team size (STS) – The greatest number of challenger personnel present in the OA during the eight (8) hour surveillance period at any given time. Shift changes of personnel are permitted without penalty.

Human attention (HA) – The OA will be partitioned with an area for challengers to install monitoring equipment and a second area out of sight of the first but immediately accessible to surveillance team members. The challenge administrator will document the time one or more surveillance team members spend in the first area where their equipment is installed. Flashing lights and audible alarms are permitted in the second area to alert surveillance team members and are not considered for human attention calculations. Human attention is defined as the total number of minutes any team member spends in the area containing their monitoring equipment.

Setup time (ST) – Challengers will be allowed up to two (2) hours to setup their equipment. Challengers who exceed two (2) hours will be scored overall zero (0) for the surveillance challenge.

D.6.6 Section J – Attachment 002 – Inspection Challenge Evaluation

EVALUATION CALCULATION

For the purpose of comparison and ranking, challenger performance is summarized by two (2) scores: culvert clearance score and culvert investigation score. Vendors will be offered an opportunity to inspect some number of culvert locations. The scores are computed as the summation of performance across all culvert locations. The scores are computed as follows:

$$Culvert\ Clearance\ score = \sum(90 - CCS)$$

$$Culvert\ Investigation\ score = \sum((IF \times 100) + (5 - ITS) \times 5 + \frac{(90 - CS)}{18} + \frac{(90 - LIF)}{60})$$

EVALUATION FACTORS

Culvert clearance speed (CCS) – The time in minutes from the start of the event to when the operator communicates the number of culverts and the presence or absence of a weapon inside each.

Items found (IF) – The total of the number of items correctly identified and recorded on the NAI map furnished by the challenge administrator, or on a challenger provided map that allows position determination of identified items with one (1) meter accuracy or better. Items that are recorded outside a one (1) meter radius of actual surveyed item location will not be considered found.

Inspection team size (ITS) – The number of team members present during the event.

Completion speed (CS) – The time in minutes from the start of the event to when the inspection team declares they have found all items within the NAI or ninety (90) minutes passes.

Last item found speed (LIF) – The time in minutes from the start of the event until the last correctly identified and located item is recorded. If the challenge administrator cannot determine this time, ninety (90) minutes will be used.

D.6.7 Section L – Instructions, Conditions, and Notices to Offerors

1 OVERVIEW

JIEDDO and ARL seek to establish quantifiable metrics that will bring transparency, objectivity, and competition to the acquisition of counter-IED culvert solutions that support the warfighter. Offerors shall provide the following requested information while addressing the respective PWS and evaluation criteria as stipulated herein. The response shall be in the form of a short white paper and will help JIEDDO and ARL understand the unique capabilities of each Offeror and create the best opportunity to distinguish their solution(s).

Offerors shall prepare their white paper(s) to be evaluated for contract award(s) per the directions below. Offerors may express their interest in participating in the inspection or surveillance challenge or both.

To be considered, Offerors must submit a separate white paper for each solution and for each challenge for which they want to be considered. Each white paper will be evaluated independently.

2 ADMINISTRATION

Each white paper shall be no more than ten (10) pages in length and may include pictures and diagrams within the page limit requirement. References made to material outside the white paper will not be considered.

The following additional restrictions apply:

- a. Each paragraph shall be separated by at least one (1) blank line. A standard, 12 point minimum font size applies. Arial or Times New Roman fonts are required. Tables and illustrations may use a reduced font size not less than 8 point and may be landscape.
- b. Margins – Top, Bottom, Left, Right 1”
- c. Gutter – 0”
- d. From Edge – Header, Footer 0.5”
- e. Page Size, Width – 8.5”

f. Page Size, Height – 11”

The front cover does not count against the page count limit. Please provide the following information on the front cover page of the white paper:

g. Offeror Name

h. Offeror Mailing Address

i. Company URL

j. Offeror POC

k. Offeror POC Job Title

l. Offeror POC Phone Number

m. Offeror POC Email Address

Offerors shall include a declaration affirming participation in their selected challenge. This declaration should read as follows:

n. [Insert Company Name] submits this white paper to be considered for contract award of the Base IDIQ and to participate in the [surveillance or inspection] challenge.

3 SURVEILLANCE CHALLENGE WHITE PAPER INSTRUCTIONS

If you plan to participate in the surveillance challenge, please address the following in your white paper submission:

3.1 Offeror Experience

- a. Summary of Offeror’s overall experience to include general technical capabilities. Examples include corporate experience with technology, relevant educational background, depth of knowledge, and publications.
- b. Summary of Offeror’s overall experience to include products and examples of their successful application.

