



**BROAD AGENCY ANNOUNCEMENT (BAA)**

**Explosives Division (EXD) BAA 12-06**

**Amendment 00001**

**Widely Tunable Infrared Source (WTIRS)**

**Full Proposals Due: See Anticipated Schedule of Events in paragraph 4.5**

## **1. GENERAL INFORMATION**

### **1.1. Introduction**

This solicitation is a Broad Agency Announcement (BAA) issued under the provisions of paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR) to provide for the competitive selection of research proposals. A formal Request for Proposal (RFP) will not be issued. The Department of Homeland Security (DHS) Science & Technology (S&T) Directorate is soliciting Full Proposals which will be evaluated in accordance with this BAA. Contracts based on responses to this BAA are considered to be the result of full and open competition and in full compliance with the provisions of Public Law (PL) 98-369, "The Competition in Contracting Act of 1984." Awards under this BAA are planned in Fiscal Year (FY) 2012. No contract awards will be made until appropriated funds are available from which payment for contract purposes can be made.

### **1.2. Agency Name**

Department of Homeland Security  
Science & Technology Directorate  
Explosives Division  
Washington, DC

### **1.3. Research Opportunity Title**

Widely Tunable Infrared Source (WTIRS)

### **1.4. Program Name**

Standoff Detection

### **1.5. Research Opportunity Number**

BAA 12-06

### **1.6. Solicitation and Response Approach**

The Department of Homeland Security (DHS) Science & Technology (S&T) Directorate will not issue paper copies of this announcement. DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this solicitation. No funding for direct reimbursement of proposal development costs will be allowed. Full Proposals or any other material submitted in response to this BAA will not be returned. However, depending on the markings on the proposal, DHS S&T will adhere to FAR policy on handling source selection information and proprietary proposals. It is the policy of DHS S&T to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation. Offerors are to provide unclassified proposals. Documents containing sensitive information that are not suitable for

uncontrolled public dissemination should be marked “For Official Use Only” (FOUO). When transmitted electronically, FOUO proposals should be sent with password protection.

Award type is anticipated to be in the form of a Cost Reimbursement type contract or other transaction agreement. In the event an Offeror or subcontractor is an FFRDC, Department of Energy National Laboratory, or other Federally funded entity, DHS S&T will work with the appropriate sponsoring agency to issue an interagency agreement pursuant to the Economy Act (31 U.S.C. 1531) or other appropriate authority.

An evaluation process will be conducted by DHS S&T, which will consist of the solicitation, receipt, and evaluation of a Full Proposal, limited to 30 pages, excluding the Formal Transmittal Letter, Cover Page, Table of Contents and resumes/biographical information for proposed performers.

### **1.7. Response Dates**

Full Proposals Due: See Anticipated Schedule of Events in paragraph 4.5.

### **1.8. Research Opportunity Description**

#### **1.8.1 Technical Description of the Problem**

The threat of Improvised Explosive Devices (IEDs) has become a significant risk to the United States domestically as well as abroad. The potential for mass casualties and significant damage to the infrastructure of the United States, with minimal investment, make IEDs an attractive option for terrorists. Current IED detection technologies are not ideal for domestic usage for a number of reasons including required screening at close proximity (or actual contact with the threat), slow throughput or long screening times, and collateral radiation dosage, among others. These factors place the screening personnel or law enforcement responders in undesirable situations with respect to the IED threat. Versatile and portable detection capabilities are needed as the IED threat may be worn or carried by a person. These capabilities are also necessary due to the *improvised* nature of any IED threat.

Regardless of the particular threat configuration and delivery mechanism, there is an overwhelming requirement for improved standoff detection techniques. The mission of the Standoff Detection Program is to develop new or improve existing technical capabilities to detect IEDs worn or carried by an individual, specifically in standoff applications. This is especially relevant at high volume public venues and entrances where an aviation-style checkpoint is not available.

DHS S&T seeks solutions to be inserted into a set of concepts of operations (CONOPS) for DHS customers. Current operations at building checkpoints need to be supplemented with concealed trace explosive sensors to increase the level of detection of explosive residue on people entering the building. In addition, operations for surface transportation venues need additional technology for detecting trace explosives. Current CONOPS cannot be changed

to introduce a significant increase in manpower for the security personnel, therefore automatic scanning and analysis is necessary. In addition, throughput cannot be decreased. This is especially true in larger surface transportation venues with high volumes of passenger throughput. Solutions are needed for detection of trace amounts of explosives that address the above CONOPS requirements.

Current trace explosives detection systems encompass a large variety of commercial and developmental systems. Commercial systems include Ion Mobility Spectrometry (IMS) systems like those used at aviation checkpoints as well as optics based systems using Raman or Fourier Transform Infrared (FTIR) spectroscopy. Both systems require either insertion of the sample into the system (in the case of the IMS) or very close proximity or intimate contact with the sample (for optics based systems). In addition, analysis of the sample takes several seconds for a single measurement, making the screening of an entire person in a short amount of time impossible.

Systems in development by DHS S&T and other government agencies have the potential for quick, sensitive, selective, standoff detection of trace amounts of explosives. Unfortunately, the light source of several of these systems prevents them from performing to the level of the defined requirements. A compact, low-power consuming, air cooled, widely tunable light source would enable portable, battery operated, quickly scanning trace explosives detection systems.

Research has shown that the infrared range of the electromagnetic spectrum has many signatures available for commercial, military, and improvised explosives. In the mid IR (6-10 $\mu$ m), explosives molecules possess unique vibrational spectroscopic signatures. This region is also potentially more eye-safe at higher laser powers than other regions of the spectrum. Many research groups have been developing trace explosives sensors in this region and some commercial systems exploit this area as well. Therefore the IR (6-10 $\mu$ m) region is the desired range for a widely tunable light source. As illustrated in the potential CONOPS above, the trace explosives sensor must meet a specific set of requirements in order to be beneficial in the field. Among these are quick speed, high selectivity between threats and non-threat items, and sensitivity. These requirements can be met or closely approached with the use of a widely tunable light source. External Cavity Tunable Quantum Cascade Lasers (ECT QCL) are available in the commercial market and have somewhat useful tunable ranges and output power levels. However the ECT operation requires hybrid integration and mechanical movement of external optical elements. Both of these factors will adversely impact reliable operations of the lasers in demanding field environments. Additionally, the speed of the mechanical tuning element within an ECT QCL poses an undesirable upper bound on the laser tuning speed which, in turn, seriously limits the overall operating speed of a sensor system.

The desired widely tunable IR source will meet the requirements specified below. These requirements will have threshold and objective values. Threshold values will be met by successful technologies. It is expected that the offeror will develop a light source that will easily interface with trace explosive sensors currently in development and those to be

developed. To facilitate the specific requirements associated with this program, DHS S&T is initiating this targeted BAA. The primary goals are:

**Table 1.**

Requirement	Threshold(s)	Objective
Tuning Range	6-10 $\mu$ m	6-10 $\mu$ m
Wavelength Accuracy	<0.02 $\mu$ m	<0.01 $\mu$ m
Tuning Step Size	1.0nm	0.5nm
Tuning Step Time <sup>a</sup>	125 $\mu$ sec	31 $\mu$ sec
Line Width	1-3 cm <sup>-1</sup> 0.0072 $\mu$ m at 6 $\mu$ m 0.02 $\mu$ m at 10 $\mu$ m	<1 cm <sup>-1</sup> <0.0036 $\mu$ m at 6 $\mu$ m <0.01 $\mu$ m at 10 $\mu$ m
Full Wavelength Scan Time	0.5 second	250 msec
Scanning	Uni- and bi- directional survey scan, start, stop, step, pause scanning programmable	
Source Cooling	Thermo-electric (or equivalent) cooled	No cooling required
Power Source - Fixed	120 V AC 15 Amps	120 V AC 15 Amps
Minimum Peak Output Power	$\geq$ 50mW	$\geq$ 100mW
Maximum Peak Output Power	150mW	200mW
Beam Diameter <sup>b</sup>	<12mm @8 $\mu$ m wavelength	1-2mm @8 $\mu$ m wavelength
Beam Quality/Beam Profile	Gaussian	TEM <sub>00</sub>
Operation Mode	Pulsed	Pulsed
Pulse Repetition Frequency <sup>c</sup>	10-100 kHz	100 kHz-1MHz
Pulse Width	500 nanoseconds	1-10 nanoseconds
Pointing Stability	<1 mrad	<1 mrad
Beam Noise <sup>d</sup>	<0.5% RSD	<0.1% RSD
Operating Environment <sup>e</sup>	Temperature Range 10 $^{\circ}$ F-100 $^{\circ}$ F Relative Humidity 0-80% (non-precipitating)	Temperature Range 0 $^{\circ}$ F-120 $^{\circ}$ F <sup>b</sup> Relative Humidity 0-90% (non-precipitating)
Storage Environment (Idle)	0 $^{\circ}$ F - 100 $^{\circ}$ F	-15 $^{\circ}$ F - 120 $^{\circ}$ F
Dimensions <sup>f</sup>	12''L x 10''W x 5'' H (<600 in <sup>3</sup> cubic area no one dimension >12'')	10''L x 10''W x 3''H (<300 in <sup>3</sup> cubic area no one dimension >10'')
Weight	< 10lbs.	< 5 lbs.
External Interface	RS-232, GPIB, USB	RS-232, GPIB, USB
Availability <sup>g</sup>	0.95	0.99
Reliability <sup>h</sup>	MTBF= 3120 hrs MTTR= 48 hrs	MTBF= 8760 hrs MTTR= 24 hrs

