U.S. DEPARTMENT OF DEFENSE
SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM

PROGRAM SOLICITATION FY 16.A

Closing Date: February 17, 2016, at 6:00 a.m. ET

Participating DoD Components:

- Department of the Army
- Department of the Navy
- Department of the Air Force
- Defense Health Program (DHP)
- Defense Threat Reduction Agency (DTRA)

IMPORTANT

Deadline for Receipt: Proposals must be **completely** submitted by **6:00 a.m.** ET, February 17, 2016. Proposals submitted after 6:00 a.m. will not be evaluated.

Classified proposals are not accepted under the DoD STTR Program.

Solicitation Changes:

As a result of program reauthorization, the solicitation has been extensively rewritten and follows the changes of the SBIR/STTR reauthorization. Please read the entire solicitation carefully prior to submitting your proposal.

Please go to http://sbir.gov/sites/default/files/sttr_pd_with_1-8-14_amendments_2-24-14.pdf to read the STTR Policy Directive issued by the Small Business Administration.

SBIR/STTR Updates and Notices: To be notified of SBIR/STTR opportunities and to receive e-mail updates on the DoD SBIR and STTR Programs, you are invited to subscribe by e-mailing sbiroutreach@bytecubed.com.

Help Desk: If you have questions about the Defense Department's SBIR or STTR Programs, please call the DoD SBIR/STTR Help Desk at 1-800-348-0787, or email to sbirhelp@bytecubed.com, or visit the DoD SBIR/STTR Web site, at http://www.acq.osd.mil/osbp/sbir/.

December 11, 2015: Solicitation issued for pre-release

January 11, 2016: DoD begins accepting proposals

February 17, 2016: Deadline for receipt of proposals at **6:00 a.m.** ET

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1.0 INTRODUCTION

The Army, Navy, Air Force, DHP and DTRA, hereafter referred to as DoD Components, invite small business firms and research institutions to jointly submit proposals under this solicitation for the Small Business Technology Transfer (STTR) Program. Firms with the capability to conduct research and development (R&D) in any of the defense-related topic areas described in Section 12.0 and to commercialize the results of that R&D are encouraged to participate.

The STTR Program, although modeled substantially on the Small Business Innovation Research (SBIR) Program, is a separate program and is separately financed. Subject to availability of funds, DoD Components will support high quality cooperative research and development proposals of innovative concepts to solve the listed defense-related scientific or engineering problems, especially those concepts that also have high potential for commercialization in the private sector. Partnerships between small businesses and Historically Black Colleges and Universities (HBCUs) or Minority Institutions (MIs) are encouraged, although no special preference will be given to STTR proposals from such offerors.

While the Phase II proposal process is covered in this announcement, **this solicitation is for Phase I proposals only**. All firms that are awarded Phase I contracts originating from this solicitation will be eligible to participate in Phases II and III. DoD Components will notify Phase I awardees of the Phase II proposal submission requirements. Submission of Phase II proposals will be in accordance with dates provided by individual Component instructions. The details on the due date, content, and submission requirements of the Phase II proposal will be provided by the awarding DoD Component either in the Phase I award or by subsequent notification. If a firm submits their Phase II proposal prior to the dates provided by the individual Components, it may be rejected without evaluation. **All SBIR/STTR Phase II awards made on topics from solicitations prior to FY13 will be conducted in accordance with the procedures specified in those solicitations.**

DoD is not obligated to make any awards under Phase I, Phase II, or Phase III, and all awards are subject to the availability of funds. DoD is not responsible for any monies expended by the proposer before award of any contract.

2.0 PROGRAM DESCRIPTION

2.1 Objectives

The objectives of the DoD STTR Program include stimulating technological innovation in DoD's Science and Technology Emphasis Areas, strengthening the role of small business in meeting DoD research and development needs, fostering and encouraging participation by minority and disadvantaged persons in technological innovation, and increasing the commercial application of DoD-supported research or research and development results.

The DoD STTR Program follows the policies and practices of the Small Business Administration (SBA) STTR Policy Directive updated on February 24, 2014. The guidelines presented in this solicitation incorporate and make use of the flexibility of the SBA STTR Policy Directive to encourage proposals based on scientific and technical approaches most likely to yield results important to the DoD and the private sector. The STTR Policy Directive is available at: http://sbir.gov/sites/default/files/sttr_pd_with_1-8-14_amendments_2-24-14.pdf.

2.2 Three Phase Program

The STTR Program is a three phase program. Phase I is to determine, to the extent possible, the scientific, technical, and commercial merit and feasibility of ideas submitted under the STTR Program. Phase I awards are typically $70,000 to $150,000 in size and the period of performance is generally from six to twelve months. Proposals should concentrate on research or research and development which will significantly contribute to proving the scientific and technical feasibility, and commercialization potential of the proposed effort, the successful completion of which is a prerequisite for further DoD support in Phase II. Proposers are encouraged to consider whether the research or research and development being proposed to DoD Components also has private sector potential, either for the proposed application or as a base for other applications.

Phase II awards will be made to firms on the basis of results of their Phase I effort and the scientific merit, technical merit, and commercialization potential of the Phase II proposal. Phase II awards are typically $500,000 to $1,000,000 in size and the period of performance is generally 24 months. Phase II is the principal research or research and development effort and is expected to produce a well-defined deliverable prototype. A Phase II contractor may receive up to one additional, sequential Phase II award for continued work on the project.

Under Phase III, the Proposer is required to obtain funding from either the private sector, a non-STTR Government source, or both, to develop the prototype into a viable product or non-R&D service for sale in military or private sector markets. STTR Phase III refers to work that derives from, extends, or completes an effort made under prior STTR funding agreements, but is funded by sources other than the STTR Program. Phase III work is typically oriented towards commercialization of STTR research or technology.

3.0 DEFINITIONS

The following definitions from the SBA STTR Policy Directive and the Federal Acquisition Regulation (FAR) apply for the purposes of this solicitation:

3.1 Commercialization

The process of developing products, processes, technologies, or services and the production and delivery (whether by the originating party or others) of the products, processes, technologies, or services for sale to or use by the Federal government or commercial markets.

3.2 Cooperative Research and Development

For the purposes of the STTR Program this means research and development conducted jointly by a small business concern and a research institution in which not less than 40% of the work is performed by the small business concern, and not less than 30% of the work is performed by the research institution. The percentage of work is usually measured by both direct and indirect costs; however, proposers should verify how it will be measured with their DoD contracting officer during contract negotiations.

3.3 Essentially Equivalent Work

Work that is substantially the same research, which is proposed for funding in more than one contract proposal or grant application submitted to the same Federal agency or submitted to two or more different Federal agencies for review and funding consideration; or work where a specific research objective and the research design for accomplishing the objective are the same or closely related to another proposal or award, regardless of the funding source.

3.4 Export Control

The International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, will apply to all projects with military or dual-use applications that develop beyond fundamental research, which is basic and applied research ordinarily published and shared broadly within the scientific community. More information is available at: http://www.pmddtc.state.gov/regulations_laws/itar.html.

NOTE: Export control compliance statements found in the individual component proposal instructions are not meant to be all inclusive. They do not remove any liability from the submitter to comply with applicable ITAR or EAR export control restrictions or from informing the Government of any potential export restriction as fundamental research and development efforts proceed.

3.5 Foreign Nationals

Foreign Nationals (also known as Foreign Persons) as defined by 22 CFR 120.16 means any natural person who is not a lawful permanent resident as defined by 8 U.S.C. § 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. § 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g., diplomatic missions).

“Lawfully admitted for permanent residence” means the status of having been lawfully accorded the privilege of residing permanently in the United States as an immigrant in accordance with the immigration laws, such status not having changed.

"Protected individual’’ means an individual who (A) is a citizen or national of the United States, or (B) is an alien who is lawfully admitted for permanent residence, is granted the status of an alien lawfully admitted for temporary residence under 8 U.S.C. § 1160(a) or 8 U.S.C. § 1255a(a)(1), is admitted as a refugee under 8 U.S.C. § 1157, or is granted asylum under Section 8 U.S.C. § 1158; but does not include (i) an alien who fails to apply for naturalization within six months of the date the alien first becomes eligible (by virtue of period of lawful permanent residence) to apply for naturalization or, if later, within six months after November 6, 1986, and (ii) an alien who has applied on a timely basis, but has not been naturalized as a citizen within 2 years after the date of the application, unless the alien can establish that the alien is actively pursuing naturalization, except that time consumed in the Service's processing the application shall not be counted toward the 2-year period.