3.2 Offeror Management Approach

- a. Summary of company’s program management approach for the execution of the IDIQ and respective task orders. Examples include timely submission of status reports, ability to accurately project and reliably follow schedules, production of quality deliverables on time and budget, and overall program management of the contract to include achievement of cost, schedule, and performance objectives.
- b. Summary of Offeror’s intellectual property strategy to include what (if any) intellectual property rights the Offeror may be willing to provide the Government and what (if any) rights the Government may already have in the Offeror’s solution from previous development contracts.

3.3 Approach to the PWS

White paper submissions will explain or describe the following:

- a. Execution of the tasks in PWS Section C.6, Culvert Denial Program Tasks, and PWS Attachment A, Surveillance Challenge.
- b. Solution to the Surveillance Challenge.
- c. Identification of suspicious or nefarious activity taking place in the vicinity of a culvert while minimizing false-positive identifications.

- d. Time it takes your solution to identify and then report (latency) suspicious or nefarious activity
- e. Level of human attention required to operate your solution.
- f. How the solution reports suspicious or nefarious activities.
- g. Number of personnel required to operate your solution.
- h. Amount of set-up time is required to prepare your solution for operation, resources required, and its concept of emplacement.

3.4 Supporting Information

White paper submissions will explain or describe the following:

- a. Resistance of your solution to weather and its ability to operate in darkness
- b. Communication approach
- c. Size, weight, and power requirements of your solution
- d. Training, skills, knowledge, and experience required to operate your solution
- e. Resistance of your solution to tampering and your approach to concealment
- f. If using a radio in the solution, please fill out and submit a completed DD Form 1494 in Section j. (This completed form shall be attached to the Offeror's white paper as an appendix and will not count against the page count limitation)

3.5 Pricing

Estimate the per culvert deployment price for your solution.

4 INSPECTION CHALLENGE WHITE PAPER INSTRUCTIONS

If you plan to participate in the inspection challenge, please address the following in your white paper submission.

4.1 Offeror Experience

- a. Summary of Offeror's overall experience to include general technical capabilities. Examples include corporate experience with technology, relevant educational background, depth of knowledge, and publications.
- b. Summary of Offeror's overall experience to include products and examples of their successful application.

4.2 Offeror Management Approach

- a. Summary of company's program management approach for the execution of the IDIQ and respective task orders. Examples include timely submission of status reports, ability to accurately project and reliably follow schedules, production of quality deliverables on time and budget, and overall program management of the contract to include achievement of cost, schedule, and performance objectives.
- b. Summary of Offeror's intellectual property strategy to include what (if any) intellectual property rights the Offeror may be willing to provide the Government and what (if any) rights the Government may already have in the Offeror's solution from previous development contracts.

4.3 Approach to the PWS

White paper submissions will explain or describe the following:

- a. Execution of the tasks in PWS Section C.6, Culvert Denial Program Tasks, and PWS Attachment B, Inspection Challenge.
- b. Solution to the Inspection Challenge.
- c. Time it takes your solution to determine the presence or absence of a weapon concealed in or around a culvert.
- d. How expeditiously the system identifies and locates multiple simulated IEDs, trigger devices, and other objects of interest and how this information is plotted on a map.
- e. Location accuracy when item of interest is found.
- f. Number of personnel required to operate your solution.

4.4 Supporting Information

White paper submissions will explain or describe the following:

- a. Resistance of your solution to weather and its ability to operate in darkness.
- b. Communication approach
- c. Size, weight, power requirements of your solution.
- d. Training, skills, knowledge, and experience required to operate your solution.
- e. If using a radio in the solution, please fill out and submit a completed DD Form 1494 in Section j.
- j. This completed form shall be attached to the Offeror's white paper as an appendix and will not count against the page count limitation.

4.5 Pricing

Estimate the unit price for your solution.

D.6.8 Section M – Evaluation Factors for Award

1 OVERVIEW

Award of this contract and subsequent task orders will be evaluated based on:

- a. Offeror Experience (Section L.3.1 Surveillance, Section L.4.1 Inspection),
- b. Offeror Management Approach (Section L.3.2 Surveillance, Section L.4.2 Inspection),
- c. Approach to the PWS (Section L.3.3 Surveillance, Section L.4.3 Inspection),
- d. Supporting Information (Section L.3.4 Surveillance, Section L.4.4 Inspection),
- e. Price (Section L.3.5 Surveillance, Section L.4.5 Inspection).