<sup>a</sup> Tuning step time is the time to tune from one wavelength (wavelength 1) to another wavelength (wavelength 2) within the tuning range. For purposes of this specification the proposed solution must be capable of achieving the tuning step time where wavelength 1 and 2 are 0.5 $\mu$ m, 1.5 $\mu$ m, 2.75 $\mu$ m, and 4 $\mu$ m apart. The tuning step is demonstrated in

Figure 1 where each arrow represents a wavelength that the WTIRS should be able to tune in the tuning step time. No photons should be released tuning from wavelength 1 and 2. In other words, the WTIRS should not slew through all the wavelengths between wavelengths 1 and 2 rather it should skip between them.

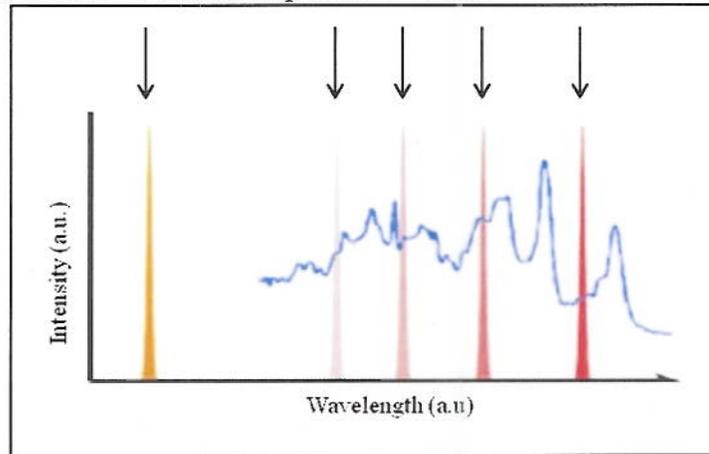


Figure1. Demonstration of the tuning steps for the WTIRS.

<sup>b</sup> Beam diameter as measured at 10m from the aperture with no additional optics outside the aperture at an emissions wavelength of 8 $\mu$ m

<sup>c</sup> User tunable through entire specified repetition frequency range

<sup>d</sup> Measures pulse to pulse

<sup>e</sup> If Thermo-electric Cooling or equivalent is required in order to obtain the extremes of the temperature range this is acceptable but not preferred

<sup>f</sup> Dimensions include light source and power source module

<sup>g</sup> Availability is defined as

$$Availability = \frac{Total\ Operational\ Time}{Total\ Operational\ Time + Total\ Maintenance\ Time}$$

<sup>h</sup> Mean Time Between Failure

$$MTBF = \frac{Total\ Operation\ Time}{\#\ of\ Failures}$$

Mean Time To Repair

$$MTTR = \frac{Total\ Maintenance\ Time}{\#\ of\ Corrective\ Actions}$$

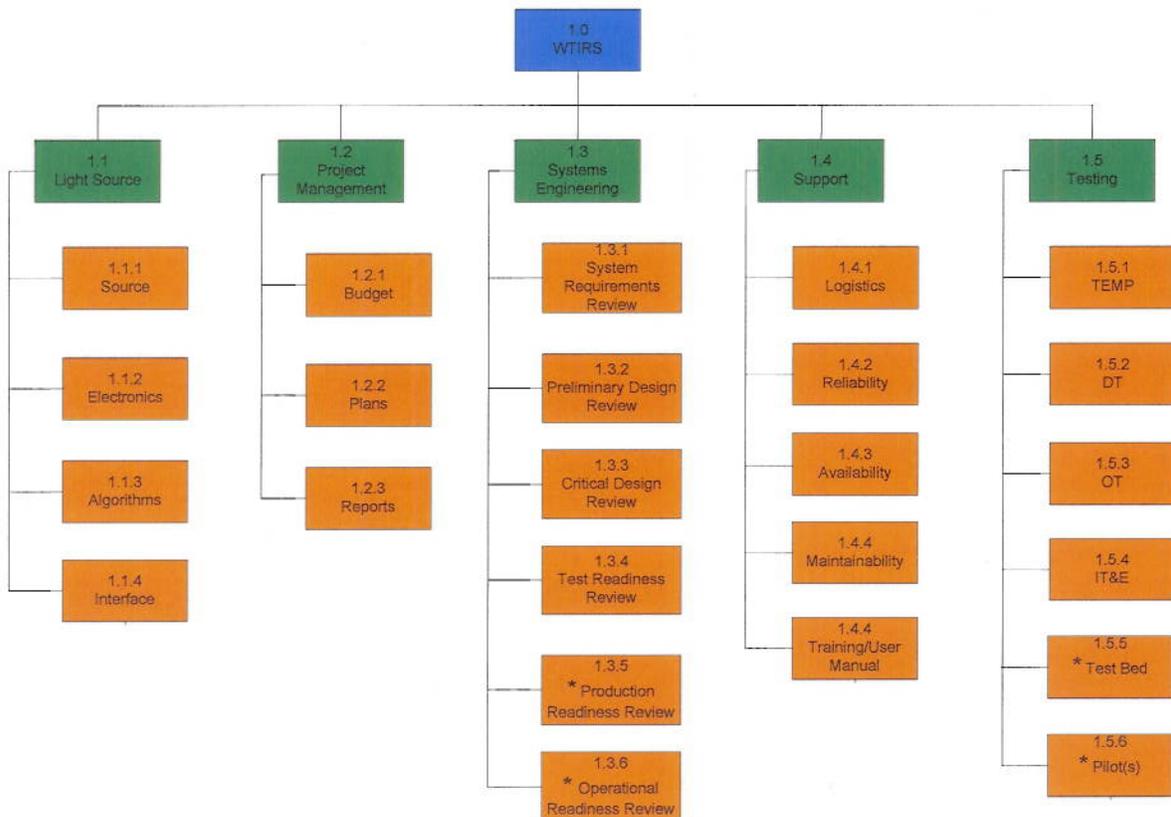
where Failure = hardware/ software malfunction encountered

Considering the above parameters, particular light sources and methods of tuning will not be viable. The goal of this program is to seek a viable solution. All proposed solutions should pay close attention to the operation conditions described in Section 1.8.1 Paragraph 3. Any proposed approach should be able to definitively describe their ability to meet the threshold or objective values in Table 1. All claims must be thoroughly supported with calculations and data including the reliability and availability.

## 1.8.2 Deliverables and Reporting

Deliverables for each phase of awards within each topic area include the following:

- Work Breakdown Structure (WBS) to include main subjects of: Sensor, Project Management, Systems Engineering, Support, and Testing. Offerors are expected to use the WBS below as a guideline. Additions and deletions will be considered and accepted with valid explanation. WBS is to be submitted to the Contracting Officer's Technical Representative (COTR) 14 days after contract award and discussed during the kickoff meeting.



\*These particular WBS elements are presented for informational purposes only and will be addressed at a future date.