3.6 Fraud, Waste, and Abuse

a. **Fraud** includes any false representation about a material fact or any intentional deception designed to deprive the United States unlawfully of something of value or to secure from the United States a benefit, privilege, allowance, or consideration to which an individual or business is not entitled.
b. **Waste** includes extravagant, careless or needless expenditure of Government funds, or the consumption of Government property, that results from deficient practices, systems, controls, or decisions.
c. **Abuse** includes any intentional or improper use of Government resources, such as misuse of rank, position, or authority or resources.

3.7 Funding Agreement

Any contract, grant, or cooperative agreement entered into between any Federal Agency and any small business concern for the performance of experimental, developmental, or research work, including products or services, funded in whole or in part by the federal Government. Only the contract method will be used by DoD Components for all STTR awards.

3.8 HBCU/MI - Historically Black Colleges and Universities and Minority Institutions

Listings for the Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) are available through the Department of Education Web site, http://www.ed.gov/about/offices/list/ocr/edlite-minorityinst.html.

3.9 Proprietary Information

Proprietary information is information that you provide which constitutes a trade secret, proprietary commercial or financial information, confidential personal information or data affecting the national security.

3.10 Research Institution

Any organization located in the United States that is:
a. A university.
b. A nonprofit institution as defined in Section 4(5) of the Stevenson-Wydler Technology Innovation Act of 1980.

c. A contractor-operated federally funded research and development center, as identified by the National Science Foundation in accordance with the government-wide Federal Acquisition Regulation issued in accordance with Section 35(c)(1) of the Office of Federal Procurement Policy Act. A list of eligible FFRDCs is available at: http://www.nsf.gov/statistics/nsf05306/.

3.11 Research or Research and Development

Any activity that is:

a. A systematic, intensive study directed toward greater knowledge or understanding of the subject studied.
b. A systematic study directed specifically toward applying new knowledge to meet a recognized need; or
c. A systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

3.12 Research Involving Animal Subjects

All activities involving animal subjects shall be conducted in accordance with DoDI 3216.01 "Use of Animals in DoD Programs," 9 C.F.R. parts 1-4 "Animal Welfare Regulations," National Academy of Sciences Publication "Guide for the Care & Use of Laboratory Animals," as amended, and the Department of Agriculture rules implementing the Animal Welfare Act (7 U.S.C. §§ 2131-2159), as well as other applicable federal and state law and regulation and DoD instructions. A listing of the cited regulations is available at:
http://www.acq.osd.mil/osbp/sbir/sb/resources/deskreference/quickref/researchanimalsubject.shtml.

"Animal use" protocols apply to all activities that meet any of the following criteria:

a. Any research, development, test, evaluation or training, (including experimentation) involving an animal or animals.
b. An animal is defined as any living or dead, vertebrate organism (non-human) that is being used or is intended for use in research, development, test, evaluation or training.
c. A vertebrate is a member of the subphylum Vertebrata (within the phylum Chordata), including birds and cold-blooded animals.

See DoDI 3216.01 for definitions of these terms and more information about the applicability of DoDI 3216.01 to work involving animals.

3.13 Research Involving Human Subjects

All research involving human subjects shall be conducted in accordance with 32 C.F.R. § 219 "The Common Rule," 10 U.S.C. § 980 "Limitation on Use of Humans as Experimental Subjects," and DoDD 3216.02 "Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research," as well as other applicable federal and state law and regulations, and DoD component guidance. Offerors must be cognizant of and abide by the additional restrictions and limitations imposed on the DoD regarding research involving human subjects, specifically as they regard vulnerable populations (DoDD 3216.02), recruitment of military research subjects (DoDD 3216.02), and informed consent and surrogate consent (10 U.S.C. § 980) and chemical and biological agent research (DoDD 3216.02). Food and Drug Administration regulation and policies may also apply. A listing of the cited regulations is available at:
http://www.acq.osd.mil/osbp/sbir/sb/resources/deskreference/quickref/researchhumansubject.shtml.

"Human use" protocols apply to all research that meets any of the following criteria:

a. Any research involving an intervention or an interaction with a living person that would not be occurring or would be occurring in some other fashion but for this research.
b. Any research involving identifiable private information. This may include data/information/specimens collected originally from living individuals (broadcast video, web-use logs, tissue, blood, medical or personnel records, health data repositories, etc.) in which the identity of the subject is known, or the identity may be readily ascertained by the investigator or associated with the data/information/specimens.

See DoDD 3216.02 for definitions of these terms and more information about the applicability of DoDI 3216.02 to research involving human subjects.

3.14 Research Involving Recombinant DNA Molecules

Any recipient performing research involving recombinant DNA molecules and/or organisms and viruses containing recombinant DNA molecules shall comply with the National Institutes of Health Guidelines for Research Involving Recombinant DNA Molecules, dated January 2011, as amended. The guidelines can be found at: http://oba.od.nih.gov/rdna/nih_guidelines_oba.html. Recombinant DNA is defined as (i) molecules that are constructed outside living cells by joining natural or synthetic DNA segments to DNA molecules that can replicate in living cells or (ii) molecules that result from the replication of those described in (i) above. A listing of the cited regulations is available at: http://www.acq.osd.mil/osbp/sbir/sb/resources/deskreference/quickref/researchrecombinantdna.shtml.

3.15 Small Business Concern (SBC)

A concern that meets the requirements set forth in 13 C.F.R. § 121.702 (available here).

3.16 Subcontract

A subcontract is any agreement, other than one involving an employer-employee relationship, entered into by an awardee of a funding agreement calling for supplies or services for the performance of the original funding agreement. This includes consultants.

3.17 United States

"United States" means the fifty states, the territories and possessions of the Federal Government, the Commonwealth of Puerto Rico, the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau, and the District of Columbia.

3.18 Women-Owned Small Business Concern

An SBC that is at least 51% owned by one or more women, or in the case of any publicly owned business, at least 51% of the stock is owned by women, and women control the management and daily business operations.

3.19 Performance Benchmarks for Progress Towards Commercialization

In accordance with the SBA Policy Directive Sec 4.(a)(3), DoD established a threshold for the application of a benchmark where it is applied only to Phase I applicants that have received more than twenty (20) awards over the prior five (5) fiscal years as determined by the Small Business Administration. The ratio of Phase II awards received to Phase I awards received during this period must be at least 0.25. Additional information on performance benchmarking for Phase I applicants can be found on www.sbir.gov.

3.20 Certified HUBZone Small Business Concern

An SBC that has been certified by SBA under the Historically Underutilized Business Zones (HUBZone) Program (13 C.F.R. § 126) as a HUBZone firm listed in the Dynamic Small Business Search (DSBS).

3.21 Service-Disabled Veteran-Owned Small Business (SDVOSB)

The Service-Disabled Veteran must have a service-connected disability that has been determined by the Department of Veterans Affairs or Department of Defense, and the SBC must meet the eligibility and business control requirements set forth in 13 C.F.R. § 125.8-125.10.

3.22 Federal Laboratory

As defined in 15 U.S.C. §3703, means any laboratory, any federally funded research and development center (FFRDC), or any center established under 15 U.S.C. §§ 3705 & 3707 that is owned, leased, or otherwise used by a Federal agency and funded by the Federal Government, whether operated by the Government or by a contractor.

3.23 Principal Investigator

The principal investigator/project manager is the one individual designated by the applicant to provide the scientific and technical direction to a project supported by the funding agreement.

For both Phase I and Phase II, the primary employment of the principal investigator must be with the small business firm or research institution at the time of award and during the conduct of the proposed project. Primary employment means that more than one-half of the principal investigator's time is spent in the employ of the small business firm or research institution. This precludes full-time employment with another organization. Occasionally, deviations from this requirement may occur, and must be approved in writing by the contracting officer after consultation with the agency SBIR/STTR Program Manager/Coordinator. Further, a small business firm or research institution may replace the principal investigator on an SBIR/STTR Phase I or Phase II award, subject to approval in writing by the contracting officer.

4.0 PROPOSAL FUNDAMENTALS

Unless otherwise specified, Section 4 applies to both Phase I and Phase II.

4.1 Introduction

The proposal must provide sufficient information to demonstrate to the evaluator(s) that the proposed work represents an innovative approach to the investigation of an important scientific or engineering problem and is worthy of support under the stated criteria. The proposed research or research and development must be responsive to the chosen topic, although it need not use the exact approach specified in the topic. Anyone contemplating a proposal for work on any specific topic should determine that:

(a) the technical approach has a reasonable chance of meeting the topic objective,
(b) this approach is innovative, not routine, with potential for commercialization and
(c) the proposing firm has the capability to implement the technical approach, i.e., has or can obtain people and equipment suitable to the task.