Unless all offers are rejected, award will be made to the responsible Offeror(s) whose offer, conforming to the solicitation, is determined to be the best overall value to the Government, price and other factors considered. In determining the best overall response, the combined non-price factors are more important than the price factor, however, price is a significant factor. The Government may select for award the Offeror(s) whose price is not necessarily the lowest, but whose technical proposal (White Paper) is more advantageous to the Government and warrants the additional cost.

2 WHITE PAPER EVALUATION CRITERIA

White papers submitted following Section L instructions will be evaluated using the following evaluation criteria to determine contract award.

Color	Rating	Description
Blue	Outstanding	Proposal meets requirements and indicates an exceptional approach and understanding of the requirements. The proposal contains multiple strengths and no deficiencies.
Purple	Good	Proposal meets requirements and indicates a thorough approach and understanding of the requirements. Proposal contains at least one strength and no deficiencies.
Green	Acceptable	Proposal meets requirements and indicates an adequate approach and understanding of the requirements. Proposal has no strengths or deficiencies.
Yellow	Marginal	Proposal does not clearly meet requirements and has not demonstrated an adequate approach and understanding of the requirements.
Red	Unacceptable	Proposal does not meet requirements and contains one or more deficiencies and is unawardable.

Please reference: DoD Source Selection Procedures at <http://www.acq.osd.mil/dpap/policy/policyvault/USA007183-10-DPAP.pdf>

3 SURVEILLANCE CHALLENGE WHITE PAPER EVALUATION CRITERIA

Offeror Experience, Offeror Management Approach, Approach to PWS, and Supporting Information are the non-price technical factors used in the evaluation. In determining the best overall technical response using these non-price factors, the Approach to PWS is more important than all of other non-price factors when combined.

3.1 Offeror Experience

- a. Evaluation of the Offeror's general technical capabilities and relevance to the objectives presented in the PWS.
- b. Evaluation of the Offeror's experience developing products which have been successful in the marketplace.

3.2 Offeror Management Approach

- a. Evaluation of Offeror's management approach for timely submission of status reports, ability to accurately project and reliably follow schedules, produce and submit quality deliverables on time and budget, and overall program management of the contract to include achievement of cost, schedule, and performance objectives.
- b. Evaluation of whether or not the Offeror provided an intellectual property strategy to include what (if any) intellectual property rights the Offeror may be willing to provide the Government and what (if any) rights the Government may already have in the Offeror's solution from previous development contracts.

3.3 Approach to the PWS

White paper submissions will be evaluated based on the quality of the explanation of how the Offeror expects to perform or deliver the following during the Surveillance Challenge:

- a. Execution of the tasks in PWS Section C.6, Culvert Denial Program Tasks, and PWS Attachment A, Surveillance Challenge
- b. Solution to the Surveillance Challenge
- c. Identification of suspicious or nefarious activity taking place in the vicinity of a culvert while minimizing false-positive identifications
- d. Time it takes solution to identify and then report (latency) suspicious or nefarious activity – the less time the better
- e. Level of human attention required to operate solution – the less time the better
- f. How the solution reports suspicious or nefarious activities
- g. Number of personnel required to operate solution – the less personnel required the better
- h. Amount of set-up time is required to prepare solution for operation, resources required, and its concept of emplacement – the less set-up time the better

3.4 Supporting Information

White paper submissions will be evaluated based on the quality of the explanation of how the Offeror intends to address the following:

- a. Resistance of solution to weather and its ability to operate in darkness
- b. Communication approach
- c. Size, weight, and power requirements of the solution
- d. Training, skills, knowledge, and experience required to operate solution.
- e. Resistance of your solution to tampering and approach to concealment.
- f. Amount of time the solution can be expected to operate without operator intervention.

3.5 Price

Evaluation of the estimated per culvert deployment price for the solution.

4 INSPECTION CHALLENGE WHITE PAPER EVALUATION CRITERIA

Offeror Experience, Offeror Management Approach, Approach to PWS, and Supporting Information are the non-price technical factors used in the evaluation. In determining the best overall technical response using these non-price factors, the Approach to PWS is more important than all of other non-price factors when combined.

4.1 Offeror Experience

- a. Evaluation of the Offeror's general technical capabilities and relevance to the objectives presented in the PWS.
- b. Evaluation of the Offeror's experience developing products which have been successful in the marketplace.

4.2 Offeror Management Approach

- a. Evaluation of Offeror's management approach for timely submission of status reports, ability to accurately project and reliably follow schedules, production of quality deliverables on time and budget, and overall program management of the contract to include achievement of cost, schedule, and performance objectives.