- Non-proprietary quad chart and program summary sheet, to be submitted to the COTR 15 days after contract award, and then updated as necessary. The quad chart will be one page with four annotated summary sections and the program summary sheet will contain an expanded summary and be no longer than one page in length.
- Monthly reports
- Monthly status teleconferences
- Milestone reports
- Milestone meetings

- Final report

Monthly Reports will consist of the following:

Monthly reports, not to exceed 10 pages with cover page, will be electronically submitted to the Program Manager and are due 48 hours prior to the monthly status teleconference. These reports will describe the previous 30 calendar days' activity, principals involved in the actual work of the period, technical progress achieved against goals, and difficulties encountered. Cost and schedule will be tracked using Earned Value Management variances and is not included in the 10 page allotment. The offeror will be required to submit Budgeted Cost of Work Scheduled (BCWS), Budgeted Cost of Work Performed (BCWP), and Actual Cost of Work Performed (ACWP). If the program begins to perform with negative cost/schedule variances > 10%, then an Estimate at Completion (EAC) should be submitted as well. This will be used to support re-baselining the program if necessary.

Monthly Status Teleconferences will consist of the following:

A monthly teleconference will take place within 10-15 days of the end of the month between the Principal Investigator and DHS S&T Program Manager. This teleconference will discuss the monthly report including previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 day period, and financial status. (This teleconference will take place as soon as possible but not before Earned Value information is available.)

Milestone Reports will consist of the following:

Milestone reports should include a cover page and will be electronically submitted to the Program Manager 30 days after the scheduled milestone event. The milestone events include the Preliminary Design Review (PDR) and Critical Design Review (CDR). These reports will describe the activity surrounding the milestone, principals involved in the actual work of the period, technical progress achieved against goals, difficulties encountered, funds expended against, recovery plans (if needed), explicit plans from this milestone, and financial status.

Milestone Meetings (PDR, CDR, etc.) will consist of the following:

A milestone meeting will take place at the proper time in the milestone event between Principal Investigator, DHS S&T Program Manager, DHS component representatives, and any additional staff needed. The milestone events include the PDR and CDR. The PDR should occur when the offeror has completed the design tradeoff phase and is ready to recommend proceeding with a single design. The CDR will occur when the offeror has completed the final design and is ready to begin the build phase of the program. This meeting will discuss technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next milestone, and financial status. Location of these meetings will be determined based on the nature of the milestone, but will most likely occur at DHS or performer facilities.

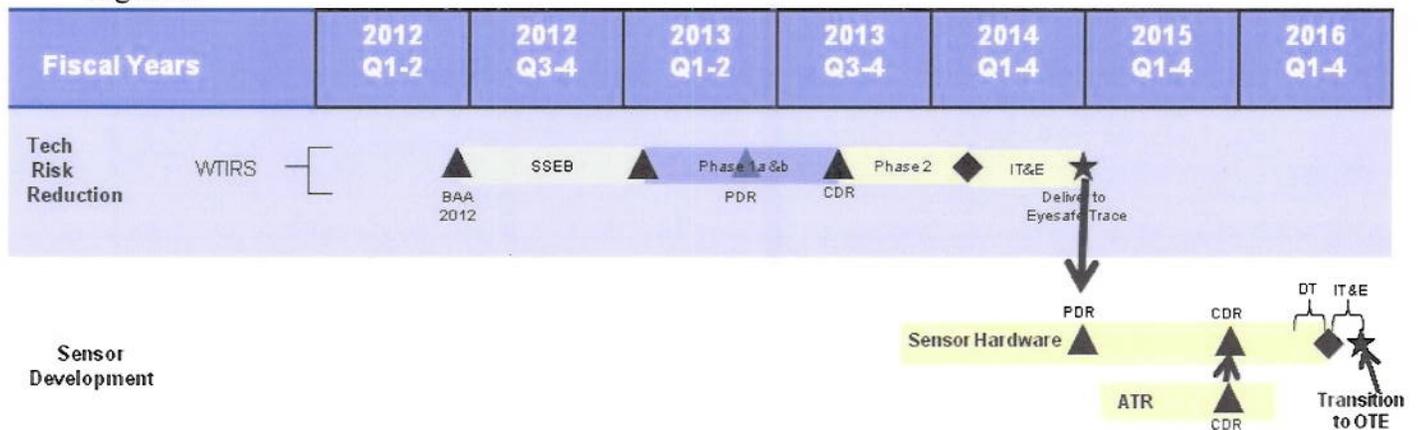
Final Reports will consist of the following:

For a final report, each performer will provide a technical report of their work performed during the preceding Phase or Phases. This will include, where applicable, performance predictions, estimates of cost of ownership, and an enumeration of remaining unknowns and uncertainties. This final report will be a cumulative, stand-alone document that describes the work of the entire Phase leading up to it. It must include any technical data gathered, such as measurements taken, models developed, simulation results, and formulations developed. This final report should also include “lessons learned” from the effort, recommendations for future research in this area, and a comprehensive account of all funds expended. Performers will develop a plan for executing future Phases of projects addressing the topic areas. The final report will also include documentation of the executed work plan, including the contracted Statement of Work (SOW), as well as a work plan and SOW for proposed future efforts where appropriate.

**1.8.3 Program Structure**

The following information is for general guidance purposes only. Submissions that fall outside of these guidelines will be reviewed and considered. This project will consist of three phases. There may be multiple awards for this topic. Evaluation criteria will be written into the end of each phase and will comprise the criteria for phase exit. WTIRS is a component of the Standoff Trace Explosives Detector (STED) Program. The schedule in Figure 2 is a representation of this program and is shown to provide the offeror context of how the developed light source will integrate into the larger program. Any slips in schedule will dramatically affect the entire program, therefore it is very important that the offeror is aggressive in their schedule but not so much that the risk of schedule slip is significant. In addition, the period of performance are suggested for each phase but may be proposed as shorter in duration if the offeror desires. However, the phases should not be longer than suggested.

Figure 2.



- Phase I Design the WTIRS: 18 month duration, Major Milestone and Deliverables:

- Base Effort Phase IA-: Preliminary Design Review (PDR). Demonstration of the feasibility is encouraged but not mandatory (approx. 12 months after initial award)
- Option 1 (Phase IB)- Critical Design Review (CDR) (approx. 18 months after initial award)
- Phase II Build the WTIRS: 12 month duration, Major Milestone and Deliverables:
  - Option 2 (Phase II)- Successful completion and demonstration of a Technology Readiness Level (TRL) 8 prototype (approx. 30 months after initial award)
- Phase III Test the WTIRS: 6 month duration, Major Milestone and Deliverables:
  - Option 3
    - 2 Low Rate Initial Production (LRIP) representative units
    - Testing, Testing Support, and Operational Documentation
- Option 4: Additional WTIRS LRIP representative units in lots of 5, up to 4 lots.

The detailed program structure for each Phase will be as follows:

**Phase I. Design the WTIRS.** This phase will encompass the design phase of the development effort and will consist of a phase gate at the completion of Phase IA and Phase IB.

Phase IA will be the initial design phase where the preliminary designs of the WTIRS that meet the stated parameters are developed. The phase will culminate in a PDR during which several designs may be presented for consideration. The offeror will exit PDR once the Government and offeror reach agreement on the single design to go forward into Phase IB. A demonstration of the feasibility of the design is encouraged if the offeror believes it will lower the risk in the PDR decision. Once the performer has exited PDR, Phase IB will commence.

Phase IB will finalize the WTIRS design and will end with a phase gate decision at the CDR. The CDR will determine the final design that the offeror will build to and no changes to the design are expected beyond this point. When the final design is accepted by the Government, the performer will continue on to Phase II.

**Phase II. Building the WTIRS.** The performer will build the WTIRS in accordance with the final design approved at the completion of the CDR.

Phase II will begin the final build of the TRL 8 WTIRS prototype. The performer is expected to build and deliver a TRL 8 prototype that meets the figures listed in Table 1 thru independent testing. It is the Government's intent that the WTIRS will be integrated into trace detection hardware.

**Phase III. Testing the WTIRS.** The final phase of development includes Developmental Test and Evaluation (DT&E), Operational Test and Evaluation (OT&E), and Independent Test and Evaluation (IT&E). DT&E will be performed at the performer's location to verify that it has met the project objectives. This will include environmental, reliability and maintainability tests. The OT&E will be done at either the performer's location or that of a DHS S&T contractor developing a trace explosives detector. The OT&E will demonstrate and verify the developed WTIRS ability to be easily integrated into a developed sensor system. This will include inserting the developed WTIRS prototype into a trace explosives detection test bed, most likely on an optical bench. It is expected that the detection system will be able to interface with the control system for the WTIRS and be used at the wavelengths desired for the detector. For IT&E, an independent party of the COTR's choosing will verify the operations of the WTIRS itself including meeting all project metrics. The performer will provide testing support in the form of training the IT&E operators in the use of the WTIRS, documentation for quick reference during testing (owner's manual, quick start guide, trouble shooting for possible issues), and basic maintenance of the WTIRS if the system fails to be operational at any point during the testing. The major deliverable from Phase III will be two functioning LRIP representative WTIRS prototypes.

