

AIR FORCE (AF) SMALL BUSINESS INNOVATION RESEARCH (SBIR) PHASE II PROPOSAL INSTRUCTIONS TOPIC J201-CSO1

These Phase II instructions apply to Topic J201-CSO1 ONLY.

I. INTRODUCTION

All Phase II proposals must be prepared and submitted through the Department of Defense SBIR/STTR Innovation Portal (DSIP), <https://www.dodsbirsttr.mil/>. Ensure the proposal email address is accurate. AF is not responsible for missed notifications due to firms changing mailing address/email address/company contacts after submission without notifying the AF. Firms must verify registration for “All Contracts”, not just grants or assistance. Addresses must be consistent between the proposal and System for Award Management (SAM) at award. Deadline for **ALL** J201-CSO1 Phase II proposal submissions is 24 AUGUST 2020, no later than 12:00 p.m. Eastern Time.

Proposals submitted after the deadline are NOT considered, no exceptions. This includes those missing the deadline due to system issues encountered during electronic submission site upload. Proposals not submitted to the correct command (“AFWERX”) in DSIP will also not be considered for award. Only full, timely proposal submissions will be considered for award. Classified proposals are not accepted. Proposals shall not include classified information or data.

These instructions take precedence over conflicting information in other SBIR instructions. However, for items not mentioned in this document, information contained in the AF X20.1 SBIR CSO and/or the Small Business Administration (SBA) SBIR/STTR Policy Directive may still apply.

For AF SBIR/STTR questions, contact the AF Help Desk at (800) 222-0336/usaf.team@afsbirsttr.us. Contact the DoD SBIR/STTR Help Desk, DoDSBIRSupport@reisystems.com, with proposal submission issues.

There is no requirement for non-SBIR Federal or non-Federal cost match or share, and no preference for proposals including either. Cost match or share funds constitute evidence of commercial potential IAW 15 USC §638(e) but other indicators exist as well. All proposals are subject to the same SBIR funding caps, solicitation terms, and performance period limits. Please note, although the term “cost match” is used, there are no associated ratios. The maximum SBIR funding for all awards under this solicitation is \$750,000, regardless of the amount of cost share or match. The performance period shall not exceed 15 months, including 12 months technical performance and three months for reporting.

Award execution is anticipated to take place 26-30 OCTOBER 2020. Non-SBIR Federal cost match funds must be received by AFRL/SBRF 30 days prior to Phase II award. For private investment, the SBIR firm must provide funds receipt evidence within 90 calendar days after award. Phase II efforts with private cost match are generally awarded as Other Transactions for Prototype, authorized by 10 USC 2371b.

Technical and Business Assistance (TABA): Please be advised, AF does not utilize TABA.

II. PHASE II PROPOSAL FUNDAMENTALS

2.0 SBIR/STTR Phase I awardees qualified under 15 USC 638(bb)(1) and (2) are eligible to submit Phase II proposals. Phase I firms must qualify as small business concerns as defined in the Air Force X20.1 SBIR Commercial Solutions Opening (CSO) at Phase II award. Firms are highly encouraged to revisit the solicitation from which awards resulted to review the requirements and elements common to Phase I and II awards. The Government reserves the right to award all, some, or none of the proposals received. The Government is not responsible for expenditures incurred by offerors prior to Phase II award. All awards are subject to funds availability and successful negotiations.

2.1 Offeror Eligibility and Performance Requirements

2.1.1 Each proposer must qualify as a small business concern IAW 13 C.F.R §§ 701-705 at time of award and certify to this on the Proposal Coversheet. SBIR/STTR eligibility requirements are unique and do not correspond to other small business programs (see Section 3.15 of the X20.1 SBIR CSO). Proposers must meet eligibility requirements for Small Business Ownership and Control IAW 13 CFR § 121.702 and Section 4.4 of the X20.1 SBIR CSO.

2.1.2 A minimum of one-half the Phase II research and/or analysis must be conducted by the offeror. The work percentage is calculated using both direct and indirect costs.

2.1.3 The principal investigator's primary employment must be with the small business firm at award and throughout the awarded effort. Primary employment means more than one-half the principal investigator's time is spent with the small business. Primary employment with a small business concern precludes full-time employment with another organization.

2.1.4 Phase II R/R&D work must be performed by the small business concern and its subcontractors in the US.

2.2 **Benchmarks.** Proposers with prior SBIR/STTR awards must meet two benchmark requirements for progress toward commercialization as determined by the Small Business Administration (SBA) on 1 June each year.

- For all proposers with greater than 20 Phase I awards over the past five fiscal years, excluding the most recent year (currently FY 2015-2019), the ratio of Phase II awards to Phase I awards must be at least 0.25.
- For all proposers with greater than 15 Phase II awards over the last ten fiscal years excluding the last two years (currently FY 2009-2019), the proposer must have received, to date, an average of \geq \$100,000 in sales and/or investments per Phase II award received or have obtained a number of patents from SBIR efforts \geq 15% of the Phase II awards received during the period.

Consequence of failure to meet the benchmarks:

- SBA will identify and provide agencies annually on 1 June a list of companies failing to meet minimum performance requirements. These companies will not be eligible to submit Phase I proposals for one year.

- This requirement affects a company's eligibility for new Phase I awards only. Companies failing to meet minimum performance requirements may continue work on active SBIR/STTR awards. They may also apply for and receive new Phase II awards. Likewise, they are not prohibited from receiving Phase III awards.
- To provide advance warning, SBA notifies companies on 1 April when they are failing to meet the benchmarks. If a company believes the information is not complete or accurate, it may provide SBA Company Registry feedback at www.sbir.gov.
- SBA has also provided a [Guide to SBIR/STTR Program Eligibility](#) to help small businesses understand program eligibility requirements, determine eligibility, and accurately complete required certifications.
- Companies' benchmark information is not available to the public.

2.3 Joint Ventures: Joint ventures and limited partnerships are permitted, provided the entity created qualifies as a small business in accordance with the Small Business Act, 13 U.S.C. § 121.701.

2.4 Investment from, and Majority Ownership by, Venture Capital Operating Companies, Hedge Funds, and Private Equity Firms: Small businesses owned in majority part by multiple venture capital operating companies (VCOCs), hedge funds, or private equity firms, are ineligible to submit proposals under this solicitation. This solicitation is not utilizing the Domestic Investment Pilot Program authority of the FY2020 NDAA Section 884.

2.5 Conflicts of Interest: Contract awards to firms owned by or employing current or previous Federal Government employees may constitute conflicts of interest in violation of Federal law. Proposing firms should contact the employee's Government agency Ethics Counselor for further guidance.

2.6 Classified Proposals: Classified proposals are not accepted under this solicitation. If Phase II performance will require classified work, the proposing firm must have or be able obtain facility clearance. Additional information on facility and personnel clearance procedures and requirements is available at the Defense Security Service site, <http://www.dss.mil/index.html>.

2.7 Research Involving Human Subjects: Research involving human subjects, to include human biological specimens and human data, shall comply with applicable Federal and state laws and agency policy/ guidelines for human subject protection (see Section 3.12 of the X20.1 SBIR CSO).

Institutions selected for funding for research involving human subjects must provide current Federal Assurance of Compliance with Federal regulations documents for human subject protection. For example, the offeror may provide a Department of Health and Human Services, Office for Human Research Protections Federal Wide Assurance (<http://www.hhs.gov/ohrp>).

The AF may request additional Federal Assurance documentation. All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved must provide appropriate human subject protection training completion documents. Institutions proposing to conduct human subject research meeting an exemption criteria in 32 CFR 219.101 are not required to provide a Federal Assurance of Compliance. If selected, institutions must also provide Institutional Review Board (IRB) approval documents or an appropriate institution official's determination the work meets an exemption found in 32 CFR 219. As part of the IRB review process, appropriate training documents for all investigators must accompany the protocol. The protocol, separate

from the proposal, must include a detailed research plan description, study population, study participation risks and benefits, recruitment and consent process, data collection, and data analysis.

The time required for the IRB's protocol review and approval will vary, depending on such things as procedures used, research complexity, the study participant risk level, and Principal Investigator responsiveness. The average process can last one and three months. Once approved, the AF will review the protocol and the IRB's determination to ensure research will comply with DoD and AF policies. The DoD review process can last three to six months. Ample time should be allotted to complete the IRB and DoD approval processes before recruiting subjects. **No funding can be applied to human subject research until all approvals are granted.**

2.8 Research Involving Animal Subjects: All animal research, development, testing, experimentation, education, and/or training shall comply with applicable DoD and AF rules on animal acquisition, transport, care, handling, and use. For submissions requiring animal use, briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval.

All offerors must receive IACUC approval, plus secondary or headquarters-level approval by a DoD veterinarian trained or experienced in laboratory animal medicine and science. No DoD-funded animal research may be conducted until all appropriate approvals are obtained.

2.9 Research Involving Recombinant DNA Molecules: All recombinant DNA molecule research shall comply with applicable Federal and state laws and regulations, as well as additional agency guidance. Research shall be approved by an Institutional Biosafety Committee.

2.10 Use of Unmanned Aircraft Systems (UAS): All activities involving UAS operation shall be conducted IAW DoD memos "Guidance for the Domestic Use of Unmanned Aircraft Systems in the U.S. National Airspace", 18 August 2018, and "Delegation Authority to Approve Exemptions for Using Commercial-Off-The-Shelf Unmanned Aerial Systems in Support of Urgent Needs", 16 November 2018. Contractor personnel operating DoD or DoD-contracted UAS in US National Airspace, whether domestic use is related to an intelligence activity or not, will comply with all UAS operation in US National Airspace laws, regulations, and guidance. Specific programs utilizing UAS shall obtain a UAS operational use exemption. Therefore, the AF may request additional documentation to support an exemption request. The DoD exemption approval process can last up to two months. **No funding can be used for contracted-UAS operations until ALL approvals are granted.**

2.11 Proposal Status and Feedback: The Principal Investigator (PI) and Corporate Official (CO) identified on the Proposal Coversheet (Volume 1) are notified of proposal selection/non-selection via email. The SBC receives a notification for each proposal submitted. Please read carefully and note the proposal number referenced. **If changes occur to the company mail/email address(es) or contacts after proposal submission, the information must be provided to the AF at sbir@afwerx.af.mil. The message shall include the subject line, "X20.1 Phase II Address Change".**

Feedback requests must be submitted in writing within 30 calendar days after non-selection notification receipt. Requests must be submitted via email to AF.SBIR.STTR_FeedbackRequest@us.af.mil. Requests shall include the proposal number, the company name, and the POC and alternate's telephone numbers/email addresses. Requests received more than 30 calendar days after non-selection notification receipt are fulfilled at the Contracting Officers' discretion. Feedback will be provided to offerors with

“Not Selectable” proposals ONLY. Unsuccessful offerors are entitled to no more than one feedback response for each proposal.