4.2 Offeror Eligibility and Performance Requirements

a. Each proposer must qualify as a small business for research or research and development purposes and certify to this on the Cover Sheet of the proposal.

b. A minimum of 40% of each STTR project must be carried out by the small business concern and a minimum of 30% of the effort performed by the research institution, as defined in Section 3.10. The percentage of work is usually measured by both direct and indirect costs, although proposers planning to subcontract a significant fraction of their work should verify how it will be measured with their Component Contracting Officer during contract negotiations.

c. For both Phase I and II, the principal investigator must be primarily employed with the small business firm or the research institution. At the time of award of a Phase I or Phase II contract, the small business concern must have at least one employee in a management position whose primary employment is with the small business and who is not also employed by the research institution. Primary employment means that more than one half (50%) of the employee's time is spent with the small business. Primary employment with a small business concern precludes full-time employment at another organization.

d. For both Phase I and Phase II, all research or research and development work must be performed by the small business concern and its subcontractors in the United States.

e. Proposers with prior SBIR/STTR awards must meet two benchmark requirements for Progress Towards Commercialization as determined by the Small Business Administration (SBA) on June 1 each year.

(1) For all proposers with greater than 20 Phase I awards over the past five fiscal years excluding the most recent year (currently FY 2009-2013), the ratio of Phase II awards to Phase I awards must be at least 0.25.

(2) For all proposers with greater than 15 Phase II awards over the last ten fiscal years excluding the last two years (currently FY 2003-2012), the proposer must have received, to date, an average of at least $100,000 of sales and/or investments per Phase II award received, or have

received a number of patents resulting from the SBIR/STTR work equal to or greater than 15% of the number of Phase II awards received during the period.

Companies that fail to meet either of these benchmarks will not be eligible to receive a Phase I award for a period of one year from that June 1 determination by SBA.

f. A small business concern must negotiate a written agreement between the small business and the research institution allocating intellectual property rights and rights to carry out follow-on research, development, or commercialization (see Model Agreement for the Allocation of Rights).

Deviations from the requirements in this section must be approved in writing by the Component Contracting Officer (during contract negotiations).

In addition, SBA has posted a Guide to SBIR/STTR Program Eligibility to help small businesses understand program eligibility requirements, determine if they will be eligible at the time of award, and accurately complete necessary certifications.

4.3 Joint Ventures

Joint ventures and limited partnerships are permitted, provided that the entity created qualifies as a small business in accordance with the Small Business Act, 15 U.S.C. § 631.

4.4 Majority Ownership in Part by Multiple Venture Capital, Hedge Fund, and Private Equity Firms

Small businesses that are owned in majority part by multiple venture capital operating companies (VCOCs), hedge funds, or private equity funds are ineligible to submit applications or receive awards for opportunities in this solicitation.

4.5 Conflicts of Interest

Contract awards to firms owned by or employing current or previous Federal Government employees could create conflicts of interest for those employees which may be a violation of federal law. Proposing firms should contact the cognizant Ethics Counselor from the employee's Government agency for further guidance if in this situation.

4.6 Classified Proposals

Classified proposals are not accepted under the DoD STTR Program. If topics will require classified work during Phase II, the proposing firm must have a facility clearance in order to perform the Phase II work. For more information on facility and personnel clearance procedures and requirements, please visit the Defense Security Service Web site at: http://www.dss.mil/index.html.

4.7 Research Involving Human Subjects

All research involving human subjects, to include use of human biological specimens and human data, shall comply with the applicable federal and state laws and agency policy/guidelines for human subject protection. (see Section 3.13)

Institutions to be awarded funding for research involving human subjects must provide documentation of a current Federal Assurance of Compliance with Federal regulations for human subject protection, for

example a Department of Health and Human Services, Office for Human Research Protections Federalwide Assurance (http://www.hhs.gov/ohrp). Additional Federal Assurance documentation may also be requested by the awarding DoD Component. All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved in human subjects research must provide documentation of completing appropriate training for the protection of human subjects. Institutions proposing to conduct human subject research that meets one of the exemption criteria in 32 CFR 219.101 are not required to have a Federal Assurance of Compliance.

If selected, institutions must also provide documentation of Institutional Review Board (IRB) approval or a determination from an appropriate official in the institution that the work meets one of the exemption criteria with 32 CFR 219. As part of the IRB review process, evidence of appropriate training for all investigators should accompany the protocol. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection and data analysis.

The amount of time required for the IRB to review and approve the protocol will vary depending on such things as the IRB's procedures, the complexity of the research, the level of risk to study participants and the responsiveness of the Investigator. The average IRB approval process can last between one and three months. Once the IRB has approved the research, the awarding DoD Component will review the protocol and the IRB's determination to ensure that the research will be conducted in compliance with DoD and DoD Component policies. The DoD review process can last between three to six months. Ample time should be allotted to complete both the IRB and DoD approval processes prior to recruiting subjects. **No funding can be used towards human subjects research until ALL approvals are granted.**

4.8 Research Involving Animal Subjects

All research, development, testing, experimentation, education or training involving the use of animals shall comply with the applicable federal and agency rules on animal acquisition, transport, care, handling, and use (see Section 3.12).

For submissions containing animal use, proposals should briefly describe plans for their Institutional Animal Care and Use Committee (IACUC) review and approval.

All Recipients must receive their IACUC's approval as well as secondary or headquarters-level approval by a DoD veterinarian who is trained or experienced in laboratory animal medicine and science. **No animal research may be conducted using DoD funding until all the appropriate DoD office(s) grant approval.**

4.9 Research Involving Recombinant DNA Molecules

All research involving recombinant DNA molecules shall comply with the applicable federal and state law, regulation and any additional agency guidance. Research shall be approved by an Institutional Biosafety Committee.

4.10 Debriefing

An unsuccessful offeror that submits a written request for a debriefing within 30 days of being notified that its proposal was not selected for award will be provided a debriefing. Please note that Component-unique debriefing processes exist; in those cases, the Component debriefing instructions supersede instructions provided here. The written request should be sent to the DoD organization that provided such notification to the offeror. Be advised that an offeror that fails to submit a timely request is not entitled to

a debriefing, although untimely debriefing requests may be accommodated at the Government's discretion.

4.11 Solicitation Protests

Interested parties may have the right to protest this solicitation by filing directly with the agency by serving the Contracting Officer (listed below) with the protest, or by filing with the Government Accountability Office (GAO). If the protest is filed with the GAO, a copy of the protest shall be received in the office designated below within one day of filing with the GAO. The protesting firm shall obtain written and dated acknowledgment of receipt of the protest from:

SBIR/STTR Contracting Office
WHS/Acquisition Directorate
1155 Defense Pentagon
Washington, DC 20301-1155

Mr. James L. Colachis
SBIR/STTR Solicitation Contracting Officer
E-mail: james.l.colachis.civ@mail.mil
Mr. Khalil R. Mack
SBIR/STTR Solicitation Contracting Specialist
E-mail: khalil.r.mack.civ@mail.mil

4.12 Selection and Award Protests

Protest of Phase I or a Phase II selection shall be directed to the contracting officer from the awarding DoD Component or by filing with the Government Accountability Office (GAO). If the protest is filed with the GAO, a copy of the protest shall be received in the office of the DoD Component within one day of filing with the GAO. Protests of the small business status of a selected firm may also be made to the Small Business Administration.

4.13 Phase I Award Information

a. **Number of Phase I Awards**. The number of Phase I awards will be consistent with the Component's RDT&E budget, the number of anticipated awards for interim Phase I modifications, and the number of anticipated Phase II contracts. No Phase I contracts will be awarded until evaluation of all qualified proposals for a specific topic is completed.

b. **Type of Contract**. Each Phase I proposal selected for award will be funded under negotiated contracts or purchase orders and will include a reasonable fee or profit consistent with normal profit margins provided to profit-making firms for R/R&D work. Firm fixed price, purchase order, or cost plus fixed fee type contracts will be used for all Phase I projects.

c. **Dollar Value**. The Phase I contract value varies among the DoD Components; it is therefore important for proposing firms to understand Section 5.2 "Summary of Component Programs" for the Component to which they are applying for any specific instructions regarding award size.

d. Timing. The SBA STTR Policy Directive, Section 7(c)(1)(ii), states that agencies should issue the Phase I award no more than 180 days after the closing date of the solicitation. However, across DoD, the median time between the date that the STTR solicitation closes and the award of a Phase I

contract is approximately four months. Normally proposing firms will be notified of selection or non-selection status for a Phase I award within 90 days of the closing date for this solicitation.