**Option: 5 Additional WTIRS units.** The offeror will propose the cost to deliver additional LRIP representative units. These will be priced out in lots of 5 units and up to 4 lots for 20 units total.

### **1.9. Government Representatives**

Technical:

Thomas P. Coty  
Project Officer  
Explosives Division  
Science and Technology Directorate  
Department of Homeland Security  
Washington, DC 20528

Contracting:

Duane Schatz  
Contracting Officer  
Science and Technology Acquisitions Division  
Office of Procurement Operations  
Department of Homeland Security  
Washington, DC 20528

## **2. AWARD INFORMATION**

### **2.1. Available Amount of Funding Expected to be Awarded Through this BAA**

Although subject to official fiscal appropriation and availability, it is anticipated that the S&T will have approximately \$4M for all awards to be made under this BAA for the period of performance.

### **2.2. Limitation of Funds.**

The Government reserves the right to incrementally fund contracts awarded from this BAA as provided by the FAR 52.232-22, "Limitation of Funds."

### **2.3. Anticipated Number of Awards**

DHS S&T expects to make at least one, and possibly more awards under this BAA.

### **2.4. Anticipated Award Types**

Award type is anticipated to be in the form of a Cost Reimbursement type contract.

### **2.5. Anticipated Period of Performance for New Awards**

The period of performance for research efforts and studies proposed should not exceed 18 months for Phase I, 12 months for Phase II, 6 months for Phase III, and 6 months for Option 4. Proposals that build on current or previous work are encouraged. If Offerors are extending work performed under other DHS projects or projects for other sponsors, the proposal must clearly identify the point of departure and what existing work will be brought forward and what new effort will be performed under this BAA. The final deliverables will be two functioning LRIP representative WTIRS prototypes (at a desired TRL 8) and a final report.

## **3. ELIGIBILITY INFORMATION**

This BAA is open to **ALL** responsible U.S. sources.

Offerors may include single entities or teams from academia, private sector organizations, Government laboratories, and Federally Funded Research and Development Centers (FFRDCs), including Department of Energy National Laboratories and Centers.

### **3.1. Federally Funded Research & Development Centers**

FFRDCs, including Department of Energy National Laboratories and Centers, are eligible to respond to this BAA, individually or as a team member of an eligible principal Offeror, so long as they are permitted under a sponsoring agreement between the Government and the specific FFRDC.

### **3.2. Nonprofit Organizations, Educational Institutions and Small Business Set Aside**

The Government encourages nonprofit organizations, educational institutions, small businesses, small disadvantaged business (SDB) concerns, Historically Black Colleges and Universities (HBCU)/ Minority Institutions (MI) (HBCU/MIs), women-owned businesses (WB), and Historically Underutilized Business (HUB) zone enterprises as well as large businesses, academic institutions, and Government laboratories to submit research proposals for consideration and/or to join others in submitting proposals; however, no portion of the BAA will be set-aside for these special entities pursuant to FAR Part 19.502-2, because of the impracticality of reserving discrete or severable areas of research and development in any specific requirement area.

To ensure full consideration in these programs, registration in the <https://baa2.st.dhs.gov/> website, described later in this document, requires the appropriate business type selection as well as accurate up-to-date information.

### **3.3. Organizational Conflict of Interest**

Organizational Conflict of Interest issues will be evaluated on a case-by-case basis, as outlined below. Offerors who have existing contract(s) to provide scientific, engineering, technical and/or administrative support directly to the DHS S&T Directorate will receive particular scrutiny.

(a) Determination. The Government has determined that this effort may result in an actual or potential conflict of interest, or may provide one or more Offerors with the potential to attain an unfair competitive advantage.

(b) If any such conflict of interest is found to exist, the Contracting Officer may (1) disqualify the Offeror, or (2) determine that it is otherwise in the best interest of the United States to contract with the Offeror and include the appropriate provisions to mitigate or avoid such conflict in the contract awarded. After discussion with the Offeror, the Contracting Officer may determine that the actual conflict cannot be avoided, neutralized, mitigated, or otherwise resolved to the satisfaction of the Government, and the Offeror may be found ineligible for award.

(c) Disclosure: The Offeror must represent, as part of its proposal and to the best of its knowledge that: (1) It is not aware of any facts which create any actual or potential organizational conflicts of interest relating to the award of this contract; or (2) It has included information in its proposal, providing all current information bearing on the existence of any actual or potential organizational conflicts of interest, and has included the mitigation plan in accordance with paragraph (d) of this provision.

(d) Mitigation/Waiver. If an Offeror with a potential or actual conflict of interest or unfair competitive advantage believes it can be mitigated, neutralized, or avoided, the Offeror shall submit a mitigation plan to the Contracting Officer for review. Award of a contract where an actual or potential conflict of interest exists shall not occur before Government approval of the mitigation plan.

(e) Other Relevant Information: In addition to the mitigation plan, the Contracting Officer may require further relevant information from the Offeror. The Contracting Officer will use all information submitted by the Offeror, and any other relevant information known to DHS, to determine whether an award to the Offeror may take place, and whether the mitigation plan adequately neutralizes or mitigates the conflict.

(f) Corporation Change. The successful Offeror shall inform the Contracting Officer within thirty (30) calendar days of the effective date of any corporate mergers, acquisitions, and/or divestures that may affect this provision.

(g) Flow-down. The contractor shall insert the substance of this clause in each first tier subcontract that exceeds the simplified acquisition threshold.

#### **4. APPLICATION AND SUBMISSION INFORMATION**

##### **4.1. BAA Package Download.**

This BAA package may be downloaded in its entirety from the FedBizOpps website <http://www.fbo.gov> or from <https://baa2.st.dhs.gov> .

Registration is not required to download the BAA package; however, a registration in <https://baa2.st.dhs.gov/> is required to upload a response to the BAA.

##### **4.2. Application and Submission Process**

Submissions will not be accepted from organizations that have not registered. Any organization that wishes to participate in this solicitation must register at: <https://baa2.st.dhs.gov/> . Interested parties are encouraged to register early in the process.

**White papers will not be submitted in response to this BAA. Only Full Proposals will be submitted in response to this BAA.**

To submit your Full Proposal, select the appropriate submission button, fill out the requested fields, upload your files, and then submit. Users will receive confirmation of their submission via e-mail. You may revise your Full Proposal submission until the deadline.

No classified Full Proposals (or portions of proposals) will be accepted.

The DHS BAA website at <https://baa2.st.dhs.gov> offers electronic access to BAA solicitations, frequently asked questions (FAQs), answers to FAQs, abstracts of previously funded projects, and hyperlinks to other useful information.

Please refer to the “Registrations and Submissions Training Guide” at [https://baa2.st.dhs.gov/portal/jsp/public/help/public\\_portal\\_registration\\_and\\_submissions\\_training\\_guide.pdf](https://baa2.st.dhs.gov/portal/jsp/public/help/public_portal_registration_and_submissions_training_guide.pdf) for step-by-step instructions for registering your company and submitting your proposal.

**IMPORTANT:** Before submitting a proposal for the first time, you must first register your company and user account in the system. It is recommended that the Business Official, or an authorized representative designated by the Business Official, be the first person to register for your company. Your company's Taxpayer Identification Number (TIN) is required during registration. (If your company does not have a TIN, you can generate a unique ID by following the prompts provided in the system). After your company is registered, other new users may register and associate their information with the company's existing record. When registration is complete, users can submit and manage their proposals.

Note: User registration is not sufficient for registering the Full Proposal. To register your Full Proposal, you must log on with your credentials. Click the "Start New Proposal" button. When the Start New Proposal page displays, pick the solicitation and topic, and then enter the title of the proposal that you are submitting. Note: if the solicitation that you want to submit against is not listed, click on the "click here to register a solicitation" link to gain access. When you have entered the title, click the "Add Proposal to Activity Worksheet" button. The Proposal Activity worksheet page lists your proposal in the proposals in progress section of the page. Your Full Proposal is registered at this point. Repeat this step before the Full Proposal registration deadline for every Full Proposal you wish to register.