Release of Proposal Review Information: After final award decisions have been announced, the offeror may request the proposal’s peer review comments. Reviewers’ identities shall not be disclosed.

It is anticipated proposal reviews will be complete, selection decisions made, and notification letters sent within approximately 30 calendar days after proposal receipt. Please do not contact the solicitation Contracting Officer for proposal status before that time.

2.12 Phase II Award Information

2.12.1 **Number of Awards.** Depends upon funds availability. The Government reserves the right to make no awards under this solicitation. The Federal Government is not responsible for any costs incurred before award receipt.

2.12.2 **Type of Funding Agreement.** Selected Phase II proposals will be awarded as firm fixed price contracts or Other Transactions, including reasonable profit consistent with private R/R&D firms.

- **Average Dollar Value.** The maximum Phase II contract or agreement value is \$750,000.
- **Timing.** It is intended peer review, proposal selection, negotiations, and award will be complete within 60 calendar days of proposal receipt.

2.13 **Registrations and Certifications:** Firms must be registered in DSIP, to prepare and submit proposals. Proposing firms must also register in the System for Award Management (SAM.gov). SAM.gov allows firms interested in conducting business with the Federal Government to provide basic business capability and financial information. To register, visit SAM.gov. Follow instructions found there to obtain a Commercial and Government Entity (CAGE) code and Dun and Bradstreet (DUNS) number. Offerors must be registered in SAM to receive awards. Firms are advised to visit SAM and ensure all company data is up to date before proposal submission and before award.

In addition to the standard Federal and DoD procurement certifications, the SBA SBIR/STTR Policy Directive requires certain information be collected from firms at award and during the award life cycle. Each firm will be asked to provide this additional information at the time of award, prior to receiving 50% of the total award amount, and prior to final payment.

2.14 **Agreements with Federal Laboratories:** The Air Force may issue an STTR funding agreement to an SBC intending to enter into an agreement with a Federal Laboratory to perform portions of the award or has entered into a cooperative research and development agreement (see 15 USC 3710a(d)) with a Federal Laboratory, only if there is compliance with the following:

- AF will not require the SBC to enter into an agreement with a Federal Laboratory to perform specific project portions as a condition for award.
- AF will not issue an STTR award or approve an agreement between an STTR firm and a Federal Laboratory if the SBC will not meet the minimum work performance requirements set forth in § 6(a)(4) of this Policy Directive.
- AF will not issue an STTR award or approve an agreement between a STTR firm and Federal Laboratory violating any requirement set forth in statute or the SBA SBIR/STTR Policy Directive, including data rights protections.

- AF and Federal Laboratory will not require STTR firms engaging in agreements with a Federal Laboratory to perform project tasks providing advance payment to the Federal Laboratory in an amount greater than necessary for 30 days' support.

2.15 Fraud and False Statements: Knowingly and willfully making false, fictitious, or fraudulent statements or representations may be a felony under the Federal Criminal False Statement Act (18 USC Sec 1001), punishable by a fine of up to \$10,000, imprisonment up to five years, or both.

The DoD Office of the Inspector General (IG) Hotline is an important avenue for reporting fraud, waste, abuse, and mismanagement within the DoD. The DoD IG operates a hotline to receive and investigate complaints or information from contractor employees, DoD civilians, military service call (800) 424-9098 Monday through Friday, 8:00 a.m. at 5:00 p.m. Eastern Time, or use hotline@dodig.mil.

2.16 Innovation in Manufacturing: Pursuant to Executive Order (EO) 13329, high priority is accorded to proposals advancing innovation in U.S. small business manufacturing.

III. PROPOSAL PREPARATION AND SUBMISSION

Before submitting a proposal, offerors should verify the effort:

- a. Has a reasonable chance of meeting the Government's stated objectives;
- b. Is innovative with commercialization potential; and
- c. Demonstrates capability to perform the proposed effort, i.e., has or can obtain suitable people and equipment for the effort.

Phase II proposals require a comprehensive, detailed effort description. Proposals should demonstrate sufficient Phase I technical progress in solving an important AF problem to warrant more extensive R/R&D. Developing technology commercial and military potential is extremely important. Particularly, AF seeks proposals emphasizing technologies' dual-use applications and commerciality/commercial exploitation.

3.0 Proprietary Information. Information constituting a trade secret, commercial or financial information, confidential personal information, or data affecting national security must be clearly marked. It shall be protected to the extent permitted by law. Awards for selected proposals will likely incorporate the Work Plan, in whole or part, by reference or as an attachment. Therefore, **DO NOT INCLUDE PROPRIETARY INFORMATION.** See AF X20.1 SBIR CSO, section 3.14 for the definition of Proprietary Information, and Section 8.7.b for Proprietary Information marking.

3.1 General Content. Proposals should be direct, concise, and informative. Type shall be no smaller than 12- pitch or 11-point on standard 8 1/2" X 11" paper, with one-inch margins and pages consecutively numbered. Offerors are discouraged from including promotional and non- programmatic items, except when directed, e.g., in the '1-pager' and the '100-second video'.

The proposal shall constitute registration and six volumes:

REGISTRATION

- DUNS Number
- Commercial and Government Entity (CAGE) Code
- DoD SBIR/STTR ID

VOLUME 1: DoD PROPOSAL COVERSHEET

- CAGE, DUNS
- Proposal Summary
- Proposal Certification
- Contact Information

VOLUME 2: TECHNICAL VOLUME

- White Paper not to exceed 15 pages (does not include Table of Contents or Glossary)
- Technical Summary
 - Identification/Significance of Problem/Opportunity
 - Phase I Feasibility Study Results
 - Phase II Technical Objectives/Key Results
- Phase II Work Plan
 - Scope
 - Task Outline

- Milestone Schedule
- Deliverables
- Required Reports
- Safety Related Deliverables
- Commercialization Strategy
 - Commercialization Plan
 - Military Applications/DoD Customers
 - Non-Defense Commercial Customers
- Key Personnel
 - Foreign Nationals
 - Investors/Partners
 - Related Work

VOLUME 3: COST VOLUME

- Direct Labor
- Overhead
- G&A
- Subcontractors/Consultants
- Other Direct Costs, e.g., materials, equipment, travel
- Cost Share or Match
- Profit Rate

VOLUME 4: COMPANY COMMERCIALIZATION REPORT

VOLUME 5: SUPPORTING DOCUMENTS

Templates can be found within X20.1 Phase I Union platform or via cohort dropbox at:

<https://www.dropbox.com/sh/7g61eaeqpv7b84j/AABBP-jjWvEGJk7A4TLrALzGa?dl=0>

- Signed Customer Memorandum
- Letters of Support
- 15 Page Slide Deck
- Coversheet Supplement
- Certification/Eligibility Check
- Prior, Current, or Pending Support of Similar Proposals or Awards
- Foreign Citizen Table, if applicable
- Supplemental Cost Information
- Resumes of Key Personnel
- Technical Data Assertions (*if applicable*)
- DoD Funding Agreement Certifications (*Signed*)
- SBIR/STTR Environment, Safety and Occupational Health (ESOH)
- 1-pg. 'Sales Pitch' Summary

The following are as required:

- Funds Matching Form
- Additional Fund Matching Documentation, e.g., Private Investor Letter
- Additional Facilities/Equipment Information
- Additional Subcontractor/Consultant Information
- Certified DD Form 2345, Militarily Critical Technical Data Agreement
- Lifecycle Certification

- Allocation of Rights
- Additional Letters of Support

VOLUME 6: FRAUD, WASTE AND ABUSE TRAINING

The AF SBIR/STTR Center of Excellence (CoE) has instituted training and certification requirements to combat fraud within the programs. Offerors are required to complete Fraud, Waste and Abuse Training in DSIP to meet the Volume 6 requirement. If training is not completed in DSIP, the submitter will receive an error message and be unable to submit the proposal.

3.2 Volume 1: DoD Proposal Coversheet

Prepare the Proposal Coversheet in DSIP, <https://www.dodsbirsttr.mil/>. It must include a technical abstract no more than 200 words describing the proposed R/R&D project and discussing anticipated benefits and potential commercial applications. **Proprietary and/or classified information shall not be included in the Proposal Coversheet.** If selected, the technical abstract and anticipated benefits discussion may be publicly released. When the Proposal Coversheet is saved, DSIP will assign a proposal number. The coversheet may be revised as often as necessary until the Phase II solicitation period closes.

3.2.1 Technical Abstract: The technical abstract should include a brief program objective and effort description. Technical abstracts are submitted to the Office of the Secretary of Defense (OSD) for publication. Therefore, they shall not contain proprietary or classified information. The term “Component” on the coversheet refers to the soliciting AF organization, i.e., AFWERX.

3.2.2 Anticipated Benefits/Potential Commercial Applications of R/R&D: The first line of the ‘Anticipated Benefits’ section should follow this format: *We solved [AF problem] by providing [advantage], to help [AF end-user organization] accomplish [AF end-user’s] goal. We will recognize profit by charging [non-defense commercial customer organizations] to get [non-defense commercial benefit].* Be very explicit regarding the proposed AF end user and customer, if different, which is likely, and potential non-SBIR funding sources after successful Phase II completion. This list should also include non-proprietary, non-defense commercial customers. Do not include specific AF names or non-defense customers, as this section will be publicly released.