4.14 Phase II Award Information

a. **Number of Phase II Awards**. The number of Phase II awards will depend upon the results of the Phase I efforts and the availability of funds. Historically, approximately 40% of the Phase I awards will result in Phase II projects. This is merely an advisory estimate and the Government may make no awards, fewer awards, or more awards.

b. **Type of Contract**. Each Phase II proposal selected for award will be funded under a negotiated contract and will include a reasonable fee or profit consistent with normal profit margins provided to profit-making firms for R/R&D work.

c. **Average Dollar Value**. The typical size of award varies across the DoD Components. Information on award size will be provided in DoD Component instructions for submission of Phase II proposals.

d. **Timing**. Across DoD, the median time between DoD's receipt of a Phase II proposal and the award of a Phase II contract is six months when the firm has an adequate accounting system.

4.15 Questions about this Solicitation and Solicitation Topics

a. **General STTR Questions/Information**.

(1) **Help Desk.** The DoD SBIR/STTR Help Desk is prepared to address general questions about this solicitation, the proposal preparation and electronic submission process and other program-related areas. The Help Desk may be contacted from 9:00 a.m. to 6:00 p.m. ET Monday through Friday at:

- Phone: 1-800-348-0787
- E-mail: sbirhelp@bytecubed.com

(2) **Web sites**. The DoD SBIR/STTR Program Web site at http://www.acq.osd.mil/osbp/sbir offers electronic access to SBIR/STTR solicitations, answers to commonly asked questions, sample SBIR/STTR proposals, model SBIR/STTR contracts, abstracts of ongoing SBIR/STTR projects, the latest updates on the SBIR/STTR Program, hyperlinks to sources of business assistance and financing, and other useful information.

The new DoD SBIR/STTR Portal at https://sbir.defensebusiness.org/ mirrors the most frequently accessed information on the DoD SBIR/STTR Web site, including:

- SBIR and STTR Solicitations
- Topics Search engine
- Technical Q&A through the SBIR/STTR Interactive Topic Information System (SITIS)
- Electronic Proposal Submission for Phase I and Phase II Proposals. Firms submitting through this site for the first time will be asked to register.

(3) **Tutorial.** An on-line tutorial on how to prepare and submit a proposal to the DoD SBIR/STTR Program is available at the SBIR/STTR Web Portal at

https://sbir.defensebusiness.org/. It is a practical guide for beginners and a quick reference for more experienced participants.

(4) **SBIR/STTR Updates and Notices:** To be notified of SBIR/STTR opportunities and to receive e-mail updates on the DoD SBIR and STTR Programs, you are invited to subscribe by e-mailing sbiroutreach@bytecubed.com.

b. **General Questions about a DoD Component**. General questions pertaining to a particular DoD Component should be submitted in accordance with the instructions given at the beginning of that Component's topics, in Section 12.0 of this solicitation.

c. **Direct Contact with Topic Authors.** From **December 11, 2015 – January 10, 2016**, this solicitation is issued for Pre-Release with the names of the topic authors and their phone numbers and e-mail addresses. During the pre-release period, proposing firms have an opportunity to contact topic authors by telephone or e-mail to ask technical questions about specific solicitations topics. Questions should be limited to specific information related to improving the understanding of a particular topic's requirements. Proposing firms may not ask for advice or guidance on solution approach and you may not submit additional material to the topic author. If information provided during an exchange with the topic author is deemed necessary for proposal preparation, that information will be made available to all parties through SITIS (SBIR/STTR Interactive Topic Information System) and an amendment to the solicitation. After this period questions must be asked through SITIS as described below.

d. **SITIS.** Once DoD begins accepting proposals on **January 11, 2016**, no further direct contact between proposers and topic authors is allowed. However, proposers may submit written questions through SITIS at https://sbir.defensebusiness.org/. In SITIS, the questioner and respondent remain anonymous and all questions and answers are posted electronically for general viewing. Questions are limited to technical information related to improving the understanding of a particular topic's requirements. Any other questions, such as those asking for advice or guidance on solution approach, will not receive a response. Proposing firms may locate the topic to which they want to submit a technical question by using the SITIS Quick Scan feature on this Web site. Then, using the form at the bottom of the topic description page, enter and submit the question. Answers are generally posted within seven working days of question submission. (Answers will also be e-mailed directly to the inquirer if the inquirer provides an e-mail address.)

The SITIS service for this solicitation opens on **December 11, 2015,** and closes to new questions on **February 3, 2016**. All questions and answers will be posted from **December 11, 2015 – February 16, 2016**. Once the solicitation closes to proposal submission, no communication of any kind with the topic author or SITIS regarding your submitted proposal is allowed.

Proposing firms are advised to monitor SITIS during the solicitation period for questions and answers.

4.16 Registrations and Certifications

Proposing firms must be registered in the DoD Submission system at: https://sbir.defensebusiness.org/ in order to prepare and submit proposals.

Before the DoD Components can award a contract, proposing firms must be registered in the System for Award Management (SAM). If you were previously registered in CCR, your information has been

transferred to SAM. However, it is in the firm's interest to visit SAM and ensure that all of the firm's data is up to date from SAM and other databases to avoid delay in award. SAM replaced the Central Contractor Registration (CCR), Online Representations and Certifications Application (ORCA), and the Excluded Parties List System (EPLS). SAM allows firms interested in conducting business with the federal government to provide basic information on business capabilities and financial information. To register, visit www.sam.gov.

Follow instructions found on the SAM Web site on how to obtain a Commercial and Government Entry (CAGE) code and Data Universal Numbering System (DUNS) number. Once a CAGE code and DUNS number are obtained, update the firm's profile on the DoD Submission Web site at https://sbir.defensebusiness.org/ to automatically print these on future proposals to expedite the award process.

In addition to the standard federal and DoD procurement certifications, the SBA SBIR/STTR Policy Directive requires the collection of certain information from firms at time of award and during the award life cycle. Each firm must provide this additional information at the time of the Phase I and Phase II award, prior to final payment on the Phase I award, prior to receiving 50% of the total award amount for a Phase II award, and prior to final payment on the Phase II award.

4.17 Promotional Materials

Promotional and non-project related discussion is discouraged and additional information provided via Universal Resource Locator (URL) links or on computer disks, CDs, DVDs, video tapes or any other medium will not be accepted or considered in the proposal evaluation.

4.18 Prior, Current, or Pending Support of Similar Proposals or Awards

IMPORTANT -- While it is permissible, with proposal notification, to submit identical proposals or proposals containing a significant amount of essentially equivalent work (see Section 3.3) for consideration under numerous federal program solicitations, it is unlawful to enter into contracts or grants requiring essentially equivalent effort. If there is any question concerning prior, current, or pending support of similar proposals or awards, it must be disclosed to the soliciting agency or agencies as early as possible. See Section 5.4.c(11).

4.19 Fraud and False Statements

Knowingly and willfully making any false, fictitious, or fraudulent statements or representations may be a felony under the Federal Criminal False Statement Act (18 U.S.C. Sec 1001), punishable by a fine of up to $10,000, up to five years in prison, or both.

The Department of Defense, Office of Inspector General Hotline ("Defense Hotline") is an important avenue for reporting fraud, waste, abuse, and mismanagement within the Department of Defense. The Office of Inspector General operates this hotline to receive and investigate complaints or information from contractor employees, DoD civilians, military service members and public citizens. Individuals who wish to report fraud, waste or abuse may contact the Defense Hotline at (800) 424-9098 between 8:00 AM and 5:00 PM Eastern Time, or visit http://www.dodig.mil/hotline/submit_complaint.htm to submit a complaint. Mailed correspondence should be addressed to the Defense Hotline, The Pentagon, Washington, DC 20301-1900, or e-mail addressed to hotline@dodig.mil.

4.20 Adequate Accounting System

In order to reduce risk to the small business and avoid potential contracting delays, it is suggested that companies interested in pursuing Phase II STTR contracts and other contracts of similar size with the Department of Defense (DoD), have an adequate accounting system per General Accepted Accounting Principles (GAAP), Generally Accepted Government Auditing Standards (GAGAS), Federal Acquisition Regulation (FAR) and Cost Accounting Standards (CAS) in place. The accounting system will be audited by the Defense Contract Audit Agency (DCAA). DCAA's requirements and standards are available at the following DCAA Website: http://www.dcaa.mil. Click on "Publications", and then click on "Information for Contractors."