After you have completed the Coversheets and uploaded your Full Proposal document, you must click on the "Submit Proposal" button to submit the Full Proposal; simply uploading the document is not sufficient.

### **4.3. Format and Content of Full Proposals**

#### Full Proposals

See the Anticipated Schedule of Events in paragraph 4.5 for the due date for receipt of Full Proposals. **Full Proposals WILL NOT BE ACCEPTED after the published due date.** Proposals that exceed the page limit will not have the extra pages reviewed, which may affect the proposal rating.

#### Full Proposal Format: Volume 1 Technical Proposal; and Volume 2 - Cost Proposal

Full proposals will consist of two volumes: a Technical Proposal volume and a Cost Proposal volume.

- Paper Size – 8.5-by-11-inch paper
- Margins – 1 inch
- Spacing – Single- or double-spaced
- Font – Times New Roman, 12 point. Text embedded within graphics or tables in the body of the Project Description Form should be legible and not smaller than 8 point.
- Number of Pages –

- Volume 1 (Technical Proposal): No more than 30 single-sided pages. Full proposals exceeding the page limit will not be evaluated. The Official Transmittal Letter, as well as the cover page, table of contents and resumes/biographical information about potential performers in the Full Proposal are not subject to the page limitation.
- Volume 2: (Cost Proposal): No page limitation.
- Copies – A proposal shall consist of one electronic file for the Technical Proposal volume and one electronic volume for Cost proposal volume. Electronic files will be in portable document format (PDF), readable by IBM-compatible PCs. Each file size must be no more than 10 MB.

## Full Proposal Content

### **Volume 1: Technical Proposal**

Volume I of the Full Proposal shall be in the form of a Technical Proposal volume. Responsiveness to the order and content of sections listed in Volume I is important to assure thorough and fair evaluation of proposals. Nonconforming proposals may be rejected without review. In particular, the Technical Proposal must cover the following points in more detail:

- Official Transmittal Letter: This is an official transmittal letter with authorizing official signature. For an electronic submission, the letter can be scanned into the electronic proposal. The letter of transmittal shall state whether this proposal has been submitted to another government agency, other than DHS S&T, and if so, which one and when.
- Cover Page: This should include the words “Technical Proposal” and the following:
  - 1) BAA number;
  - 2) Title of Proposal;
  - 3) Identity of prime Offeror and complete list of subcontractors, if applicable;
  - 4) Technical contact (name, address, phone/fax, electronic mail address);
  - 5) Administrative/business contact (name, address, phone/fax, electronic mail address); and,
  - 6) Duration of effort (separately identify the basic effort and any options)
- Table of Contents
- Executive Summary: Summarize the Proposal and the expected benefits of the solution.
- Quad Chart: See below Figure 2 template for formatting.

## Organization of Quad Chart

BAA Number:		Offeror Name:	
Title: <i>(Brief/Short Title to Describe Offeror's Proposed Effort)</i>		Date:	
Photograph or artist's concept: <i>Provide a simple but sufficiently detailed graphic that will convey the main idea of the final capability/use/deployment of the prototype, and its technological methodology</i>		Technology Readiness Level: <i>Provide information on the current state of the proposed technology in terms of the DHS (S&amp;T) TRL Chart. Identify strengths and weaknesses relative to the TRL Chart.</i>	
Proposed Technical Approach: <i>How will the problem be approached? Describe tasks to be performed. Describe any ongoing related efforts by the offeror. Describe the technology involved and how it will be used to solve the problem. Describe key technical challenges.</i>		Schedule, Cost, Deliverables & Contact Info: <i>Summarize key schedule, cost, and deliverable elements and full contact information for the lead offeror as well as other key technical contributing organizations, including phone numbers and email</i>	

Figure 3. Quad Chart

Quad Charts shall not use any font smaller than 8-point and shall be organized as shown in Figure 3.

- **Abstract of Proposal:** This is a one-page synopsis of the entire proposal including total costs proposed for the effort. Provide a description of the technical/engineering, and management approaches you propose to address the goals of the Topic. Highlight what is unique about your proposed solution. Include a brief summary of your concept's anticipated performance relative to the Topic goals. This section should be separable, i.e., it should begin on a new page with the following section beginning on a new page as well as be a self standing synopsis of the proposal,
- **Proposal:** This section describes the proposed work and associated technical and management issues. Below are the general guidelines for writing a technical volume, but the Offeror should be aware that additional details/information may be required for a particular topic.
  - **Ability of proposed work to meet the program goals.** This section is the centerpiece of the proposal and should describe the overall methodology and how it will meet the required and desired attributes and functionality specified in the BAA. If applicable, describe how the proposed prototype is suitable to the users and field environments specified. This section should also address a plan to enter production or otherwise supply the capability to DHS users if the prototype is successful.
  - **Detailed technical descriptions and approach.** Identify the critical issues and plans for execution,

- **Statement of Work (SOW), Schedule, and Milestones.** Submit an integrated schedule for the proposed work, including major milestones. The section for the schedule and milestones should be separate and clearly marked. It is important to note that the SOW will be used for the initiation of contract negotiations for selected proposals. Accordingly, the draft SOW must be non-proprietary and not include any classified information,
  - **WBS.** Provide a proposed work breakdown structure to the third level. The offeror should begin with the furnished WBS and then propose adjustments with justification as required.
  - **Deliverables.** Provide a detailed list, schedule for delivery, and description of all deliverables proposed under this effort, including prototype hardware, technical data, computer software, or other intellectual property, test plans, and reports consistent with the objectives of the work involved and as specified in the Topic requirements. The following section will be severable, i.e., it will begin on a new page. It is anticipated that the proposed detailed list and description of all deliverables will be incorporated as an attachment to the resultant award instrument. To this end, proposals must include a severable self-standing detailed list and description of all deliverables without any proprietary restrictions, which can be attached to the contract or agreement award,
  - **Management Plan.** Provide a brief summary of the management plan, including an explicit description of what role each participant of team member will play in the project, and their past experience in the technical areas related to this proposal and complexity of project managed.
  - **Commercialization:** Provide a summary of discrete examples of successful commercialization of developed technologies and describe the planned approach for successfully commercializing the WTIRS. Based upon the proposed technology, provide a projected per unit cost at the 100<sup>th</sup> and 1,000<sup>th</sup> unit, assuming buys in lots of 100 units each with all 10 lots procured over a period of three years.
  - **Facilities.** Describe key facilities that will be used in the proposed effort. Delineate between classified and **unclassified** facilities.
  - **Requirements for Government Furnished Resources (GFR).** Provide a brief summary of required hardware, information, and data which must be provided by the Government to support the proposed work, if any. Provide a detailed breakout for all GFR that is requested by the Offeror.
- Cost Summary: Summarize the projected total costs for each task in the initial period of performance and any proposed option years of the effort, including a summary of subcontracts, man hours, and consumables.
  - Resumes for Key Personnel: In Appendix A, provide resumes and *curriculum vitae* (CVs) for each of the key personnel. These resumes do not count toward the 30-page limit.

- Other DHS Support: As an appendix, provide a list of any current or pending awards or proposals with DHS that pertain to this work. This section will not count towards the 30-page limit.
- Assertion of Data Rights: Include here a summary of any assertions to any technical data or computer software that will be developed or delivered under any resultant award. This includes any assertions to pre-existing results, prototypes, or systems supporting and/or necessary for the use of the research, results, and/or prototype. Any rights asserted in other parts of the proposal that would impact the rights in this section must be cross-referenced. If less than unlimited rights in any data delivered under the resultant award are asserted, the Offeror must explain how these rights in the data will affect its ability to deliver research data, subsystems, and toolkits for integration as set forth below. Additionally, the Offeror must explain how the program goals are achievable in light of these proprietary and/or restrictive limitations. If there are no claims of proprietary rights in pre-existing data, this section shall consist of a statement to that effect.

Proposals submitted in response to this BAA shall identify all technical data or computer software that the Offeror asserts will be furnished to the Government with restrictions on access, use, modification, reproduction, release, performance, display, or disclosure.

Offeror's pre-award identification shall be submitted as an attachment to its offer and shall contain the following information:

(1) Statement of Assertion. Include the following statement: "The Offeror asserts for itself, or the persons identified below, that the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose only the following technical data or computer software should be restricted:"

(2) Identification of the technical data or computer software to be furnished with restrictions. For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process as specifically as possible (e.g., by referencing specific sections of the proposal or specific technology or components). For computer software or computer software documentation, identify the software or documentation by specific name or module or item number.