3.2.3 List of maximum 8 Key Words or Phrases, separated by commas, describing the project: This section will be used to categorize the application. These keywords may also be used to identify Phase III transition partners within the Government. Therefore, consider more than technical key words. A potentially useful analogy is Search Engine Optimization (SEO) Keywords.

3.2.4 Prior/Current/Pending Support of Similar Proposals/Awards: With proper notification, offerors may submit identical proposals or those with significant amounts of essentially equivalent work under one or more Federal announcements. **It is unlawful to enter into two or more contracts requiring essentially equivalent effort.** Potential situations must be disclosed to AF at proposal submission and before award. Proposal submissions previously, currently, or in-process of being funded by AF or other Federal agency shall be identified. On the Proposal Coversheet, answer ‘Yes’ to the following or similar question, “*Has a proposal for essentially*

equivalent work been submitted to the AF or other US Government agency?”

3.3 Volume 2: Technical Volume

The technical volume shall be no longer than 15 pages. Additional pages will not be reviewed. Include page numbers in the technical volume.

3.3.1 Table of Contents: Include a table of contents immediately following the coversheet (not included in 15 page count).

3.3.2 Glossary: Include a glossary of proposal acronyms and abbreviations (not included in 15 page count).

3.3.3 Technical Summary:

3.3.3.1 Identification and Significance of the Problem or Opportunity: Briefly describe the specific problem/opportunity addressed in Phase I and its relationship to Phase II.

3.3.3.2 Non-Defense Commercial Solution: Describe the non-Defense commercial solution, including its use by non-Defense commercial customers. Describe its technical specifications as well as the qualitative and quantitative value it brings to the solution’s users. Additionally, please answer the following questions:

- Is the proposed item “of a type”, i.e., similar to a commercial item, customarily used by the public or by non-governmental entities for non-governmental purposes?
- Has proposed item been (i) sold, leased, or licensed to the public; OR (ii) offered for sale, lease, or license to the public?
- Include, where applicable, revenue, unit sales, user adoption, pre-sales, and investments. Broad adoption and commercial success can be indicators of commercial potential and reduced technical risk but are not mandated. NOTE: This is an R&D solicitation and not a commercial off-the-shelf (COTS) resale solicitation. See FAR 2.101, for a “commercial items” definition.

3.3.3.3 Proposed Adaptation of Non-Defense Commercial Solution: Describe the proposed R/R&D adaptations of the non-Defense commercial solution to meet an AF end-user need. In this section, please answer the following questions:

- How similar is the modified item to others sold in the commercial marketplace?
- Does the supplier perform similar modifications for non-Defense customers?
- Do the AF-unique modifications change the product’s essential purpose and use?
- Are there differences in the production/manufacturing/delivery processes used to perform the Defense modification versus non-government customers?
- What are the quantitative benefits expected for identified Air Force end-users?

3.3.4 Phase I ‘Feasibility Study’ Results: The proposal shall detail the solution’s ability to meet AF end-user and customer needs. These results shall be framed in the context of AF end-user and customer exploration previously performed.

3.3.4.1 Scientific or Technical R/R&D Effort: Include research questions, methods, results, and relevant literature.

3.3.4.2 AF End-User and Customer Exploration Methods: Describe methods, both successful and unsuccessful, used for technical and scientific feasibility analysis, AF customer and end-user exploration to adapt the non-Defense commercial solution to a specific AF end-user needs. This should include detailed documentation involving at least one in-depth interview with an AF end-user AND customer.

3.3.4.3 Empowered and Committed AF End-Users and Customers: List and describe specific AF end-users, e.g., operators, willing to support further product solution R&D, test, evaluation, or trials in Phase II, as evidenced by a signed Customer Memorandum (Attachment 1). Specifically explain how the proposed solution meets the need(s) and describe understanding of the problem or benefit area in detail. List and describe specific AF customers, e.g., Program Manager in a system program office, willing to assist in the proposals solution's transition during Phase II and, potentially, to Phase III. Explain the proposed solution's integration with existing systems in detail.

3.3.4.4 Empowered and Committed US non-AF Government End-Users: List firm commitments, e.g., through a Customer Memorandum, from additional US Government end-users directly related to the proposed solution. Customer Memoranda must be uploaded to the 'Letters of Support' section in Volume 5, Supporting Documents. Relevant supporting data such as journal articles, literature, and Government publications should be included or referenced in the proposal. These documents count toward the page limit.

3.3.5 Phase II Technical Objectives and Key Results: Clearly describe three to five Phase II R/R&D effort and trial objectives. Objectives shall:

- Be tied to specific Phase II trial tasks;
- Be qualitative and AF end user-specific;
- Be tied to specific time-periods, tangible, unambiguous about anticipated results;
- Describe end-state outcomes rather than processes or activities; and
- Each be accompanied by three to five specific key results measurable throughout Phase II performance. Likely quantitative in nature, e.g., deliver X widgets to AF end-user; non-quantitative key results shall be clearly measurable.

3.3.5.1 List anticipated interactions with stakeholders such as Program Managers, test range officials, small business officials, system engineers, etc. necessary to accomplish a Phase II trial. Clearly describe Phase II trial completion requirements not within the offeror's control, as well as plans for working within those constraints. NOTE: This includes clearances, e.g., DD Form 254, Contract Security Classification Specification; UAS operation waivers, etc.

3.3.6 Phase II Work Plan: A Work Plan, **not** a Statement of Work, is required. For proposals including private investment, the Work Plan should include only SBIR-funded tasks. Tasks to be executed with private investment should be discernable from SBIR-funded tasks. If selected, SBIR- and private investment-funded tasks are separately addressed in the award document. The Work Plan should be structured around the effort's purpose and requirements set forth in clear, specific, and objective terms with measurable outcomes. The Work Plan has two mandatory features; (1) work stated by outcomes or results, not performance methods, and (2) measurable performance standards, including assessment methods. The plan should include the location and

mechanics to accomplish the proposed approach. The approach shall attempt to demonstrate the Phase I-like effort’s technical feasibility, including private sector or Government customer transition results.

- **Scope:** List the effort’s major requirements and specifications.
- **Task Outline:** Outline work to be accomplished. If cost match is proposed, clearly identify SBIR-funded versus cost match-funded tasks.
- **Milestone Schedule:** The maximum period of performance will be 15 months, including 12 months technical performance and three months for reporting. Provide a concise program schedule identifying all key milestones. Include a proposed start date, usually ~2 months after Phase II submission deadline. For each milestone, include:
 - An expected delivery date, represented in number of months after contract award, e.g., widget delivered at contract award (CA) + 6 months.
 - A specific valuable deliverable for the AF end-user.
 - Clear deliverable acceptance criteria for all to determine milestone achievement.
 - Proposals shall include no more than 15 milestones/deliverables, including a refined Work Plan (CA + 30 calendar days) and a Final Technical Report, the draft of which is due 30 days after technical performance completion.

NOTE: Upload suggested payment amounts/references to rationale/supporting information in “Additional Cost Information”, Volume 5, Supporting Documents.

NOTE: If proposing to work with multiple AF end-users, Customer Memoranda must be consolidated into a single, coherent, mutually agreed upon Schedule of Milestones, meeting the approval of all.

Below is a sample schedule. Milestones marks required deliverables’ completion, e.g., baseline execution plan, prototype component, test plan, prototype production, final report submission, etc. Status reports cannot be milestones. Provide criteria to verify milestones’ completion. Associated milestone payments shall reflect justifiable costs. Include supporting rationale in Volume 5, Supporting Documents.

NOTE: Non-Defense commercial customers’ pricing data is likely proprietary and should be marked as such. See AF X20.1 SBIR CSO section 3.14 for the definition of Proprietary Information and section 8.7.b for guidance regarding proprietary markings.

MILESTONE	EXPECTED DELIVERY (MONTHS AFTER CA)	DELIVERABLE	ACCEPTANCE CRITERIA	PAYMENT AMOUNT
EXAMPLE: 01 - Finalize customer requirements for adaptation	Award +1 month.	Complete adapted commercial solution specs plus quantitative goals for further widget	AF end-users and customers agree specs will meet their needs.	\$50,000 Evidence: Invoice from non-Defense Customer A pilot program.

		R&D/test in AF ops environment.		
EXAMPLE: 02 - Deliver three adapted commercial widgets	Award + 4 months	Three adapted widgets meeting specs in Task 1 delivered to AF end-user.	AF end-user will physically accept adapted widgets	\$250,000 Evidence: 2019 commercial widget sales data.
EXAMPLE: 03 - Training for widget use.	Award + 4 months	Solution provider trains three AF end-users use of adapted solution in operational environment.	Three AF end-users verify training sufficient to use adapted widget.	\$75,000 Evidence: Non-Defense Customer A pilot program invoice.
EXAMPLE: 04 – Widget test support.	Award + 12 months	Solution provider supports test, produces report re: adapted widget performance in solving AF users’ needs as described in task 01.	Report of test results confirmed by AF end-users.	\$100,000 Evidence: Non-Defense Customer B pilot program invoice.
EXAMPLE: 05 – Widget warranty.	Award +15 months	Adapted widgets remain in working condition throughout contract performance.	AF end-users verify widgets’ remained in working condition for entire contract performance.	\$100,000 Evidence: Non-Defense Customer C pilot program invoice.

- **Deliverables:** Include a section clearly describing the specific sample/prototype hardware/software to be delivered, as well as data deliverables, schedules, and quantities.
- **Unique Item Identification:** IAW DFARS 252.211-7003, Item Identification and Valuation, may be required. Information regarding hardware may be found at: <https://www.acq.osd.mil/dpap/dars/dfars/html/current/252211.htm#252.211-7003>
- **Required Reports:** At a minimum, the Phase II Work Plan must include the following required scientific and technical reports.