4.21 State and Other Assistance Available

Many states have established programs to provide services to those small business firms and individuals wishing to participate in the Federal STTR Program. These services vary from state to state, but may include:

- Information and technical assistance;
- Matching funds to STTR recipients;
- Assistance in obtaining Phase III funding.

Contact your State STTR Support office at http://www.sbir.gov/state-contacts for further information. Small Businesses may seek general administrative guidance from small and disadvantaged business utilization specialists located in various Defense Contract Management (http://www.sbir.gov/sites/default/files/elig_size_compliance_guide.pdf) activities throughout the continental United States.

4.22 Discretionary Technical Assistance

Components may have agreements with vendors to provide technical assistance to SBIR or STTR awardees to assist in:

- Making better technical decisions on SBIR/STTR projects
- Solving technical problems that arise during SBIR/STTR projects;
- Minimizing technical risks associated with SBIR/STTR projects; and
- Commercializing the SBIR/STTR product or process.

Each agency may provide up to $5,000 of SBIR or STTR funds for the technical assistance described above per year for each Phase I award and each Phase II award to these vendors for direct support to SBIR and STTR awardees.

Alternatively, an SBIR or STTR firm may directly acquire the technical assistance services described above and not through the vendor selected by the Components. Firms must request this authority from the agency and clearly identify the need for assistance (purpose and objective of required assistance), provide details on the provider of the assistance (name and point of contact for performer) and why the proposed DTA provider is uniquely skilled to conduct the work (specific experience in providing the assistance proposed), and the cost of the required assistance (costs and hours proposed or other details on arrangement). This information must be included in the Explanatory Material section of the firm's cost proposal specifically identified as "Discretionary Technical Assistance."

If the awardee demonstrates this requirement sufficiently, the agency shall permit the awardee to acquire such technical assistance itself, in an amount up to $5,000 per year for each Phase I award and each Phase

II award, as an allowable cost of the SBIR or STTR award. The per year amount will be in addition to the award and is not subject to any profit or fee by the requesting (SBIR/STTR) firm and is inclusive of all indirect rates.

The DTA provider may not be the requesting firm, an affiliate of the requesting firm, an investor of the requesting firm, or a subcontractor or consultant of the requesting firm otherwise required as part of the paid portion of the research effort (e.g. research partner or research institution).

Failure to include the required information in the Phase I and/or Phase II proposal will result in the request for discretionary technical assistance being disapproved. Requests for DTA funding outside of the Phase I or Phase II proposal submission will not be considered. If the firm is approved for DTA from a source other than that provided by the agency, the firm may not be eligible for the technical assistance services normally provided by those organizations.

Contact the relevant Component SBIR/STTR Program Office for any other considerations.

5.0 PHASE I PROPOSAL

5.1 Introduction

This solicitation and the electronic submission site are designed to reduce the time and cost required to prepare a formal proposal. Since the guidance on allowable content may vary by Component, it is the proposing firm's responsibility to consult the Component-specific instruction for detailed guidance.

A complete proposal consists of four volumes:

Volume 1: Proposal Cover Sheet
Volume 2: Technical Volume
Volume 3: Cost Volume
Volume 4: Company Commercialization Report

The DoD SBIR/STTR Submission Web site provides a structure for providing these four sections but the proposing firm must begin entering its proposal by providing information for the Proposal Cover Sheet. After the firm saves the draft Proposal Cover Sheet, the system will assign a proposal number. **Please make note of this proposal number and print it for future reference**.

There is no "Submit" button. All proposals in the system at solicitation close will automatically be submitted. The proposer may add the remaining volumes or edit the Proposal Cover Sheet until solicitation close. It is the proposing firm's responsibility to verify that the Technical Volume does not exceed the page limit after upload to the DoD SBIR/STTR Submission Web site by clicking on the "Verify Technical Volume" icon. Refer to Component-specific instructions for an explanation of how a technical volume in excess of 20 pages is handled.

5.2 Summary of Component Programs

DoD Component	Technical Volume Page Limit	Price	Duration	Phase I Option
Army	20 pages	Base NTE $150,000	6 Month Base	Not Applicable
Navy	20 pages	Base NTE $80,000 + Phase I Option NTE $70,000	7 Month Base + 6 Month Phase I Option	Required
Air Force	20 pages	Base NTE $150,000	9 Month Base	Not Applicable
DHP	20 pages	Base NTE $150,000	6 Month Base	Not Applicable
DTRA	20 pages	Base NTE $150,000	7 Month Base	Not Applicable

*NTE – Not-to-Exceed

5.3 Marking Proprietary Proposal Information

Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall:

(1) Mark the first page of each Volume of the proposal submission with the following legend:

"This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed-in whole or in part-for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of – or in connection with – the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in pages [insert numbers or other identification of sheets]"; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

"Use or disclosure of data contained on this page is subject to the restriction on the first page of this volume."

The DoD assumes no liability for disclosure or use of unmarked data and may use or disclose such data for any purpose.

Restrictive notices notwithstanding, proposals and final reports submitted through the DoD SBIR/STTR Submission Web site may be handled, for administrative purposes only, by support contractors. All support contractors are bound by appropriate non-disclosure agreements.

5.4 Phase I Proposal Instructions

a. **Proposal Cover Sheet (Volume One)**

On the DoD Submission Web site at https://sbir.defensebusiness.org/, prepare the Proposal Cover Sheet. The Cover Sheet must include a brief technical abstract of no more than 200 words that describes the proposed R&D project with a discussion of anticipated benefits and potential commercial applications. **Do not include proprietary or classified information in the Proposal Cover Sheet**. If your proposal is selected for award, the technical abstract and discussion of anticipated benefits will be publicly released on the Internet. Once the Cover Sheet is saved, the system will assign a proposal number. You may edit the cover sheet as often as necessary until the solicitation closes.

b. **Format of Technical Volume (Volume Two)**

(1) Type of file: The Technical Volume must be a single Portable Document Format (PDF) file, including graphics. Perform a virus check before uploading the Technical Volume file. If a virus is detected, it may cause rejection of the proposal. **Do not lock or encrypt the uploaded file.**

(2) Length: The Technical Volume is limited to 20 pages.

(3) Layout: Number all pages of your proposal consecutively. Those who wish to respond must submit a direct, concise, and informative research or research and development proposal of no more than 20 pages (no type smaller than 10-point on standard 8-1/2" x 11" paper with one inch margins). The header on each page of the technical volume should contain your company name, topic number, and proposal number assigned by the DoD SBIR/STTR Submission Web site when the Cover Sheet was created. The header may be included in the one-inch margin.

c. **Content of the Technical Volume (Volume Two)**

The Technical Volume should cover the following items in the order given below.

(1) **Identification and Significance of the Problem or Opportunity**. Define the specific technical problem or opportunity addressed and its importance.

(2) **Phase I Technical Objectives**. Enumerate the specific objectives of the Phase I work, including the questions the research and development effort will try to answer to determine the feasibility of the proposed approach.

(3) **Phase I Statement of Work (including Subcontractors' Efforts)**.

(a) Provide an explicit, detailed description of the Phase I approach. If a Phase I option is required or allowed by the Component, describe appropriate research activities which would commence at the end of Phase I should the Component elect to exercise the option. The Statement of Work should indicate what tasks are planned, how and where the work will be conducted, a schedule of major events, and the final product(s) to be delivered. The Phase I effort should attempt to determine the technical feasibility of the proposed concept. The methods planned to achieve each objective or task should be discussed explicitly and in detail. This section should be a substantial portion of the Technical Volume section.

(b) This solicitation may contain topics that have been identified by the Program Manager as research or activities involving Human /Animal Subjects and/or Recombinant DNA. In the event that Phase I performance includes performance of these kinds of research or activities, please identify the applicable protocols and how those protocols will be followed during Phase I. Please note that funds cannot be released or used on any portion of the project involving human/animal subjects or recombinant DNA research or activities until all of the proper approvals have been obtained. (See Sections 4.7- 4.9.)

(4) **Related Work**. Describe significant activities directly related to the proposed effort, including any conducted by the principal **investigator**, the proposing firm, consultants, or others. Describe how these activities interface with the proposed project and discuss any planned coordination with outside sources. The technical volume must persuade reviewers of the proposer's awareness of the state-of-the-art in the specific topic. Describe previous work not directly related to the proposed effort but similar. Provide the following: (1) short description, (2) client for which work was performed (including individual to be contacted and phone number), and (3) date of completion.