(3) Detailed description of the asserted restrictions. For each of the technical data or computer software identified above in paragraph (2), identify the following information:

(i) Asserted rights. Identify the asserted rights for the technical data or computer software.

(ii) Copies of negotiated, commercial, and other non-standard licenses. Offeror shall attach to its offer for each listed item copies of all proposed negotiated license(s), Offeror's standard commercial license(s), and any other

asserted restrictions other than Government purpose rights; limited rights; restricted rights; rights under prior Government contracts, including Small Business Innovation Research (SBIR) data rights for which the protection period has not expired; or Government's minimum rights.

(iii) Specific basis for assertion. Identify the specific basis for the assertion. For example:

(A) Development at private expense, either exclusively or partially. For technical data, development refers to development of the item, component, or process to which the data pertains. For computer software, development refers to the development of the software. Indicate whether development was accomplished exclusively or partially at private expense.

(B) Rights under a prior Government contract, including SBIR data rights for which the protection period has not expired.

(C) Standard commercial license customarily provided to the public.

(D) Negotiated license rights.

(iv) Entity asserting restrictions. Identify the corporation, partnership, individual or other person, as appropriate, asserting the restrictions.

(4) Previously delivered technical data or computer software. The Offeror shall identify the technical data or computer software that are identical or substantially similar to technical data or computer software that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The Offeror need not identify commercial technical data or computer software delivered subject to a standard commercial license.

(5) Estimated cost of development. The estimated cost of development for that technical data or computer software to be delivered with less than Unlimited Rights.

(6) Supplemental information. When requested by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate the Offeror's assertions. Sufficient information must include, but is not limited to, the following:

(i) The contract number under which the data or software were produced;

(ii) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and

(iii) Identification of the expiration date for any limitations on the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose the data or software, when applicable.

**Ineligibility for award.** An Offeror's failure to submit or complete the identifications and assertions required by this provision with its offer may render the offer ineligible for award.

It is anticipated that the proposed Assertion of Data Rights will be incorporated as an attachment to the resultant award instrument. To this end, proposals must include a severable self-standing Assertion of Data Rights without any proprietary restrictions, which can be attached to the contract or agreement award.

## **VOLUME 2: Cost Proposal**

The Cost Proposal shall consist of a cover page and two parts, Part 1 and Part 2. Part 1 will provide a detailed cost breakdown of all costs by cost category by calendar/fiscal year and Part 2 will be a Cost breakdown by task/sub-task using the same task numbers in the Statement of Work. Options must be separately priced and cost proposed. No rough order of magnitude estimations will be accepted.

- Cover Page: The use of the SF 1411 is optional. The words "Cost Proposal" should appear on the cover page in addition to the following information:
  - BAA number;
  - Title of Proposal;
  - Identity of prime Offeror and complete list of subcontractors, if applicable;
  - Technical contact (name, address, phone/fax, electronic mail address)
  - Administrative/business contact (name, address, phone/fax, electronic mail address) and;
  - Duration of effort (separately price out the basic effort and any options)
  
- Part 1: Detailed breakdown of all costs by cost category by calendar/fiscal year. The offeror should provide a total estimated price for major demonstrations and other activities associated with the program, including cost sharing, if any. The offeror should state whether any Independent Research and Development (IR&D) program is or will be dedicated to this effort, or if IR&D is being pursued to benefit related programs as well. Any cost sharing estimates should include the type of cost share, i.e. cash or in-kind. If inkind is proposed, the offeror should provide a discussion of how the cost share was valued.
  - **Direct Labor** - Individual labor category or person, with associated labor hours and *unburdened* direct labor rates;
  - **Indirect Costs** - Fringe Benefits, Overhead, G&A, COM, etc. (*Must show base amount and rate*)
  - **Travel** - Number of trips, destinations, durations, etc.
  - **Subcontract** - A cost proposal *as detailed as the Offeror's cost proposal* will be required to be submitted by the subcontractor. The subcontractor's cost proposal can be provided in a sealed envelope with the Offeror's cost proposal or will be requested from the subcontractor at a later date;

- **Consultant** - Provide consultant agreement or other document which verifies the proposed loaded daily/hourly rate;
  - **Materials** - Specifically itemized with costs or estimated costs. Where possible, indicate purchasing method, (Competition, engineering estimate, market survey, etc.)
  - **Other Directs Costs** - Particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the contractor/recipient. Justifications must be provided when Government funding for such items is sought
  - **Fee/Profit** - Including fee percentage.
- **Part 2:** Cost breakdown by task/sub-task using the same task numbers in the Statement of Work and Work Breakdown Structure.

The Cost Proposal should be consistent with your proposed SOW. Activities such as demonstrations required to reduce the various technical risks should be identified in the SOW and reflected in the Cost Proposal. The offeror should provide a total estimated price for the major Research, Development, Test, and Evaluation (RDT&E) activities associated with the program.

For the Cost Proposal, the DHS BAA website system has a web form where the Offeror may enter data regarding the cost proposal. The system does not allow the Full Proposal to be submitted without completing this Cost Proposal web form. Offerors may choose to not enter information in the Cost Proposal web form since the Cost Proposal cover page, Part 1, and Part 2 will be uploaded separately. However, Offerors will still need to go to the last page of the Cost Proposal web form and hit the confirmation button, noting that the Offeror has reviewed the empty web form and is submitting the web form blank.

#### **4.4. Protection of Information Uploaded to BAA Website:**

All data uploaded to <https://baa2.st.dhs.gov/> is protected from public view or download. All submissions will be considered proprietary/source selection sensitive and protected accordingly. Documents may only be reviewed by the registrant, authorized Government representatives, and assigned evaluators. Offerors submitting proprietary information should specifically mark or identify any information they perceive is proprietary for which they seek added protection.

#### **4.5. Significant Dates and Times**

DHS S&T plans to review all Full Proposals in accordance with the “Anticipated Schedule of Events” set forth in the table in this section, using the evaluation criteria described in Section 5.1. A Review Panel will evaluate the Full Proposals using the criteria specified under the evaluation criteria set forth in Section 5.1. Following that review, Offerors will be notified whether or not their proposal has been selected for negotiation. It is anticipated that multiple awards may be made under this BAA.

The Government reserves the right to fund none, some, or all of the proposals received. It is the intention upon completion of the proposal evaluation to notify Offerors of an

initiation of negotiation for awards or rejection of their proposal. Awards will be made based on the evaluation, funds availability, and other programmatic considerations.

**Anticipated Schedule of Events**

<b>Anticipated Schedule of Events</b>		
<b>Event</b>	<b>Due Date</b>	<b>Time (E.S.T.)</b>
BAA Posted to Website	March 20, 2012	
Deadline for submissions of Full Proposal Questions	April 10, 2012	4:30 PM
Full Proposal Website Registration Deadline	May 14, 2012	4:30 PM
Full Proposal Due Date	May 22, 2012	4:30 PM
Notification of Selection for Award Negotiations	July 3, 2012	N/A
Contract Award	TBD	N/A
Kickoff Meetings	TBD	TBD

**4.6. Submission of Late Full Proposals**

Full Proposals **WILL NOT BE ACCEPTED** after the published due dates.

**4.7. Further Assistance Needed for this BAA**

The applicable electronic address for all correspondence for this BAA is: BAA12-06@HQ.DHS.GOV.

For technical assistance with using the <https://baa2.st.dhs.gov/> website, submit questions to the administrators at [dhsbaa@reisys.com](mailto:dhsbaa@reisys.com) , phone 703-480-7676.

**4.8. BAA Contractual and Technical Questions.**

All contractual and technical questions regarding this BAA, including the published requirements and instructions, must be directed to the Contracting Officer at BAA mailbox: BAA12-06@HQ.DHS.GOV. The program and technical staff will not acknowledge, forward, or respond to any inquiries received in any other manner concerning this BAA. Contractual questions and answers will be posted periodically under the Frequently Asked Questions (FAQs) section on the [www.fbo.gov](http://www.fbo.gov) and <https://baa2.st.dhs.gov> websites.