- **Final Report:** Draft due 30 calendar days after technical performance completion. The first page shall include a single-page project summary, identifying the work’s purpose, a brief performance description, and potential results applications. DoD may publish the summary; therefore, **it shall not contain proprietary information**. It shall also contain project objectives met, work completed, results obtained, and technical feasibility estimates.
- **Status Reports:** Due at least quarterly, they shall be concise documents describing progress toward meeting AF end-user’s needs. Each shall be no longer than 15 slides. They shall include progress toward Phase II objectives and key results, as well as a quantitative measure between 0-1 for progress toward each.
- **Phase II Summary Report:** The Phase II summary report, submitted to the Contracting or Agreements Officer via email, shall not exceed 700 words. Due at technical performance completion, it will include a technology description and anticipated Government and/or private sector applications/benefits.
- **Additional Reporting:** The AF end-user or customer may require additional reporting or documentation including:
 - Software documentation and user manuals;
 - Engineering drawings;
 - Operation and maintenance documentation;
 - Safety hazard analysis when partial/total hardware development/delivery is anticipated; and
 - Updated commercialization results.
- **Additional Reporting Requirement for Cost Match Efforts:** Final Phase II status report must include, in company format, investor project expenditures description.
- **Technical Interchange Meetings:** Awardees will be required to conduct technical interchange meetings with Government technical personnel at least quarterly. To limit associated costs, these meetings will be held using a virtual app, e.g., Zoom, Microsoft Teams, etc.”
- **Safety Related Deliverables:** Safety requirements shall be followed in design and performance. The Work Plan must contain separate sections specifically addressing:
 - Preliminary Hazard Analysis Report (if applicable): For hardware development, the contract shall include at least a preliminary hazard analysis deliverable.
 - Hazardous Material Report: For hazardous material use, the following shall be provided:
 - Materials identification;
 - Materials purpose; and
 - Possible alternatives/procedures/safeguards to minimize risk.

3.3.7 Commercialization Potential

3.3.7.1 Commercialization Plan: The SBA and DoD require a Phase II commercialization plan. The plan should briefly describe anticipated results and potential commercialization, including plans to exploit in both the Defense and non-Defense markets. The plan must include:

- Company Information. Focused objectives/core competencies; specialization area(s); products with significant sales; and previous Federal and non-Federal funding history (including foreign investments), regulatory experience, and commercialization.

- Customer and Competition. Clear key technology objective descriptions, current competition advantages compared to competing products/services; hurdles to innovation acceptance.
- Market. Milestones. Target dates, market size analyses, and estimated market share after first year and first five years' sales; plan to obtain market share.
- Intellectual Property. Patent status, technology lead, trade secrets, or other plan to achieve sufficient protection to reach the commercialization stage, attaining at least a temporal competitive advantage.
- Financing. Plans for securing non-SBIR Government funding for Phase III transition.
- Assistance and Mentoring. Plans to obtain needed technical or business assistance through mentoring, partnering, or State assistance programs, Small Business Development Centers, Federally-funded research and development centers, Manufacturing Extension Partnership centers, or other assistance providers.

Specifically address the following questions:

- What is the anticipated first product to incorporate the proposed technology?
- Who are the probable customers, and what is the estimated market size?
- How much money is required to bring the solution to market and how will it be raised?
- Does the firm have necessary marketing expertise and, if not, how will the firm compensate?
- Who are the probable competitors, and what price/quality advantage is anticipated?
- Are there private sector or non-SBIR/STTR funding sources demonstrating commitment to Phase II efforts/results? This includes both outside private investment such as venture capital, angel investors, State or local government programs, etc. and internal funding sources, e.g., from affiliates. Delineate past and potential future investments, e.g., currently raising a round, signed term sheets, etc. Also state whether commitments are conditioned upon Phase II award receipt.
- Note private investment funds from qualified third-party investors for potential Phase II supplemental agreements, e.g., the investor and SBIR Program provide additional funding, adding work to the original Phase II.
- Note private or Government follow-on commitments available for Phase III.
- Note other commercial potential indicators.
- Provide the past 12 months' total revenue from non-Defense commercial solution sales of the item proposed for adaptation to meet an AF need.
- State the proposed Phase II anticipated results, specifically plans for Phase III transition to a potential Government customer.
- Discuss the Phase II effort's significance to the Phase III effort.

NOTE: Phase II awardees are required to periodically update Phase II project commercialization results at <https://sbir.defensebusiness.org/>. These updates are required one year after Phase II start, at Phase II completion, and when a new DoD SBIR/STTR proposal is submitted. Firms not submitting new proposals to DoD are requested to provide annual updates after Phase II completion.

3.3.7.2 Military Applications/DoD Customers. Briefly describe the proposed solution’s existing/potential military requirement. Identify the DoD agency/organization most likely to become the solution’s customer. It is likely the potential DoD customer and end-user are not the same person/organization. For example, the user may be an operational flying unit and the customer a system program office for the related aircraft. Identify DoD agencies, if any, expressing interest in, or committed to, a non-SBIR, Federally-funded Phase II supplement with matching SBIR funds or a Phase III with non-SBIR funding. If so, discuss funds availability for solution transition. Include relevant funding details, such as funding type, i.e., RDT&E, Operations and Maintenance, etc. Include contact names, email addresses, and telephone numbers.

NOTE: IAW 15 USC 638(e)(9), Phase II activities may include products, services, or technologies in technical/weapons systems test and evaluation.

3.3.7.3 Non-Defense Commercial Customers

3.3.7.3.1 Past revenue from the proposed non-Defense commercial solution’s customers. Clearly list non-Defense commercial customers, including revenue resulting from the proposed solution’s sales. This should not include other solutions the company may offer.

3.3.7.3.1 Potential revenue-generating projects directly related to the proposed non-Defense commercial solution or adaptations. Separately list potential revenue-generating projects with Defense or non-Defense customers directly related to the proposed solution. NOTE: On-going or completed projects/sales are strongly preferred to potential projects.

3.3.8 Key Personnel: Identify key project personnel, including subcontractors and consultants. Provide information regarding education, experience, and citizenship. A technical resume for the Principal Investigator, including publications, if any, shall be included.

3.3.8.1 Non-U.S. Citizens: Identify all non-U.S. citizens and dual citizens proposed as direct employees, subcontractors, funding/resource providers, technology licensees/licensors, and/or consultants. For these individuals, in addition to technical resumes, provide countries of origin, type of visas or work permits held, and identify their level of project involvement. For selected proposals determined subject to export-control and/or International Traffic in Arms Regulations (ITAR), these individuals, if permitted to participate, are limited to work in the public domain. Further, tasks assigned must not be capable of assimilation into an understanding of the project’s overall objectives. This prevents foreign citizens from acting in key positions such as Principal Investigator, Senior Engineer, etc. Additional information may be requested during negotiations to verify foreign citizens’ eligibility. The requested information regarding non-U.S. citizens should be captured in this table or similar:

Full Name	Foreign National (Yes or No)	Country of Origin	Type of Visa or Work Permit	Description of Involvement (specific task(s) in the work plan)
(LIST)	(LIST)	(LIST)	(LIST)	(LIST)

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3.3.8.2 Investors and Partners: Identify company investors, shareholders, lenders, technology licensors/licensees, and/or strategic advisors making significant contributions to support the Phase II effort. Describe past experience or track record as it will support the technical or commercialization effort, e.g., leveraging other entities in company investors' portfolios or accessing other capital sources.

3.3.8.3 Related Work: Describe significant activities directly related to the proposed effort, including previous programs conducted by the Principal Investigator, proposing firm, consultants, and/or others, and proposed project application. Include reviewers' comments regarding the offeror's knowledge of the state-of-the-art for the specific approach proposed. Specify related Government efforts, SBIR or otherwise, awarded, previously proposed, or intended for proposal.

3.3.9 Supply Chain Integrity. Describe the overall supply chain including, but not limited to:

- Involvement in joint ventures, partnerships, joint technology development agreements, teaming arrangements, or technical assistance or collaborative technology agreements, including associated entities or person.
- The firm's main component, software, or other suppliers. Discuss others' licensed intellectual property used as material inputs for the firm's products or services.
- Entities utilizing the firm's Intellectual Property.
- Significant non-US customer or investment base, including country(ies) and major customers or investors, i.e., >5% of revenue. Also discuss current or prospective foreign sovereign wealth funds or other foreign government instrumentalities as customers or investors.
- Foreign interests or persons with power, by contractual arrangements or other, to direct or decide matters affecting company management, intellectual property, or operations. Can be direct or indirect, exercised or not, and exercisable or not through ownership of the US company's securities. If yes, state the firm's Foreign Ownership, Control, and Influence (FOCI) mitigation measures,
- Identify needed classified information, if any, and identify the Federal agency approving the firm's classified information handling. If the firm does not currently have approval, describe the intended method to obtain it.
- Verify the firm's owners, investors, and principal investigators meet all applicable U.S. citizenship, residency, and operation requirements under 13 CFR § 121.701-705 and the SBA SBIR/STTR Policy Directive (May 2019).
- Verify the firm shall comply with DFARS 252.225-7048, Export-Controlled Items (June 2013), during Phase II performance.
- Discuss, if appropriate, the firm's mandatory or voluntary reviews of the Committee on Foreign Investment in the United States (CFIUS) under the Critical Technology review program IAW 31 CFR Part 801, or other CFIUS review. If not, discuss company's subject to, or eligible for, CFIUS Critical Technology or other mandatory or voluntary reviews. Detail the firm's technology manufacture/production considered to be emerging/foundational, regardless of export control or definition as critical technology under CFIUS. Describe the firm's consulting, scientific, or engineering services relating to emerging or foundational technology, if any, e.g., quantum information and computing, artificial intelligence, machine learning, advanced sensors and networks, etc.
- Verify the firm shall comply with the Bayh-Dole Act US technology commercialization and manufacturing requirements, codified at 35 USC § 204.

3.4 Volume 3: Cost Volume

Use the format provided in the Cost Breakdown Guidance for the DSIP online cost volume form. Some items may not apply to the specific project and, therefore, do not require input. The Government needs sufficient information to allow understanding of proposed funds expenditure, if selected for award. The Cost Volume must be adequate to enable AF personnel to determine the overall price's purpose, necessity, and reasonableness. The cost volume will cover up to 15 months, including 12 months technical effort and three months for reporting. The online Cost Volume and Itemized Cost Volume Information will not count against the 15 page/slide limits. The itemized listing may be placed in the Explanatory Material section of the online Cost Volume or in Volume 5, Supporting Documents, under the "Other" drop-down options. Note: Only one file can be uploaded to DSIP. Ensure this file includes the complete Technical Volume and the information below.