(5) **Relationship with Future Research or Research and Development**.

(a) State the anticipated results of the proposed approach if the project is successful.

(b) Discuss the significance of the Phase I effort in providing a foundation for Phase II research or research and development effort.

(c) Identify the applicable clearances, certifications and approvals required to conduct Phase II testing and outline the plan for ensuring timely completion of said authorizations in support of Phase II research or research and development effort.

(6) **Commercialization Strategy**. Describe in approximately one page your company's strategy for commercializing this technology in DoD, other Federal Agencies, and/or private sector markets. Provide specific information on the market need the technology will address and the size of the market. Also include a schedule showing the quantitative commercialization results from this STTR

project that your company expects to achieve. The Commercialization Readiness Program has been extended to STTR.

(7) **Key Personnel**. Identify key personnel who will be involved in the Phase I effort including information on directly related education and experience. A concise technical resume of the principal investigator, including a list of relevant publications (if any), must be included (Please do not include Privacy Act Information). All resumes will count toward the applicable page limitation.

(8) **Foreign Citizens**. Identify any foreign citizens or individuals holding dual citizenship expected to be involved on this project as a direct employee, subcontractor, or consultant. For these individuals, please specify their country of origin, the type of visa or work permit under which they are performing and an explanation of their anticipated level of involvement on this project. You may be asked to provide additional information during negotiations in order to verify the foreign citizen's eligibility to participate on a STTR contract. Supplemental information provided in response to this paragraph will be protected in accordance with the Privacy Act (5 U.S.C. 552a), if applicable, and the Freedom of Information Act (5 U.S.C. 552(b)(6)).

(9) **Facilities/Equipment**. Describe available instrumentation and physical facilities necessary to carry out the Phase I effort. Justify equipment purchases in this section and include detailed pricing information in the Cost Volume. State whether or not the facilities where the proposed work will be performed meet environmental laws and regulations of federal, state (name), and local Governments for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.

(10) **Subcontractors/Consultants**. Involvement of a research institution in the project is required and the institution should be identified and described according to the Cost Breakdown Guidance. A minimum of 40% of the research and/or analytical work in Phase I, as measured by direct and indirect costs, must be carried out by the proposing firm, unless otherwise approved in writing by the Contracting Officer. STTR efforts may include subcontracts with Federal Laboratories and Federally Funded Research and Development Centers (FFRDCs). A waiver is no longer required for the use of federal laboratories and FFRDCs; however, proposers must certify their use of such facilities on the Cover Sheet of the proposal.

(11) **Prior, Current, or Pending Support of Similar Proposals or Awards**. If a proposal submitted in response to this solicitation is substantially the same as another proposal that was funded, is now being funded, or is pending with another Federal Agency, or another or the same DoD Component, you must reveal this on the Proposal Cover Sheet and provide the following information:

(a) Name and address of the Federal Agency(s) or DoD Component to which a proposal was submitted, will be submitted, or from which an award is expected or has been received.
(b) Date of proposal submission or date of award.
(c) Title of proposal.
(d) Name and title of principal investigator for each proposal submitted or award received.
(e) Title, number, and date of solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received.
(f) If award was received, state contract number.
(g) Specify the applicable topics for each STTR proposal submitted or award received.

Note: If this does *not apply, state in the proposal "No prior, current, or pending support for proposed work."*

d. **Content of the Cost Volume (Volume Three)**. Complete the Cost Volume in the format shown in the Cost Breakdown Guidance by using the on-line cost volume form on the DoD SBIR/STTR Submission Web site. Some items in the Cost Breakdown Guidance may not apply to the proposed project. If that is the case, there is no need to provide information on each and every item. What matters is that enough information be provided to allow us to understand how you plan to use the requested funds if a contract is awarded.

(1) List all key personnel by name as well as by number of hours dedicated to the project as direct labor.

(2) While special tooling and test equipment and material cost may be included under Phases I, the inclusion of equipment and material will be carefully reviewed relative to need and appropriateness for the work proposed. The purchase of special tooling and test equipment must, in the opinion of the Component Contracting Officer, be advantageous to the Government and should be related directly to the specific topic. These may include such items as innovative instrumentation or automatic test equipment. Title to property furnished by the Government or acquired with Government funds will be vested with the DoD Component, unless it is determined that transfer of title to the contractor would be more cost effective than recovery of the equipment by the DoD Component.

(3) Cost for travel funds must be justified and related to the needs of the project.

(4) Cost sharing is permitted for proposals under this solicitation; however, cost sharing is not required nor will it be an evaluation factor in the consideration of a Phase I proposal.

(5) A Phase I Option (if applicable) should be fully costed separately from the Phase I (base) approach. Additional cost volume information may be required at the end of your technical volume (see Component Instructions, Section 11.0).

(6) All subcontractor costs and consultant costs must be detailed at the same level as prime contractor costs in regards to labor, travel, equipment, etc. Provide detailed substantiation of subcontractor costs in your cost proposal. Enter this information in the Explanatory Material section of the on-line cost proposal form.

When a proposal is selected for award, you must be prepared to submit further documentation to the Component Contracting Officer to substantiate costs (e.g., an explanation of cost estimates for equipment, materials, and consultants or subcontractors). For more information about cost proposals and accounting standards, see the DCAA publication called "Information for Contractors" available at www.dcaa.mil.

e. **Company Commercialization Report (Volume Four).** The Company Commercialization Report is Report is the fourth section of a complete proposal package. The Company Commercialization Report is prepared through the DoD Submission Web site (https://sbir.defensebusiness.org/). A Company Commercialization Report is required even if the proposing firm has not previously received SBIR or STTR awards. Follow the instructions on the web site and enter the quantitative commercialization results of your firm's prior Phase II projects. Include the items listed below as well as other information relative to your firm's commercialization track record.

a. Sales revenue from new products and non-R&D services resulting from Phase II technology;
b. Additional investment from sources other than the federal SBIR/STTR Program in activities that further the development and/or commercialization of Phase II technology;

c. Whether the Phase II technology has been used in a fielded DoD system or acquisition program and, if so, which system or program;
d. The number of patents resulting from the contractor's participation in the SBIR/STTR Program;
e. Growth in number of firm employees; and
f. Whether the firm has completed an initial public offering of stock (IPO) resulting, in part, from a Phase II project.

All prior DoD and non-DoD Phase II projects must be reported, regardless of whether the project has any commercialization to date.

The Web site will compare these results to the historical averages for the DoD STTR Program to calculate a Commercialization Achievement Index (CAI) value. Only firms with four or more Phase II projects that were awarded at least two years prior to this solicitation will receive a CAI score; otherwise the CAI is not applicable (see the Company Commercialization Report section of the DoD Submission Web site for more details). Firms with a CAI at the 20th percentile or below will be rated no higher than "Marginal" for this factor. This report shall only be prepared once and submitted with all your proposals for this solicitation. A report showing that a firm has received no prior Phase II awards will not affect the firm's ability to obtain an STTR award.

Additional explanatory material relating to the firm's record of commercializing its prior STTR or STTR projects may be included in the Commercialization Track Record Narrative section of the Company Commercialization Report. Examples of the additional information include: commercialization successes in government or private sector markets that are not fully captured in the quantitative results (e.g. commercialization resulting from your firm's prior Phase I projects); any mitigating factors that could account for low commercialization; and recent changes in the firm's organization or personnel designed to increase the firm's commercialization success.

5.5 Phase I Proposal Checklist

The Offeror's proposal should be in accordance with Section 5.0. A complete proposal consists of four volumes:

- Volume 1: Proposal Cover Sheet
- Volume 2: Technical Volume
- Volume 3: Cost Volume
- Volume 4: Company Commercialization Report

Those responding to this solicitation should note the proposal preparation tips listed below:

a. Read and follow all instructions contained in this solicitation, including the instructions in Section 12.0 of the DoD Component to which the firm is applying.
b. Register the firm on the secure, password-protected DoD Submission Web site at https://sbir.defensebusiness.org/ and, as instructed on the Web site, prepare the firm's submission.
c. Register the firm with SBA's Company Registry at www.sbir.gov and provide the SBA SBC Identification Number on each proposal coversheet submitted in response to this solicitation.
d. Check that the cost adheres to the Component criteria specified and the cost on the Cover Sheets matches the cost in the Cost Volume.
e. Check that the Project Abstract and other content provided on the cover sheets contain NO proprietary information.
f. Mark proprietary information within the Technical Volume as instructed in Section 5.3.

g. The content in the Technical Volume, including the option (if applicable), includes the items in Section 5.4.c.
h. That the header on each page of the technical volume should contain the company name, topic number, and proposal number. (The header may be included in the one-inch margins.)
i. The Company Commercialization Report is submitted online in accordance with Section 5.4.e. This report is required even if the firm has not received prior SBIR/STTR funding.
j. Limit your Technical Volume to 20 pages.