- b. Evaluation of whether or not the Offeror provided an intellectual property strategy to include what (if any) intellectual property rights the Offeror may be willing to provide the Government and what (if any) rights the Government may already have in the Offeror's solution from previous development contracts.

4.3 Approach to the PWS

White paper submissions will be evaluated based on the quality of the explanation of how the Offeror expects to perform or deliver the following during the Inspection Challenge:

- a. Execution of the tasks in PWS Section C.6, Culvert Denial Program Tasks, and PWS Attachment B, Inspection Challenge
- b. Solution to the Inspection Challenge
- c. Time it takes solution to determine the presence or absence of a weapon concealed in or around a culvert – the less time the better
- d. How expeditiously the system identifies and locates multiple simulated IEDs, trigger devices, and other objects of interest and how this information is plotted on a map
- e. Location accuracy when item of interest is found – the greater accuracy the better
- f. Number of personnel required to operate solution – the less personnel required the better

4.4 Supporting Information

White paper submissions will be evaluated based on the quality of the explanation of how the Offeror intends to address the following:

- a. Resistance of your solution to weather and its ability to operate in darkness.
- b. Communication approach
- c. Size, weight, power requirements of solution.
- d. Training, skills, knowledge, and experience required to operate solution.
- e. Amount of time the solution can be expected to operate without operator intervention.

4.5 Price

Evaluation of the estimated deployment price of Offeror's solution.

White Paper Evaluation Process

Phase I: SSEB Evaluator Individual Sub-Factor Evaluation

- Each Evaluator will use an Individual Sub-Factor Evaluation Form to record the results of their sub-factor evaluation for each white paper.
- Each evaluator will read each white paper and assess the merit of each sub-factor using the Sub-Factor Guidance and Definitions Matrix as guidance.
- For each sub-factor, the evaluator provides a rating of significant strength, minor strength, significant weakness, minor weakness, deficiency, or clarification using the Sub-Factor Guidance and Definitions Matrix as guidance.
- Each evaluator will provide supporting textual comments on the Individual Sub-Factor Evaluation Form that supports each sub-factor rating and specifically references the White Paper.

- If a factor does not contain sub-factors, the evaluator will evaluate at the factor level.

Phase II: SSEB Evaluator Individual Factor Evaluation

- Each evaluator will use an Individual Factor Evaluation Form to record the results of their factor evaluation for each white paper.
- Each evaluator will read Section M.2, White Paper Evaluation Criteria, of the RFP and will use the color-coded ratings (Outstanding, Good, Acceptable, Marginal, or Unacceptable) and associated definitions to assess the merit of each factor for each White Paper.
 - Reference RFP Sections M.3.1 – M.3.4 for the Surveillance White Paper
 - Reference RFP Sections M.4.1 – M.4.4 for the Inspection White Paper
- Each evaluator will provide supporting textual comments on each factor rating using the Individual Factor Evaluation Form for documentation. Evaluator should also provide a reference to the RFP and White Paper for each textual comment and associated rating provided. Each evaluator will provide textual comments that answer three things:
 - What: This includes listing the specific strengths and weaknesses of the sub-factors about the Offeror's approach to the factor and discussion of the sub-factor(s) that influenced the rating.
 - Why: The evaluator, using their listing of strengths and weaknesses of the sub-factors, will call out specific examples and specific references from the proposal that explain why you liked or disliked the Offeror's approach (include specific references to White Paper).
 - Impact: The evaluator will describe the impact of this approach to the Government's stated requirement. Does it enhance or detract from the desired results? How important is the impact? Does it increase or decrease the Offeror's ability to perform?

Phase III: Consensus Evaluation

- The SSEB Chairperson leads the consensus evaluation and brings the evaluators together forming the Consensus Team.
- The SSEB Chairperson uses the Consensus Factor Evaluation Form to record the Consensus Team's discussions and final evaluations of each factor for each White Paper.
- The Consensus Team will use the White Paper Evaluation Criteria in Section M.2 of the RFP and associated color-coded ratings (Outstanding, Good, Acceptable, Marginal, or Unacceptable) and definitions to assess the merit of each factor for each White Paper.
- Evaluators will analyze and discuss individual factor ratings as a group.
- Evaluators will come to a consensus on color evaluation rating for each factor and select a representative what, why, and impact statement for each factor.

Phase IV: Recommendation

- The SSEB Chairperson, with help from the evaluators, will develop Evaluation Report for submission to the Source Selection Authority (SSA). Evaluation Report should show the results from the Consensus Factor Evaluation Form and Consensus meeting notes.