The maximum amount of SBIR funds for any award will be \$750,000, regardless of proposed cost match or share. Fixed price payments shall be tied to measurable milestones and deliverables, as agreed upon with the Government.

Price analysis, including reasonableness, realism, and completeness, of proposed costs is required, and will be subject to US Government and DoD standards. If using comparison with prior efforts, identify the basis upon which the prior prices were determined reasonable. If price analysis techniques are inadequate, provide a cost analysis IAW FAR 15.404-1(c). Cost analysis includes, but is not limited to, consideration of materials, labor, travel, other direct costs, and proposed profit rates. Profit will be allowed subject to OSD guidance on reasonableness

https://www.acq.osd.mil/dpap/cpf/docs/contract_pricing_finance_guide/vol3_ch11.pdf

For direct cost items, include substantiation the amounts are reasonable and realistic. Unsubstantiated costs must be detailed through the cost estimating process. All evidence should be included in the 'Additional Cost Information' section of Volume 5, Supporting Documents.

If selected for award, the AF CO may require further documentation to substantiate costs, e.g., cost estimates for equipment, materials, consultants, subcontractors, etc. Additional cost proposal and accounting standard information is available in the DCAA publication titled "Audit Process Overview – Information for Contractors" at <http://www.dcaa.mil>.

Information included in the online Cost Volume form includes but is not limited to:

- Direct Labor Costs: Identify key personnel by name or labor category. Individuals' hours, labor category, labor overhead and/or fringe benefits, and actual hourly rates are required.
- Direct Material Costs: Justify materials, parts, and supply costs with an itemized list containing types, quantities, price, and, where appropriate, purpose. If proposing direct material costs, justifying information (vendor quotes, historical costs, etc.) can be included as "Supplemental Cost Information" in Volume 5, Other Supporting Documents.
- Other Direct Costs: This cost category includes specialized services such as machining or milling, special testing or analysis, and costs incurred for temporary specialized equipment use. Proposals including leased hardware must provide an adequate lease vs. purchase justification or rational. If proposing other direct costs, additional information can be included as "Supplemental Cost Information" in Volume 5, Other Supporting Documents.

- Travel: Include travel costs in “Other Direct Costs.” Must relate to project needs, broken out by trip, destination, purpose, number of travelers, airfare, per diem, lodging, ground transportation, etc. Recommend budgeting at least one trip to the AF TPOC’s location. Actual travel costs may differ from proposed travel costs. The proposal information allows the CO to determine travel costs are reasonable.
- Subcontracts: Include subcontract/consultant costs in “Other Direct Costs.” University or other consultants involvement in project planning and/or research stages may be appropriate. If the offeror requires such involvement, describe in detail, including Cost Volume information. The total consultant fees, facility lease or usage fees, and other subcontract or purchase agreements costs may not exceed one-third of the total contract price, unless otherwise approved in writing by the CO. Include copies of subcontract agreements to support subcontractor costs. Subcontract agreements must adequately describe intended performance. At a minimum, include a Statement of Work (SOW) with a corresponding detailed Cost Volume for each planned subcontract.
- Consultants: Provide a separate agreement letter for each consultant, briefly stating the service or assistance to be provided, number of hours, and hourly rate.
- Special Tooling/ Test Equipment/Material: Proposed equipment and materials will be carefully reviewed for appropriateness to the proposed effort. Special tooling and test equipment purchases must, in the CO’s opinion, be advantageous to the Government and relate directly to the specific effort. It may include such items as innovative instrumentation and/or automatic test equipment. Title to Government Furnished Property or property acquired with Government funds will be vested with the AF, unless it is determined title transfer to the contractor is more cost effective than AF recovery.

PLEASE ROUND ALL COSTS TO THE NEAREST DOLLAR!

NOTE: If no exceptions are taken to an offeror’s proposal, the Government may award a contract without negotiations. Therefore, the offeror’s initial proposal should contain its best terms from a price and technical standpoint. The Government reserves the right to award Phase IIs as firm fixed price FAR-based contracts or Other Transactions for Prototype. Contact the CO identified in the selection notification with award type questions. The Government reserves the right to reopen negotiations if the CO later determines it necessary.

3.5 Volume 4: Company Commercialization Report (CCR)

The small business’s record of commercializing SBIR/STTR or other shall be reflected in the CCR. The CCR for prior SBIR/STTR awards may be included to satisfy this requirement. The CCR is required even if the proposing firm has no previous or current SBIR/STTR awards. Following the instructions on DSIP, enter prior Phase IIs’ quantitative commercialization results. Include the items listed below and other information relative to the firm’s commercialization track-record.

- Sales revenue from newly developed products and non-R&D services using Phase II technology;
- Investment from non-Federal SBIR/STTR Program to further Phase II technology development and/or commercialization;
- Phase II technology used in fielded DoD systems or acquisition programs, if any, including the system or program name(s);
- Number of patents resulting from SBIR/STTR Program participation;
- Increase company employees; and
- Initial public stock offering (IPO), if any, resulting from a Phase II project.

All prior DoD and non-DoD Phase II projects must be reported, regardless of commercialization to date. These results will be compared to the DoD SBIR Program's historical averages to calculate a Commercialization Achievement Index (CAI) value. Only firms with four or more Phase II projects awarded at least two years prior to this solicitation receive a CAI score. Otherwise the CAI is not applicable. See the DSIP CCR section for more details. Firms with a CAI at \leq 20th percentile are rated no higher than "Marginal". This report shall be prepared once and included in all proposals submitted under this solicitation. A report showing a firm has received no prior Phase II awards will not affect their ability to be considered or selected for award.

Additional explanatory material for the firm's SBIR/STTR project commercialization may be included in the CCR, Commercialization Track Record Narrative section. This can include but is not limited to Government or private-sector commercialization successes not fully captured in the quantitative results, e.g., resulting from a firm's prior Phase I projects; mitigating factors for low commercialization; recent changes in organization or personnel designed to increase commercialization; and new qualified third party investments.

3.6 Volume 5: Supporting Documents

Volume 5 is NOT optional. It allows small businesses to submit additional Technical and Cost Volume supporting documentation. Documents acceptable for inclusion in Volume 5 are found in Section 3.1.

3.6.1 Customer Memoranda/Letters of Support. Letters of support demonstrate the proposed innovation, if developed, would solve a valid market need. More generally, letters of support help validate proposal commercial impact claims. Therefore, letters from potential technology end-users, i.e., customers, and corporate partners/collaborators are appropriate, as well as letters from actual or potential investors. Include signed Customer Memoranda from AF/non-AF end-users and/or customers. Organize all memoranda/letters logically, e.g., AF Customer Memoranda in one section, non-AF US Government Customer Memoranda in another, letters of support from non-Defense commercial customers in another, etc., and uploaded in a single .pdf. **Proposals without a Customer Memorandum signed by an AF organization WILL NOT BE CONSIDERED FOR AWARD.**

NOTE: If proposing to work with more than one AF end-user, all signed Customer Memoranda must be consolidated into a single, coherent memorandum reflecting the consolidated work plan milestones and signed by the lead AF Phase II Program Manager.

3.6.2 15-Page Slide Deck: Include a 15-page slide deck concisely summarizing the proposal's main points. It should be clear and easy to understand, as it will be used as the basis for proposal comprehension. Other volumes will provide the bulk of information.

- Slide 1 Summary: Include a simple overview of product-market fit, proposed trial and customer, and objectives/key metrics.
- Slide 2 Technical Merit Summary: Summarize the commercial non-Defense solution's best features and describe the R/R&D adaptation to meet an AF need, as well as R/R&D proposed to establish scientific and technical feasibility.
- Slide 3 Team's Ability to Accomplish Work Summary: Summarize the team's strengths in fulfilling the AF end-user and associated stakeholders' needs through the completed trial.

- Slide 4 Commercialization Potential: Summarize potential AF customers’ best ideas for Phase III funding and/or non-Defense commercialization.
- Slide 5 Financial Sustainability: Describe the product and company’s financial sustainability. Include the non-Defense solution’s sales/revenue numbers, if available. This is an R&D solicitation, not for COTS item resale. Note: This information WILL NOT be shared outside the Government acquisition team.
 - Slide 6 Team Commercialization Overview: Include partners/investors and past team efforts/successes. This slide should include commercialization team strengths, not just scientific strengths.
 - Slide 7 Pricing: The effort’s pricing should be linked to the non-Defense commercial solution’s price, including references to applicable invoice.
 - Slide 8 Non-Defense Commercial Solution: Clearly describe the non-Defense commercial solution, including relevant customers/sales.
 - Slide 9 R/R&D Commercial Solution Adaptation: Describe R/R&D adaptations or changes to the non-Defense commercial solution required to fulfill AF end-user/customer needs.
 - Slide 10 AF End-User: Describe the AF end-user(s) and the proposed solution’s ability to address their needs. Include information regarding signed Customer Memoranda received.
 - Slide 11 Key Stakeholders: Describe stakeholders, e.g., safety, range officials, cybersecurity, program managers, small business professionals, requirements community, information assurance, etc., within and outside the Government key to executing the product’s R&D and trial with the AF Customer. Explain how their buy-in will be secured, e.g., signature on an official document.
 - Slide 12 Objectives and Key Metrics: Describe how success/failure is measured during the solution’s trial.
 - Slide 13 Milestone Schedule: Include milestone schedule highlights with timing, acceptance criteria, and proposed costs.
 - Slide 14 Results of Feasibility Study: Include feasibility study highlights with metrics and methods for AF end-user, R/R&D, and customer discovery completed in Phase I.
 - Slide 15. Any additional points the firm wishes to include.

3.6.4 Lifecycle Certification: All SBIR/STTR Phase II awardees must complete certification documents at award, prior to receipt of more than half the total contract amount, AND before final payment receipt. All questions must be answered and an authorized company officer must sign and date prior to submission. Completion is part of Phase II performance requirements.