6.0 PHASE I EVALUATION CRITERIA

Proposals will be evaluated based on the criteria outlined below, unless otherwise specified in the Component-specific instructions. Selections will be based on best value to the Government considering the following factors which are listed in descending order of importance:

a. The soundness, technical merit, and innovation of the proposed approach and its incremental progress toward topic or subtopic solution.
b. The qualifications of the proposed principal/key investigators, supporting staff, and consultants. Qualifications include not only the ability to perform the research and development but also the ability to commercialize the results.
c. The potential for commercial (Government or private sector) application and the benefits expected to accrue from this commercialization.

When combined, the stated evaluation criteria are significantly more important than cost or price.

Technical reviewers will base their conclusions only on information contained in the proposal. It cannot be assumed that reviewers are acquainted with the firm or key individuals or any referenced experiments. Relevant supporting data such as journal articles, literature, including Government publications, etc., should be contained or referenced in the proposal and will count toward the page limit.

Where technical evaluations are essentially equal in merit, cost to the Government will be considered in determining the successful offeror.

7.0 PHASE II PROPOSAL

7.1 Introduction

Phase II proposals may only be submitted by Phase I awardees. Submission of Phase II proposals are not permitted at this time and, if submitted, may be rejected without evaluation. Phase II proposal preparation and submission instructions will be provided by the DoD Components to Phase I awardees.

7.2 Proposal Provisions

IMPORTANT -- While it is permissible, with proposal notification, to submit identical proposals or proposals containing a significant amount of essentially equivalent work for consideration under numerous federal program solicitations, it is unlawful to enter into contracts or grants requiring essentially equivalent effort. If there is any question concerning this, it must be disclosed to the soliciting agency or agencies as early as possible. If a proposal submitted for a Phase II effort is substantially the same as another proposal that was funded, is now being funded, or is pending with another Federal Agency, or another or the same DoD Component, you must reveal this on the Cover Sheet and provide the information required in Section 5.4.c(11).

Due to specific limitations on the amount of funding and number of awards that may be awarded to a particular firm per topic using SBIR/STTR program funds, Head of Agency Determinations are now required before a different agency may make an award using another agency's topic. This limitation does not apply to Phase III funding. Please contact your original sponsoring agency before submitting a Phase II proposal to an agency other than the one who sponsored the original topic.

Section 4(b)(1)(i) of the SBIR/STTR Policy Directives provide that, at the agency's discretion, projects awarded a Phase I under a solicitation for SBIR may transition in Phase II to STTR and vice versa. A firm wishing to transfer from one program to another must contact their designated technical monitor to discuss the reasons for the request and the agency's ability to support the request. The transition may be proposed prior to award or during the performance of the Phase II effort. Agency disapproval of a request to change programs shall not be grounds for granting relief from any contractual performance requirement. All approved transitions between programs must be noted in the Phase II award or award modification signed by the contracting officer that indicates the removal or addition of the research institution and the revised percentage of work requirements.

7.3 How to Submit

Each Phase II proposal must be submitted through the DoD SBIR/STTR Submission Web site by the deadline specified in the Component-specific instructions. Each proposal submission must contain a Proposal Cover Sheet, Technical Volume, Cost Volume, and a Company Commercialization Report (see Section 5.5).

7.4 Commercialization Strategy

At a minimum, your commercialization strategy must address the following five questions:

(1) What is the first product that this technology will go into?
(2) Who will be the customers, and what is the estimated market size?
(3) How much money will be needed to bring the technology to market, and how will that money be raised?

(4) Does the company contain marketing expertise and, if not, how will that expertise be brought into the company?
(5) Who are the proposing firm's competitors, and what is the price and/or quality advantage over those competitors?

The commercialization strategy must also include a schedule showing the quantitative commercialization results from the Phase II project that the company expects to report in its Company Commercialization Report Updates one year after the start of Phase II, at the completion of Phase II, and after the completion of Phase II (i.e., amount of additional investment, sales revenue, etc. For formatting, page count and other details, please refer to the Component-specific instructions.

8.0 PHASE II EVALUATION CRITERIA

Phase II proposals will be evaluated based on the criteria outlined below, unless otherwise specified in the Component-specific instructions. Selections will be based on best value to the Government considering the following factors which are listed in descending order of importance:

a. The soundness, technical merit, and innovation of the proposed approach and its incremental progress toward topic or subtopic solution.
b. The qualifications of the proposed principal/key investigators, supporting staff, and consultants. Qualifications include not only the ability to perform the research and development but also the ability to commercialize the results.
c. The potential for commercial (Government or private sector) application and the benefits expected to accrue from this commercialization.

When combined, the stated evaluation criteria are significantly more important than cost or price.

Technical reviewers will base their conclusions only on information contained in the proposal. It cannot be assumed that reviewers are acquainted with the firm or key individuals or any referenced experiments. Relevant supporting data such as journal articles, literature, including Government publications, etc., should be contained or referenced in the proposal and will count toward the page limit.

Where technical evaluations are essentially equal in merit, cost to the Government will be considered in determining the successful offeror.

9.0 PHASE II ENHANCEMENT POLICY

To further encourage the transition of STTR research into DoD acquisition programs as well as the private sector, certain DoD Components have developed their own Phase II Enhancement policy. Under this policy, the Component will provide a Phase II awardee with additional Phase II STTR funding if the company can match the additional STTR funds with non-STTR funds from DoD acquisition programs or the private sector.

Phase II projects that qualify under Phase II Enhancement may:

a. Extend an existing Phase II contract for up to one year and
b. Match with STTR funds, up to $500,000 of non-STTR funds from either DoD non-STTR Programs or from an outside investor.

Phase II Enhancement requirements and matching rates vary by Component. See each Component's instructions in Section 12.0 of this solicitation. Phase II Enhancement applications must be prepared and submitted through the DoD SBIR/STTR Submission Web site at https://sbir.defensebusiness.org. DoD retains the discretion not to approve or fund any Phase II Enhancement application and to review contractor eligibility at the time of selection.

10.0 COMMERCIALIZATION READINESS PROGRAM (CRP)

The SBIR/STTR Reauthorization Act of 2011 establishes the Commercialization Pilot Program (CPP) as a long-term program titled the Commercialization Readiness Program (CRP).

Each Military Department (Army, Navy, and Air Force) has established a Commercialization Readiness Program. Additionally, each Department has developed criteria and processes to identify projects with the potential for rapid transition to Phase III and that are expected to meet high priority needs of their Department. A project's inclusion in the CRP is by invitation and at the discretion of the Departments. CRP participants may receive a variety of assistance services and/or opportunities to facilitate the transition of their projects. Participation in the CRP may also include modifications to existing Phase II contracts with additional non-SBIR/STTR funding, as well as additional SBIR/STTR funding beyond the normal SBIR/STTR funding guidelines, to enhance ongoing projects with expanded research, development, test, or evaluation to accelerate transition and commercialization. Additional reporting on CRP participants and results achieved is required.