**5. EVALUATION INFORMATION**

**5.1. Evaluation Criteria:**

The evaluation of Full Proposals will be accomplished through a Peer or Scientific Review using the following criteria, which are listed in descending order of relative importance:

- **Light Source Specifications:** Meets the threshold for key requirements for WITRS as described in the Table 1. Includes: Tuning Range, Wavelength Accuracy, Tuning Speed, Output Power, Cooling, and Pulsing Characteristics. The overall proposed light source design approach is technically sound and applicable to the prescribed application.
- **Operational Environment:** Meets the threshold for key requirements for operation in a typical field environment. Includes: Operating Environment, Storage Environment, Availability, and Reliability. Demonstrates the overall capability to be operated in a field environment.
- **Source-Sensor Integration:** Meets the threshold for key requirements for the integration with a sensor technology. Includes: Electrical and External Interfaces, Dimensions, and Weight. Demonstrates the overall capability to be integrated seamlessly into a sensor technology.
- **Commercialization:** Demonstrated understanding and sound capability required to commercialize the developed technology. Reasonable projected production unit cost and learning curve.
- **Quality and Technical Merit:** Sound technical and managerial approach to the proposed work, including a demonstrated understanding of the critical technology challenges required to address the desired system performance parameters and a strategy to address those issues, including a risk mitigation strategy.
- **Cost Realism:** Accurate, well-founded estimate of all costs related to performance of the proposed effort.
- **Capabilities and Experience:** Capability to perform proposed work and history of performance of the Team and Team members in developing related technologies and systems.

Evaluation of Full Proposals will be based on an assessment of the proposed solutions which are most advantageous to the Government based on the aforementioned criteria. Awards will be made based upon Full Proposal evaluation, funds availability, and other programmatic considerations, including awards to lesser rated proposals where alternative approaches and technologies are deemed to be more technically advantageous.

**NOTE: DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this announcement.**

## 5.2. Evaluation Panel

All properly submitted Full Proposals that conform to the BAA requirements will be evaluated by a review panel comprised of Government technical experts drawn from staff within DHS S&T and other Federal agencies. All Government personnel are bound by public law to protect proprietary information.

Contract personnel who provide administrative support to the panel and who have access to proposals will be bound by appropriate non-disclosure agreements to protect proprietary and source-selection information. They will not be permitted to release any source-selection information to third parties, including others in their organization. Submissions

and information received in response to this BAA constitute permission to disclose that information to certified evaluators under these conditions.

### **5.3. Feedback**

The Government shall, if requested by unsuccessful Full Proposal Offerors, provide feedback on full proposals submitted.

## **6. AWARD ADMINISTRATION INFORMATION**

### **6.1. Reporting**

The following *minimum* deliverables will be required under traditional procurement contracts or other transactions agreements awarded to those Offerors whose Full Proposals are selected for award.

#### Monthly Program Report

Monthly reports, not to exceed 10 pages with cover page, will be electronically submitted to the Program Manager and are due 48 hours prior to the monthly status teleconference. These reports will describe the previous 30 calendar days' activity, principals involved in the actual work of the period, technical progress achieved against goals, and difficulties encountered. Cost and schedule will be tracked using Earned Value Management variances. The offeror will be required to submit Budgeted Cost of Work Scheduled (BCWS), Budgeted Cost of Work Performed (BCWP), and Actual Cost of Work Performed (ACWP). If the program begins to perform with negative cost/schedule variances > 10%, then an Estimate at Completion (EAC) should be submitted as well. This will be used to support re-baselining the program if necessary.

The following deliverables, primarily in contractor format, are anticipated as necessary. However, specific deliverables should be proposed by each Offeror and finalized with the Contracting Officer :

- Milestone Reports
- Technical and Financial Progress Reports
- Presentation Material
- Other Documents or Reports
- Final Report

### **6.2. Project Meetings and Reviews**

Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40 percent of these meetings will be at or near DHS S&T, Washington D.C., and 60 percent at other contractor or government facilities. Interim

meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or Web-based collaboration tools.

### **6.3. Additional Deliverables**

Performers should define additional program-specific deliverables as appropriate for the proposed approach.

## **7. OTHER INFORMATION**

### **7.1. Government Property, Government Furnished Equipment (GFE), and Facilities**

The Government may provide government-furnished equipment (GFE), resources (GFR), information (GFI), or services (GFS) under the terms of each negotiated contract or agreement. GFE, GFR, GFI, or GFS requested by an offeror must be factored into the offeror's project cost. Each offeror must provide a very specific description of any equipment or hardware it needs to acquire to perform the work. This description should indicate whether or not each particular piece of equipment or hardware will be included as part of a deliverable item under the resulting award.

In addition, this description should identify the component, nomenclature, and configuration of the equipment or hardware that it proposes to purchase for this effort. The Government wants to have the contractor purchase the equipment or hardware for deliverable items under its contract. It will evaluate case-by-case the purchase, on a direct reimbursement basis, of special test equipment or other equipment not included in a deliverable item. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Government research facilities may be available, and should be considered as potential GFE. These facilities and resources are of high value, and some are in constant demand by multiple programs. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should explain which of these facilities they recommend and why.

### **7.2. Security Classification**

No Classified Full Proposals (or portions of proposals) will be accepted.

The Contractor and its affiliates **shall not** be permitted to advertise or make endorsement claims of any kind relating to this procurement, the project sites, or the evaluated systems and processes, existing or proposed. The Contractor personnel and the Contractor shall sign non-disclosure agreements protecting all "official use only" and other sensitive aspects of the project from outside release upon contract award.

### **7.3. Information for Full Proposal Respondents**

This BAA is for planning purposes only. It will not be construed as an obligation on the part of the Government to acquire any products or services. No entitlement to payment of direct or indirect costs or charges by the Government will arise as a result of submission of responses to this BAA and the Government's use of such information. Unnecessarily elaborate responses containing extensive marketing materials are not desired.

#### **7.4. SAFETY Act**

As part of the Homeland Security Act of 2002, Congress enacted the Support Anti-Terrorism by Fostering Effective Technologies Act of 2002 (the "SAFETY Act"). The SAFETY Act puts limitations on the potential liability of firms that develop and provide qualified anti-terrorism technologies. DHS S&T, acting through its Office of SAFETY Act Implementation (OSAI), encourages the development and deployment of anti-terrorism technologies by making available the SAFETY Act's system of "risk management" and "liability management." Offerors submitting proposals in response to this BAA are encouraged to submit SAFETY Act applications for their existing technologies. They are invited to contact OSAI for more information, at 1-866-788-9318 or [helpdesk@safetyact.gov](mailto:helpdesk@safetyact.gov). They also can visit OSAI's Web site at [www.safetyact.gov](http://www.safetyact.gov).

#### **7.5. Subcontracting Plan**

Successful contract proposals that exceed \$650,000.00, submitted by all but small business concerns, will be required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9, prior to award.

#### **7.6. Certificate of Current Cost or Pricing Data**

Successful contract proposals that exceed \$700,000.00 may require the submission of a Certificate of Current Cost or Pricing Data in accordance with FAR 15.403-4(b)(2), prior to award.

#### **7.7. Solicitation Provisions and Clauses**

##### **FAR 52.222-54 Employment Eligibility Verification (Jan 2009).**

(a) *Definitions.* As used in this clause—

"Commercially available off-the-shelf (COTS) item"—

(1) Means any item of supply that is—

(i) A commercial item (as defined in paragraph (1) of the definition at 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 (46 U.S.C. App. 1702), such as agricultural products and petroleum products. Per 46 CFR 525.1(c)(2), “bulk cargo” means cargo that is loaded and carried in bulk onboard ship without mark or count, in a loose unpackaged form, having homogenous characteristics. Bulk cargo loaded into intermodal equipment, except LASH or Seabee barges, is subject to mark and count and, therefore, ceases to be bulk cargo.

“Employee assigned to the contract” means an employee who was hired after November 6, 1986, who is directly performing work, in the United States, under a contract that is required to include the clause prescribed at 22.1803. An employee is not considered to be directly performing work under a contract if the employee—

(1) Normally performs support work, such as indirect or overhead functions; and

(2) Does not perform any substantial duties applicable to the contract.

“Subcontract” means any contract, as defined in 2.101, entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract. It includes but is not limited to purchase orders, and changes and modifications to purchase orders.

“Subcontractor” means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime Contractor or another subcontractor.

“United States,” as defined in 8 U.S.C. 1101(a)(38), means the 50 States, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands.