3.6.5 Prior, Current, or Pending Support of Similar Proposals or Awards. Identify proposals for essentially equivalent work submitted to other US Government agencies or DoD components as described in 3.2.4 above:

Name of Federal Agency to which the Proposal was submitted	Date of Proposal Submission	Title of Proposal and (if SBIR/STTR) Proposal Number	Name of Principal Investigator	Was awarded? If so, include contract number.

(LIST)	(LIST)	(LIST)	(LIST)	(LIST)
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NOTE 1: If this does NOT apply, include a single-page document stating, “No prior, current, or pending US Government support for proposed work.”

NOTE 2: The Identification of similar proposals or awards is particularly important for the special topics, as they are broader in nature than most traditional SBIR topics. Offerors must disclose similar proposals or awards. Additionally, re-using parts or whole proposals from previously awarded efforts will likely result in disqualification.

3.6.6 Foreign Citizens Table. For further information, see Section III, item 3.3.8.2, and Section VII, item 5. If subject to ITAR, involvement of foreign nationals may be restricted. “Foreign National” is defined in 22 CFR 120.16 as a natural person who is neither a lawful permanent resident (8 USC §1101(a)(20)), nor a protected individual (8 USC § 1324b(a)(3)). It also includes foreign corporations, business associations, partnerships, trusts, societies, other entities/groups not incorporated/organized to do business in the United States, international organizations, foreign governments, and their agencies/subdivisions. Offerors must identify foreign national team members and provide their countries of origin, visa/work permits possessed, and Work Plan tasks assigned. Additional information may be required during negotiations to verify eligibility. Even if eligible, participation may be restricted due to US Export Control Laws.

NOTE: Export control compliance statements are not all-inclusive and do not remove submitters’ liability to comply with applicable ITAR/EAR export control restrictions or inform the Government of potential export restrictions as efforts proceed.

3.6.7 Supplemental Cost Information: A detailed cost proposal must be submitted and uploaded as Additional Cost Information in Volume 5. Cost proposal information will be treated as proprietary. Include direct cost substantiating information, e.g., non-Defense solution sales figures, based upon price analysis in the Cost Volume. Proposed costs must be provided by individual cost element and contractor fiscal year (FY) in sufficient detail to support estimates’ bases, as well as the purpose, necessity, and reasonableness of each. This information will expedite contract execution if selected for award. For further detail, see section 3.4, Volume 3: Cost Volume.

3.6.8 Technical Data Rights (Assertions). Rights in technical data, including software, developed under the terms of contracts awarded under this solicitation generally remain with the contractor. The Government obtains a royalty-free license to use such technical data for Government purposes only, beginning at contract award and ending 20 years after the contract’s last deliverable submission. This data shall be marked with the DFARS 252.227-7018, *Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program*, restrictive legend. Upon 20 year restrictive license expiration, the Government has unlimited rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any persons other than its support services contractors except (1) for peer review purposes; (2) as expressly permitted by the contractor; or (3) a use, release, or disclosure is necessary for Government-operated items’ emergency repair or overhaul. Proposing firms asserting data rights should include the following table in the proposal:

Technical Data or Computer Software to be Furnished With Restrictions	Basis for Assertion <ul style="list-style-type: none"> • None • Developed exclusively at private expense, • Developed partially at private expense 	Asserted Rights Category <ul style="list-style-type: none"> • None • Government Purpose Rights • Limited Rights (Technical Data) • Restricted Rights (Software) • Specifically Negotiated License 	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

If a proposer plans to submit assertions IAW DFARS 252.227-7017, *Identification and Assertion of Use, Release, or Disclosure Restrictions*, those assertions must be identified. Further, assertion of use, release, or disclosure restrictions MUST be included in this section. A contract cannot be awarded until assertions have been approved.

3.6.9 Funding Agreement Certification (signed): Firms selected for award must complete the certificate at proposal submission and include the information in Volume 5.

3.6.10 SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire: Include a completed version of the SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire.

3.6.11 One-Page ‘Sales Pitch’ Summary Document: Include a visually appealing, 1-page company ‘sales pitch’ and the proposed non-Defense commercial solution adaptation to meet an AF need. The document may be circulated publicly and, therefore, shall contain no confidential or Personally Identifiable Information, e.g., names, contact information, etc., for AF employees. This does not count against the 15-page limit.

3.6.12 Phase II Milestones and Funding Document Chart and Cost Match Documentation: Include the following information to establish proposed milestones and payment schedule.

- Provide a completed Milestones Progress and Funding Schedule form (Section 3.3.4), including proposed project milestones and funding expenditure/payment schedule, with or without cost match or share, as appropriate.
- If cost match or share is proposed, verify the outside investor and/or internal/affiliated funding source will match total Phase II funding in cash, contingent on proposal selection. There are no minimum cost match or share rates. Also provide a letter from the outside investor and/or affiliated funder to the offeror, uploaded to Volume 5, Other, containing:
 - A commitment to match funding in cash, contingent on award selection and fulfilling specified project milestones. Milestones must be structured to avoid front-loading and/or unbalanced SBIR funds expenditure. Specifically, cost match or share cannot be conditioned on majority or total SBIR funds expenditure before cost match/share is expended.

- A brief, i.e., ≤ one page description of investment-funded tasks. Invested funds may pay for additional project-related R&D or other non-Work Plan activities, provided they further the technology’s development and/or commercialization, e.g., marketing.
- A brief, i.e., ≤ one page, statement describing the investor’s (i) experience evaluating companies' technology commercialization ability and (ii) technology market assessment, including the company’s ability to bring it to market.

3.6.13 Additional Equipment/Facilities Information: Describe instrumentation and/or physical and digital facilities necessary and available to carry out the Phase II effort. Justify equipment to be purchased and include in ‘Additional Cost Information’, as necessary. State whether proposed performance locations meet Federal, state, and local Governments environmental laws and regulations for, but not limited to, airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid/bulk waste disposal practices, and toxic/hazardous material handling/storage.

3.6.14 Additional Subcontractor/Consultant Information: List private companies, consultants, universities or Federal Laboratories potentially formally involved in the project. All should be described in detail and included in the cost proposal as necessary. Copies of signed consultant and subcontractor letters of intent must be attached to the proposal. These letters should briefly state the contribution or expertise provided. Include information regarding consultant or subcontractor unique qualifications.

3.6.15 Allocation of Rights (SBIR). According to the SBA SBIR/STTR Policy Directive, an SBC retains ownership of all SBIR/STTR data it develops or generates while performing under SBIR/STTR awards. The SBC retains all rights in SBIR/STTR data not granted to the Federal Government IAW the SBA SBIR/STTR Policy Directive. The SBC’s rights do not expire but are subject to certain protection periods consistent with DFARS 227.7104 and DFARS 252.227-7018, *Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program*.

3.7 Volume 6: Fraud, Waste, and Abuse Certification: AF SBIR/STTR CoE has instituted training and certification requirements to combat program fraud. As a result, all offerors are required to complete Fraud, Waste, and Abuse Training as part of during the Phase II proposal submission process. When training is complete and certified, DSIP will indicate so in the proposal, thereby completing Volume 6. If the training is not completed, the offeror will receive an error message and cannot submit the proposal until the training is complete.

NOTE: Proprietary Information and Intellectual Property: Information contained in Not Selectable proposals remain the offerors’ property. The Federal Government may retain proposal copies. Public release of proposal information will be subject to existing statutory and regulatory requirements. Proprietary information, e.g., trade secrets, commercial or financial information, etc., in proposals will be treated in confidence to the extent permitted by law, provided the proposal is marked as follows:

- Proposal Title Page: “This proposal contains information that shall not be disclosed outside the Federal Government and shall not be duplicated, used, or disclosed in whole or part for any purpose other than proposal evaluation, unless authorized by law. The Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract if award results from proposal submission. The restricted information is contained

on all proposal pages except [*insert page numbers or other identification for pages with no restricted information*]. (End of Legend); and

- The following legend must appear on each proposal page containing information to be protected, “*Use or disclosure of information contained on this sheet is subject to the restriction on the proposal’s title page.*”
- DFARS 227.7104 and 252.227-7018, *Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program*: The Government obtains SBIR data rights in technical data and computer software generated under SBIR/STTR contracts marked with the SBIR data rights legend. This provides the Government limited rights in technical data and restricted rights in computer software during the SBIR data protection period commencing with contract award and ending twenty years after the last contract deliverable’s submission under the effort generating the data. Upon expiration of the twenty year restrictive license, the Government has unlimited rights to the SBIR data, unless the firm receives another contract under which the SBIR data rights are asserted. During the SBIR data protection period, the Government may not release or disclose SBIR technical data or computer software to any person except as authorized under limited rights in technical data or restricted rights for computer software.

Agency and Program Flexibilities under 15 USC 638(bb)(1) and (2)

Agencies: All SBCs receiving SBIR Phase I awards from a Federal agency shall be eligible to receive a subsequent SBIR Phase II award from another Federal agency. The head of each relevant Federal agency or the relevant Federal agency’s component must make a written determination the relevant awards’ topics are the same. Both agencies must report the awards to the SBA for inclusion in the public database under 15 USC 638(k).

SBIR/STTR Programs: SBCs receiving STTR Phase I awards shall be eligible to receive subsequent SBIR Phase II awards. The participating agency or agencies shall report awards to the SBA for inclusion in the public database under 15 USC 638 (k).

V. SELECTION METHOD AND REVIEW CRITERIA

Proposals will be evaluated based on the criteria outlined below.

Proposals will be initially screened to determine responsiveness. Proposals passing this initial screening will be peer reviewed by engineers and/or scientists to determine the most promising technical and scientific approaches. Each proposal shall be judged on its own merit. The AF is under no obligation to award any proposal or specific number of proposals in a given topic. The AF reserves the right to award all, some, or none of the proposals received under this solicitation.