11.0 CONTRACTUAL REQUIREMENTS

11.1 Other Contract Requirements

Upon award of a contract, the contractor will be required to make certain legal commitments through acceptance of Government contract clauses in the Phase I contract. The outline that follows is illustrative of the types of provisions required by the Federal Acquisition Regulation that will be included in the Phase I contract. This is not a complete list of provisions to be included in Phase I contracts, nor does it contain specific wording of these clauses. While a Phase II contract may include some or all of the provisions below, additional provisions will be required. Copies of complete general provisions will be made available prior to award.

a. **Standards of Work**. Work performed under the contract must conform to high professional standards.
b. **Inspection**. Work performed under the contract is subject to Government inspection and evaluation at all reasonable times.
c. **Examination of Records**. The Comptroller General (or a fully authorized representative) shall have the right to examine any directly pertinent records of the contractor involving transactions related to this contract.
d. **Default**. The Government may terminate the contract if the contractor fails to perform the work contracted.
e. **Termination for Convenience**. The contract may be terminated at any time by the Government if it deems termination to be in its best interest, in which case the contractor will be compensated for work performed and for reasonable termination costs.
f. **Disputes**. Any dispute concerning the contract which cannot be resolved by agreement shall be decided by the contracting officer with right of appeal.
g. **Contract Work Hours**. The contractor may not require an employee to work more than eight hours a day or forty hours a week unless the employee is compensated accordingly (that is, receives overtime pay).
h. **Equal Opportunity**. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.
i. **Affirmative Action for Veterans**. The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran.
j. **Affirmative Action for Handicapped**. The contractor will not discriminate against any employee or applicant for employment because he or she is physically or mentally handicapped.
k. **Officials Not to Benefit**. No member of or delegate to Congress shall benefit from the contract.
l. **Covenant Against Contingent Fees**. No person or agency has been employed to solicit or secure the contract upon an understanding for compensation except bona fide employees or commercial agencies maintained by the contractor for the purpose of securing business.
m. **Gratuities**. The contract may be terminated by the Government if any gratuities have been offered to any representative of the Government to secure the contract.
n. **Patent Infringement**. The contractor shall report each notice or claim of patent infringement based on the performance of the contract.
o. **Military Security Requirements**. The contractor shall safeguard any classified information associated with the contracted work in accordance with applicable regulations.
p. **American Made Equipment and Products**. When purchasing equipment or a product under the STTR funding agreement, purchase only American-made items whenever possible.
q. **Unique Identification (UID)**. If your proposal identifies hardware that will be delivered to the government be aware of the possible requirement for unique item identification in accordance with DFARS 252.211-7003.

r. **Publication Approval**. Government review and approval will be required prior to any dissemination or publication, except within and between the Contractor and any subcontractors, of classified and non-fundamental information developed under this contract or contained in the reports to be furnished pursuant to this contract.

s **Animal Welfare.** Contracts involving research, development, test, evaluation, or training on vertebrate animals will incorporate DFARS clause 252.235-7002.

t. **Protection of Human Subjects.** Effective 29 July 2009, contracts that include or may include research involving human subjects in accordance with 32 CFR Part 219, DoD Directive 3216.02 and 10 U.S.C. 980, including research that meets exemption criteria under 32 CFR 219.101(b), will incorporate DFARS clause 252.235-7004.

u. **E-Verify.** Contracts exceeding the simplified acquisition threshold may include the FAR clause 52.222-54 "Employment Eligibility Verification" unless exempted by the conditions listed at FAR 22.1803.

v. ITAR. In accordance with DFARS 225.7901-4, Export Control Contract Clauses, the clause found at DFARS 252.225-7048, Export-Controlled Items (June 2013), must be included in all solicitations and contracts. Therefore, all awards resulting from this solicitation will include DFARS 252.225-7048. Full text of the clause may be found at http://farsite.hill.af.mil/vfdfara.htm.

11.2 Commercialization Updates in Phase II

If, after completion of Phase I, the contractor is awarded a Phase II contract, the contractor shall be required to periodically update the following commercialization results of the Phase II project through the Web site at https://sbir.defensebusiness.org/:

a. Sales revenue from new products and non-R&D services resulting from the Phase II technology;
b. Additional investment from sources other than the federal SBIR/STTR Program in activities that further the development and/or commercialization of the Phase II technology;
c. Whether the Phase II technology has been used in a fielded DoD system or acquisition program and, if so, which system or program;
d. The number of patents resulting from the contractor's participation in the SBIR/STTR Program;
e. Growth in number of firm employees; and
f. Whether the firm has completed an initial public offering of stock (IPO) resulting, in part, from the Phase II project.

These updates on the project will be required one year after the start of Phase II, at the completion of Phase II, and subsequently when the contractor submits a new STTR proposal to DoD. Firms that do not submit a new proposal to DoD will be asked to provide updates on an annual basis after the completion of Phase II.

11.3 Copyrights

With prior written permission of the Contracting Officer, the awardee may copyright (consistent with appropriate national security considerations, if any) material developed with DoD support. DoD receives a royalty-free license for the Federal Government and requires that each publication contain an appropriate acknowledgment and disclaimer statement.

11.4 Patents

Small business firms normally may retain the principal worldwide patent rights to any invention developed with Government support. The Government receives a royalty-free license for its use, reserves

the right to require the patent holder to license others in certain limited circumstances, and requires that anyone exclusively licensed to sell the invention in the United States must normally manufacture it domestically. To the extent authorized by 35 USC 205, the Government will not make public any information disclosing a Government-supported invention for a period of five years to allow the awardee to pursue a patent. See also Invention Reporting in Section 10.6.

11.5 Technical Data Rights

Rights in technical data, including software, developed under the terms of any contract resulting from proposals submitted in response to this solicitation generally remain with the contractor, except that the Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with contract award and ending five years after completion of the project under which the data were generated. This data should be marked with the restrictive legend specified in DFARS 252.227-7018. Upon expiration of the five-year restrictive license, the Government has unlimited rights in the STTR data. During the license period, the Government may not release or disclose STTR data to any person other than its support services contractors except: (1) For evaluation purposes; (2) As expressly permitted by the contractor; or (3) A use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Technology Transfer (STTR) Program."

If a proposer plans to submit assertions in accordance with DFARS 252.227-7017, those assertions must be identified and assertion of use, release, or disclosure restriction MUST be included with your proposal submission. The contract cannot be awarded until assertions have been approved.

11.6 Invention Reporting

STTR awardees must report inventions to the component within two months of the inventor's report to the awardee. The reporting of inventions may be accomplished by submitting paper documentation, including fax, or through the Edison Invention Reporting System at www.iedison.gov for those agencies participating in iEdison.

11.7 Final Technical Reports - Phase I through Phase III

a. **Content:** A final report is required for each project phase. The reports must contain in detail the project objectives, work performed, results obtained, and estimates of technical feasibility. A completed SF 298, "Report Documentation Page," will be used as the first page of the report. (The Report Documentation Page may be prepared and printed from the DoD Submission Web site at https://sbir.defensebusiness.org/, or use DTIC (Defense Technical Information Center) submission resources at http://www.dtic.mil/dtic/submit/howtosubmit/howtosubmit.html. In addition, monthly status and progress reports may be required by the DoD Component.

b. **SF 298 Form "Report Documentation Page" Preparation:**

(1) If desirable, language used by the company in its Phase II proposal to report Phase I progress may also be used in the final report.

(2) For each report, the company submitting the report should fill in block 12 with the following statement: "Distribution authorized to U.S. Government only; Proprietary Information, (Date when completed). Other requests for this document shall be referred to the Component STTR Program Office." *Note: Data developed under a STTR contract is subject to STTR Data Rights*

which allow for protection under DFARS 252.227-7018 (see Section 11.6, Technical Data Rights). The sponsoring DoD activity, after reviewing the company's entry in block 12, has final responsibility for assigning a distribution statement.

For additional information on distribution statements see the following Defense Technical Information Center (DTIC) Web site:
http://www.dtic.mil/dtic/submit/guidance/distribstatement.html

(3) Block 14 (Abstract) of the SF 298, "Report Documentation Page," must include as the first sentence, "Report developed under STTR contract for topic [insert solicitation topic number. Follow with the topic title, if possible."] The abstract must identify the purpose of the work and briefly describe the work carried out, the findings or results and the potential applications of the effort. Since the abstract will be published by the DoD, **it must not contain any proprietary or classified data and type "UU" in Block 17**.

(4) Block 15 (Subject Terms) of the SF 298 must include the terms "STTR Report".

c. **Submission:** In accordance with DoD Instruction 3200.12 and DFARS clause 252.235-7011, a copy of the final report shall be submitted (electronically or on disc) to DTIC:

Defense Technical Information Center
ATTN: DTIC-OA (SBIR/STTR)
8725 John J Kingman Road, Suite 0944
Ft. Belvoir, VA 22060-6218

Delivery will normally be within 30 days after completion of the Phase I technical effort.

Other requirements regarding submission of reports and/or other deliverables will be defined in the Contract Data Requirements List (CDRL) of each contract.

Special instructions for the submission of CLASSIFIED reports will be defined in the delivery schedule of the contract.

DO NOT E-MAIL Classified or controlled unclassified reports, or reports containing STTR Data Rights protected under DFARS 252.227-7018.

12.0 COMPONENT INSTRUCTIONS AND TECHNICAL TOPICS

Department of the Army ..... ARMY 1-31
Department of the Navy ..... NAVY 1-50
Department of the Air Force ..... AF 1-56
Defense Health Program (DHP) ..... DHP 1-8
Defense Threat Reduction Agency (DTRA) ..... DTRA 1-14