*(b) Enrollment and verification requirements.*

(1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall—

(i) *Enroll.* Enroll as a Federal Contractor in the E-Verify program within 30 calendar days of contract award;

(ii) *Verify all new employees.* Within 90 calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); and

(iii) *Verify employees assigned to the contract.* For each employee assigned to the contract, initiate verification within 90 calendar days after date of enrollment or within 30 calendar days of the employee’s assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of—

(i) *All new employees.*

(A) *Enrolled 90 calendar days or more.* The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(B) *Enrolled less than 90 calendar days.* Within 90 calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(ii) *Employees assigned to the contract.* For each employee assigned to the contract, the Contractor shall initiate verification within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(3) If the Contractor is an institution of higher education (as defined at 20 U.S.C. 1001(a)); a State or local government or the government of a Federally recognized Indian tribe; or a surety performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements at (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.

(4) *Option to verify employment eligibility of all employees.* The Contractor may elect to verify all existing employees hired after November 6, 1986, rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986, within 180 calendar days of—

(i) Enrollment in the E-Verify program; or

(ii) Notification to E-Verify Operations of the Contractor's decision to exercise this option, using the contact information provided in the E-Verify program Memorandum of Understanding (MOU).

(5) The Contractor shall comply, for the period of performance of this contract, with the requirement of the E-Verify program MOU.

(i) The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor will be referred to a suspension or debarment official.

(ii) During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the Contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.

(c) *Web site.* Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: <http://www.dhs.gov/E-Verify> .

(d) *Individuals previously verified.* The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee—

(1) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;

(2) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or

(3) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD) -12, Policy for a Common Identification Standard for Federal Employees and Contractors.

(e) *Subcontracts.* The contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for identification of the parties), in each subcontract that—

(1) *Is for—*

(i) Commercial or noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or

(ii) Construction;

(2) Has a value of more than \$3,000; and

(3) Includes work performed in the United States.

(End of Clause)

## **HSAR 3052.209-70 Prohibition on Contracts with Corporate Expatriates (Jun 2006)**

### **(a) Prohibitions.**

Section 835 of the Homeland Security Act, 6 U.S.C. 395, prohibits the Department of Homeland Security from entering into any contract with a foreign incorporated entity which is treated as an inverted domestic corporation as defined in this clause, or with any subsidiary of such an entity. The Secretary shall waive the prohibition with respect to any specific contract if the Secretary determines that the waiver is required in the interest of national security.

### **(b) Definitions. As used in this clause:**

*Expanded Affiliated Group* means an affiliated group as defined in section 1504(a) of the Internal Revenue Code of 1986 (without regard to section 1504(b) of such Code), except that section 1504 of such Code shall be applied by substituting 'more than 50 percent' for 'at least 80 percent' each place it appears.

*Foreign Incorporated Entity* means any entity which is, or but for subsection (b) of section 835 of the Homeland Security Act, 6 U.S.C. 395, would be, treated as a foreign corporation for purposes of the Internal Revenue Code of 1986.

*Inverted Domestic Corporation.* A foreign incorporated entity shall be treated as an inverted domestic corporation if, pursuant to a plan (or a series of related transactions)—

(1) The entity completes the direct or indirect acquisition of substantially all of the properties held directly or indirectly by a domestic corporation or substantially all of the properties constituting a trade or business of a domestic partnership;

(2) After the acquisition at least 80 percent of the stock (by vote or value) of the entity is held—

(i) In the case of an acquisition with respect to a domestic corporation, by former shareholders of the domestic corporation by reason of holding stock in the domestic corporation; or

(ii) In the case of an acquisition with respect to a domestic partnership, by former partners of the domestic partnership by reason of holding a capital or profits interest in the domestic partnership; and

(3) The expanded affiliated group which after the acquisition includes the entity does not have substantial business activities in the foreign country in which or under the law of which the entity is created or organized when compared to the total business activities of such expanded affiliated group.

*Person, domestic, and foreign* have the meanings given such terms by paragraphs

(1), (4), and (5) of section 7701(a) of the Internal Revenue Code of 1986, respectively.

**(c) Special rules.** The following definitions and special rules shall apply when determining whether a foreign incorporated entity should be treated as an inverted domestic corporation.

(1) *Certain stock disregarded.* For the purpose of treating a foreign incorporated entity as an inverted domestic corporation these shall not be taken into account in determining ownership:

(i) Stock held by members of the expanded affiliated group which includes the foreign incorporated entity; or

(ii) Stock of such entity which is sold in a public offering related to an acquisition described in section 835(b)(1) of the Homeland Security Act, 6 U.S.C. 395(b)(1).

(2) *Plan deemed in certain cases.* If a foreign incorporated entity acquires directly or indirectly substantially all of the properties of a domestic corporation or partnership during the 4-year period beginning on the date which is 2 years before the ownership requirements of subsection (b)(2) are met, such actions shall be treated as pursuant to a plan.

(3) *Certain transfers disregarded.* The transfer of properties or liabilities (including by contribution or distribution) shall be disregarded if such transfers are part of a plan a principal purpose of which is to avoid the purposes of this section.

(d) *Special rule for related partnerships.* For purposes of applying section 835(b) of the Homeland Security Act, 6 U.S.C. 395(b) to the acquisition of a domestic partnership, except as provided in regulations, all domestic partnerships which are under common control (within the meaning of section 482 of the Internal Revenue Code of 1986) shall be treated as a partnership.

(e) *Treatment of Certain Rights.*

(1) Certain rights shall be treated as stocks to the extent necessary to reflect the present value of all equitable interests incident to the transaction, as follows:

- (i) warrants;
- (ii) options;
- (iii) contracts to acquire stock;
- (iv) convertible debt instruments; and
- (v) others similar interests.

(2) Rights labeled as stocks shall not be treated as stocks whenever it is deemed appropriate to do so to reflect the present value of the transaction or to disregard transactions whose recognition would defeat the purpose of Section 835.

(f) *Disclosure.* The offeror under this solicitation represents that [Check one]:

it is not a foreign incorporated entity that should be treated as an inverted domestic corporation pursuant to the criteria of (HSAR) 48 CFR 3009.108-7001 through 3009.108-7003;

it is a foreign incorporated entity that should be treated as an inverted domestic corporation pursuant to the criteria of (HSAR) 48 CFR 3009.108-7001 through 3009.108-7003, but it has submitted a request for waiver pursuant to 3009.108-7004, which has not been denied; or

it is a foreign incorporated entity that should be treated as an inverted domestic corporation pursuant to the criteria of (HSAR) 48 CFR 3009.108-7001 through 3009.108-7003, but it plans to submit a request for waiver pursuant to 3009.108-7004.

(g) A copy of the approved waiver, if a waiver has already been granted, or the waiver request, if a waiver has been applied for, shall be attached to the bid or proposal.

(End of provision)

## 7.8. References

1. Pushkarsky et al, "Sub-parts-per-billion level detection of NO<sub>2</sub> using room-temperature quantum cascade lasers," PNAS, Vol. 103, p. 10846, July 2006.
2. Van Neste et al., "Standoff Spectroscopy of Surface Adsorbed Chemicals," Analytical Chemistry, Vol. 81, No. 5, p. 1952, March, 2009.

## **8. APPENDICES**

### **8.1. Appendix A - Sample DHS Explosives Division “Monthly Project Status Reporting Form”**

#### **8.1. Appendix A- Sample DHS S&T EXD “Monthly Project Status Reporting Form”**

**DHS S&T EXD PROGRAM**

**FY 2012 MONTHLY PROJECT STATUS REPORT FORM**

**CONTRACTOR: XXX**

**MONTHLY PROJECT STATUS REPORT # x**

**For: xxx 201X (Month/Yr.)**

**Date Submitted: xxx ,201X**

**(Must be submitted to DHS PM by 15th of following month) Deliverable:**

**Project Title: Project Name XXX**

**Purchase Request/IAA No.: XXX**

**Period of Performance: Contract Award Date  
(C.A.D.) [xx/xx/201X] + X Months =  
xx/xx/201X**

**Principal Investigator (PI): XXX**

**PI Email: XXX**

**Financial Contact: XXX**

**DHS Program Manager: XXX**

**DHS PM Email: XXX**

**PI Telephone No.: XXX**

**PI Facsimile No.: XXX**

**Financial Contact Telephone No.: XXX**

**DHS PM Telephone No.: XXX**

**DHS PM Facsimile No.: XXX**