Proposals will be peer reviewed based on the criteria below. Selections will represent best value to the Government, considering the following factors in descending order of importance:

- a. The potential for commercial (Government or private sector) application and the benefits expected to accrue from this commercialization. Matching funding, whether from government or private sources, is a strong indicator of commercialization potential.
- b. The appropriateness, relevance, and specificity of an identified Defense Need. A complete, signed Air Force Customer Memorandum is a strong indicator of the appropriateness, relevance, and specificity of an identified Defense Need.
- c. The soundness, technical merit, and innovation of the proposed approach and its incremental progress toward topic or subtopic solution.

IAW 15 USC 638(dd)(7), VCOCs, private equity firm, and/or hedge fund investment shall not be used as a criterion for award under this solicitation.

Price reasonableness is established through competition for Phase II awards. Cost analysis may be conducted on otherwise successful proposals to determine the overall price fair and reasonable.

Additional factors that may apply:

- Possible duplication with other R/R&D;
- Potential integration with other Air Force or DoD Programs;
- Phase III potential;
- Funding limitations;
- AF SBIR Program balance;
- Applicant small business size/status pursuant to 13 C.F.R. 121.701-705; demonstrations of eligibility through registrations pursuant to FAR Subpart 4.11 and 4.18; and applicant responsibility pursuant to FAR Part 9; and
- National security concerns.

VI. PROTESTS, FEEDBACK, AND RELEASE OF EVALUATION:

This solicitation and resulting award decisions may be protested to the CO, the Government Accountability Office, or the US Court of Federal Claims. Further, solicitations and award decisions involving Other Transactions may be challenged in US District Courts. Small business awardees' size or status may be protested to the SBA. Solicitation protests must be filed prior to closing.

Proposal feedback may be requested in writing within 30 days after non-selection notification receipt. Written requests must be sent to AF.SBIR.STTR_FeedbackRequest@us.af.mil. Requests should include the company name and telephone number email address for a primary point of contact, as well as an alternate. Include the topic number under which the proposal was submitted and the proposal number. Requests received more than 30 days after non-selection notification receipt will not be fulfilled. Feedback will be provided to offerors with "Not Selectable" proposals ONLY. Unsuccessful offerors are entitled to no more than one feedback session per proposal.

Proposal Review Information Release: After final award decisions have been announced, the offeror's proposal review may be provided to the offeror. The reviewers' identities shall not be disclosed.

VII. DEFINITIONS:

The following definitions from the SBA SBIR Policy Direction, the Federal Acquisition Regulation (FAR) and 10 USC 2371b apply for the purpose of this solicitation:

1. Performance Benchmarks for Progress Toward Commercialization: In accordance with the SBA SBIR 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 at <https://www.sbir.gov/performance-benchmarks>.

2. 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. 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.
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 https://www.pmddtc.state.gov/?id=ddtc_kb_article_page&sys_id=24d528fddbfc930044f9f621f961987. NOTE: Export control compliance statements are not all-inclusive and do not remove submitters' liability to 1) comply with applicable ITAR/EAR export control restrictions or 2) inform the Government of potential export restrictions as efforts proceed.
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 USC § 1101(a)(20) or who is not a protected individual as defined by 8 USC § 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 is (A) a citizen or national of the US or (B) an alien lawfully admitted for permanent residence, granted alien status lawfully admitted for temporary residence IAW 8 USC §1160(a) or §1255a(a)(1), admitted as a refugee IAW 8 USC §1157, or granted asylum IAW Section 8 USC §1158. It does not include (i) an alien who fails to apply for naturalization within six months of the first eligibility date (by virtue of lawful permanent residence period) or, if later, within six months of November 6, 1986, and (ii) an alien applying on a timely basis but not naturalized as a citizen within 2 years of the application date, unless the alien can establish active naturalization pursuit, except time consumed in the Service's application processing shall not be counted toward the 2-year period.

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.
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. Other transactions under 10 USC 2371b may also be used, consistent with *Other Transactions Guide* (2018) from the Under Secretary of Defense for Acquisition & Sustainment. Only the contract method or the other transaction method will be used by USAF for all SBIR awards.
8. Certified HUBZone Small Business Concern: An SBC that has been certified by SBA under the Historically Underutilized Business Zones (HUBZone) Program (13 CFR § 126) as a HUBZone firm listed in the Dynamic Small Business Search (DSBS).
9. Proprietary Information: Information providing constituting a trade secret or proprietary commercial or financial information.
10. 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.

11. 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 CFR 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 USC §§ 2131-2159), as well as other applicable Federal and state law and regulation and DoD instructions.

“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.

12. Research Involving Human Subjects: All research involving human subjects shall be conducted in accordance with 32 CFR § 219 “The Common Rule,” 10 USC § 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 USC § 980) and chemical and biological agent research (DoDD 3216.02). Food and Drug Administration regulation and policies may also apply.

“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.

13. Commercial Applications (15 USC 638(e)): The term “commercial applications” shall not be construed to exclude testing and evaluation of products, services, or technologies for use in technical or weapons systems.
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: https://osp.od.nih.gov/wp-content/uploads/2013/06/NIH_Guidelines.pdf. 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.
15. Service-Disabled Veteran-Owned Small Business (SDVOSB): A small business concern owned and controlled by a Service-Disabled Veteran or Service-Disabled Veterans, as defined in Small Business Act 15 USC § 632(q)(2) and SBA’s implementing SDVOSB regulations (13 CFR 125).
16. Small Business Concern (SBC): A concern that meets the requirements set forth in 13 CFR § 121.702 (available [here](#)). An SBC must satisfy the following conditions on the date of award:
 - a. Is organized for profit, with a place of business located in the United States, which operates primarily within the United States or which makes a significant contribution to the United States economy through payment of taxes or use of American products, materials or labor;
 - b. Is in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that if the concern is a joint venture, each entity to the venture must meet the requirements set forth in paragraph (c) below;
 - c. Is more than 50% directly owned and controlled by one or more individuals (who are citizens or permanent resident aliens of the United States), other small business concerns (each of which is more than 50% directly owned and controlled by individuals who are citizens or permanent resident aliens of the United States), or any combination of these; and
 - d. Has, including its affiliates, not more than 500 employees. (For explanation of affiliate, see www.sba.gov/size.)

Joint Ventures and limited partnerships are eligible provided the entity created qualifies as a Small Business Concern as defined in this Program Solicitation.

17. 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.

18. United States: 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.
19. 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.
20. Federal Laboratory: As defined in 15 USC §3703, means any laboratory, any Federally funded research and development center (FFRDC), or any center established under 15 USC §§ 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.
21. Principal Investigator: The principal investigator/project manager is the 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 II, the principal investigator's primary employment must be with the SBC at award and throughout Phase II performance. Primary employment means more than one-half of the principal investigator's time is spent in the SBC's employ. This precludes full-time employment with another organization. Occasionally, deviations from this requirement may occur, and must be approved in writing by the CO after consultation with the AF SBIR Program Manager/Coordinator. Further, an SBC may replace the principal investigator on an SBIR Phase I or II, subject to approval in writing by the CO.

22. Commercial Solutions Opening: A competitive procedure COs may use to acquire innovative commercial items, technologies, or services pursuant to FAR Class Deviation 2018-O0016.
23. Innovative: (1) Any new technology, process, or method, including research and development; or (2) any new application of an existing technology, process, or method.
24. Other Transaction: Refers to the type of Other Transaction Agreement (OTA) that may be placed as a result of this solicitation. This type of OT is authorized by 10 U.S.C 2371b for prototype projects directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or material proposed to be acquired or developed by the DoD, or for the improvement of platforms, systems, components, or materials in use by the armed forces. This type of OTA is treated by DoD as an acquisition instruments, commonly referred to as an "other transaction" for a prototype or a Section 2371b "other transaction." The definition of a "prototype project" in the context of an OT is as follows: a prototype project addresses a proof of concept, model, reverse engineering to address obsolescence, pilot, novel application of commercial technologies for defense purposes, agile development activity, creation, design, development, demonstration of technical or operational utility, or combinations of the foregoing. A process, including a business process, may be the subject of a prototype project.
25. Phase II Voluntary Cost Match or Share: This section provides guidance regarding relationships between a small company and outside investors for voluntary matching, as well as for recording funding contributions by the small company or its affiliates. Commitments of cost match or share

constitute evidence of commercial potential pursuant to 15 USC 638(e). There is no requirement to provide cost match or share, and there is no preference for proposals including cost match or share. There are no ratios attached to the voluntary cost match amounts. Each applicant's commercial potential is evaluated based on its own merits in accordance with non-exclusive criteria in 15 USC 638(e). For questions regarding specific situations' qualification, please contact the solicitation CO, Ms. Kris Croake, kristina.croake@us.af.mil.

Examples of Voluntary Cost Match or Share:

- Cost share is money received from internal funds or small business affiliates for R/R&D. The SBIR/STTR Policy Directive states cost share can be encouraged.
- Cost match is funding from outside investors, which includes other companies, State or local governments, venture capital firms, angel investors, non-SBIR/non-STTR Federal Government programs, or any combination thereof. There are no ratios attached to the voluntary cost match amounts. Cost match does not include the small business's owners, their family members, and/or the small business's affiliates, as defined in 13 CFR Section 121.103, as highlighted below:
 - ▶ Concerns are affiliates when one concern controls or has power to control the other, or a third party or parties controls or has power to control both.
 - ▶ Factors considered include ownership, management, previous relationships with or ties to another concern, and contractual relationships, to determine affiliation exists.
 - ▶ Individuals or firms with identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms economically dependent through contractual or other relationships, may be treated as one party with such interests aggregated. Although the proposal must designate funding as provided by outside/external or internal/affiliated sources, the CO or the SBA may deem them to be otherwise external/outside or internal/affiliated.
- In contrast to internal/affiliated cost share, outside cost match must be an arrangement by which the outside party provides the small business cash in return for such items as equity or loans convertible to equity; a share of royalties; rights in the technology; a profit percentage; an advance purchase order for products resulting from the technology; Federal funds transferred to AFRL/SBRF via Military Interdepartmental Purchase Request; or any combination thereof.

The AF SBIR/STTR CO reserves the right to adjust these guidelines at any time. If needed, changes will be sent to all eligible Phase I companies.

VIII. NOTICE OF OTHER CONTRACTUAL REQUIREMENTS

At contract award, firms shall make certain legal commitments through Government contract clause or article acceptance. The following outline illustrates required Federal Acquisition Regulations (FAR)-based or Other Transactions provisions. The list is not a complete, nor does it include full clause/article text. Complete general provision language is available by request prior to award.

- a. Standards of Work. Contract performed must conform to high professional standards.
- b. Inspection. Contract performance 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 Government may terminate the contract at any time 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. The CO with right of appeal shall decide any dispute concerning the contract which cannot be resolved by agreement.
- 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 Congressional member/delegate shall benefit from the contract.
- l. Covenant Against Contingent Fees. No person or agency is employed to solicit or secure the contract for compensation other than the firm's bona fide employees or commercial agencies paid to secure business.
- m. Gratuities. The Government may terminate the contract if gratuities are offered to Government representatives to secure the contract.
- n. Patent Infringement. The contractor shall report patent infringement notices or claims based on contract performance.
- o. Military Security Requirements. The contractor shall safeguard contract-related classified information in accordance with applicable regulations.
- p. American Made Equipment and Products. Purchase only American-made equipment or products whenever possible in support of the SBIR award.
- q. Unique Identification (UID). Proposals including hardware to be delivered to the Government may include DFARS 252.211-7003.

- r. Publication Approval. Government review/approval is required prior to publication/dissemination, other than within/between the Contractor and subcontractors, if any, of classified and non-fundamental information resulting from contract performance or included in reports submitted under the contract.
- s. Animal Welfare. Contracts involving vertebrate animal research, development, test, evaluation, and/or training will include DFARS 252.235-7002.
- t. Protection of Human Subjects. Contracts including or potentially including research on human subjects IAW 32 CFR Part 219, DoD Directive 3216.02, and 10 USC 980, including that meeting the 32 CFR 219.101(b) exemption, will include DFARS 252.235-7004.
- u. E-Verify. Contracts exceeding the simplified acquisition threshold may include FAR 52.222-54, unless exempted as described in FAR 22.1803.
- v. ITAR. In accordance with DFARS 225.7901-4, Export Control Contract Clauses, the clause found at DFARS 252.225-7048 is included in all solicitations and contracts, including awards under this solicitation.
- w. Cybersecurity. SBIR awardees shall provide adequate security for covered contractor information systems. Specific security requirements are defined in DFARS 252.204.7012; compliance is mandatory.

IX. COMMERCIALIZATION UPDATE

The awardee shall periodically update the Phase II commercialization results at <https://sbir.defensebusiness.org/>:

- a. New products and non-R&D services' sales revenue for the Phase II technology;
- b. Additional investment from non-SBIR/STTR Program sources in activities furthering the Phase II's development and/or commercialization;
- c. The Phase II technology used in a fielded DoD system or acquisition program, if any, and the system or program;
- d. Patents resulting from the contractor's SBIR/STTR participation;
- e. Increase in firm's employees; and
- f. Completion of an initial public stock offering resulting, in part, from the Phase II project.

These project updates will be required one year after the Phase II start, at Phase II conclusion, and at submission of a new DoD SBIR/STTR proposal. Firms not submitting new DoD proposals will be requested to provide annual updates after Phase II completion.

Copyrights

With the Contracting or Agreements Officer's prior written permission, 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 each publication contain an appropriate acknowledgment and disclaimer statement.

Patents

Awardees normally may retain the principal worldwide patent rights to Government-funded inventions. The Government receives a royalty-free license, reserves the right to require the patent holder to license others in certain limited circumstances, and requires anyone exclusively licensed to sell the invention in the United States to manufacture it domestically. As authorized by 35 USC 205, the Government will not make public 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 12.6.

Technical Data Rights

Rights in technical data, including software, developed under the award terms resulting from proposals submitted under this solicitation, generally remain with the awardee. The Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with acceptance of the last deliverable under the award and ending 20 years after project completion. This data should be marked with the restrictive legend specified in DFARS 252.227-7018 or similar. Upon expiration of the 20 year restrictive license, the Government has unlimited rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any entity other than its support services contractors except (1) for evaluation purposes; (2) as expressly permitted by the contractor; or (3) use, release, or disclosure is necessary for emergency repair or overhaul of Government-operated items. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program."

If a proposer plans to submit assertions IAW DFARS 252.227-7017 or similar award term, those assertions must be identified and restrictions **MUST** be included in the proposal submission. Award cannot be executed until assertions are approved or mutually agreed-upon during negotiations.

Invention Reporting

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

Final Technical Reports

- a. **Content:** A final report is required for each award. The reports must contain detail regarding the project objectives, work performed, results obtained, and estimates of technical feasibility. A completed SF 298, "Report Documentation Page," will be used as the report's first page. The Report Documentation Page may be prepared and printed from Defense Technical Information Center's (DTIC's) site at http://www.dtic.mil/dtic/submit/guidance_on_submitting_docs_to_dtic.html.

SF 298 Form "Report Documentation Page" Preparation:

1. For unclassified reports, the submitting company should fill in Block 12 (Distribution/Availability Statement) of the SF 298, "Report Documentation Page," with the following statement: "Distribution authorized to U.S. Government only; Proprietary Information, (Date of Determination). Other requests for this document shall be referred to the Component SBIR Program Office." Note: Data developed under SBIR/STTR awards is subject to DFARS 252.227-7018 or similar protection. AF will review the awardee's Block 12 information and assign the final distribution statement.

For additional distribution statement guidance, visit the DTIC site:
http://www.dtic.mil/dtic/pdf/distribution_statements_and_reasons.pdf

Block 14 (Abstract), "Report Documentation Page" must include as the first sentence, "Report developed under SBIR/STTR contract (or OT) for topic [insert topic number]. [Follow with the topic title, if possible.]" The abstract must identify the work's purpose and briefly describe that conducted, the findings/results, and potential applications. The abstract will be published by the DoD. Therefore, **it shall not contain proprietary or classified data**. Type "UU" in Block 17.

2. Block 15 (Subject Terms) 298 must include the term "SBIR Report".

b. Submission:

All final reports are submitted to the awarding AF organization IAW the award document. Companies shall not submit Final Reports directly to DTIC.

Delivery is normally required within 30 calendar days after technical program completion.

Requirements regarding other deliverables' submission will be defined in Sections B and C of contract, and Appendix A of Other Transaction for Prototype, award documents.

Special submission instructions for CLASSIFIED reports will be defined in the award's delivery schedule.

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

Proprietary Information in Proposals: Information contained in unsuccessful proposals will remain the property of the Applicant. However, the Federal Government may retain copies of all proposals. Public release of information in any proposal submitted will be subject to existing statutory and regulatory requirements. If proprietary information is provided by an Applicant in a proposal, which constitutes a trade secret, commercial or financial information, , it will be treated in confidence, to the extent permitted by law, provided that the proposal is clearly marked by the Applicant as follows:

- (A) The following legend must appear on the title page of the proposal: This proposal contains information that shall not be disclosed outside the Federal Government and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than evaluation of this proposal, unless authorized by law The Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract if award is made as a result of the submission of this proposal. . . The information subject to these restrictions are contained on all pages of the proposal except for pages [*insert page numbers or other identification of pages that contain no restricted information.*] (End of Legend); and
- (B) The following legend must appear on each page of the proposal that contains information the Applicant wishes to protect: Use or disclosure of information contained on this sheet is subject to the restriction on the title page of this proposal.

X. PHASE II VOLUNTARY MATCHING FUNDS GUIDANCE

Below guidance discusses relationships between small companies and outside investors for voluntary matching. Matching fund commitments are evidence of commercial potential pursuant to 15 USC 638(e). There is no requirement to provide cost share or match, and proposals including either does not receive preference during peer review. Each applicant's commercial potential is evaluated on its own merits IAW non-exclusive criteria in 15 USC 638(e).

Examples of voluntary cost share or match sources:

- Funding from small business affiliates in support of the proposed R/R&D is generally considered cost share.
- Investment from **outside** sources, which includes other companies, state or local Governments, venture capital firms, individual "angel" investors, non-SBIR/non-STTR Federal Government programs, or any combination thereof, is considered cost match. This does not include the the small business's owner, their family members, and/or "affiliates" of the small business, as defined in 13 CFR Section 121.103, as highlighted below:
 - Concerns are affiliates when one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.
 - Factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships are considered in making affiliation determinations.
 - Individuals or firms with identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms economically dependent through contractual or other relationships, may be treated as one party with such interests aggregated. While the proposal must state whether funding is from external or internal sources, the Contracting Officer and the SBA have the discretion to designate an entity as an "outside investor," regardless of the designation in the proposal.
- In contrast to cost-sharing, cost match must be an arrangement by which the outside party provides cash to the small company in return for such items as equity; a share of royalties; rights in the technology; a percentage of profit; an advance purchase order for products resulting from the technology; Federal funds transferred to the AF SBIR/STTR Center of Excellence Finance Division (AFRL/SBRF) via Military Interdepartmental Purchase Request (MIPR), or any combination thereof.

The AF SBIR/STTR Center of Excellence reserves the right to adjust these guidelines at any time. Any changes to these guidelines will be sent to the eligible companies and posted online via amendment to this solicitation.

Voluntary Matching Investment Timing/Logistics

(1) Can Entity E's investment in Small Company S during the first month of S's Phase I SBIR performance qualify as a matching contribution to qualify S for Matching?

Yes, provided E is an outside investor and the other Voluntary Matching conditions are met. The investment can occur at any time after the start of Phase I performance.

(2) Small Company A, which won a Phase I award, spins off Small Company B to commercialize the SBIR technology. A then convinces Angel Investor I to invest funds in B. Is I's investment in B considered a matching contribution to qualify A for Voluntary Matching?

For Angel Investor I's investment in Small Company B to qualify Small Company A for Matching, USAF must determine if A and B are substantially the same entity as evidenced, for example, by meeting the "affiliates" definition " in 13 C.F.R. Sec.121.103. If USAF determines A and B are substantially the same entity, I's investment in B could qualify A for Voluntary Matching. Of course, the parties must also meet the other conditions for Voluntary Matching, e.g., I must be an outside investor.