

UNITED STATES SPECIAL OPERATIONS COMMAND
24.4 Small Business Innovation Research (SBIR)
Phase I Proposal Submission Instructions
Release 6

May 07, 2024: Topic issued for pre-release

May 21, 2024: USSOCOM begins accepting proposals via DSIP

June 11, 2024: DSIP Topic Q&A closes to new questions at 12:00 p.m. ET

June 25, 2024: Deadline for receipt of proposals no later than 12:00 p.m. ET

Join us for a virtual Q&A with our Technical Point of Contact
May 14, 2024 from 1200 - 1400 ET

INTRODUCTION

The United States Special Operations Command (USSOCOM) seeks small businesses with strong research and development capabilities to pursue and commercialize technologies needed by Special Operations Forces through the Department of Defense (DoD) SBIR 24.4 Program Broad Agency Announcement (BAA).

Offerors responding to a topic in this BAA must follow all general instructions provided in the Department of Defense (DoD) SBIR Program BAA. USSOCOM requirements in addition to or deviating from the DoD Program BAA are provided in the instructions below.

Proposers are encouraged to thoroughly review the DoD Program BAA and register for the DSIP Listserv to remain apprised of important programmatic and contractual changes.

- The DoD Program BAA is located at: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/#announcements>. Be sure to select the tab for the appropriate BAA cycle.
- Register for the DSIP Listserv at: <https://www.dodsbirsttr.mil/submissions/login>.

The Offeror is responsible for ensuring that their proposal complies with the requirements in the most current version of these instructions. Prior to submitting your proposal, please review the latest version of these instructions as they are subject to change before the submission deadline.

The Government may withdraw from negotiations at any time for any reason to include matters of national security (foreign persons, foreign influence or ownership, inability to clear the firm or personnel for security clearances, or other related issues).

On May 14, 2024 from 1200 - 1400 ET the USSOCOM SBIR/STTR Program Office will be hosting a virtual USSOCOM Industry Day to specify requirements and stimulate small business/research institute partnership-building. Please visit <https://events.sofwerx.org/sbir24-4r6> to register.

PHASE I PROPOSAL GUIDELINES

The Defense SBIR/STTR Innovation Portal (DSIP) is the official portal for DoD SBIR/STTR proposal submission. Offerors are required to submit proposals via DSIP; proposals submitted by any other means will be disregarded. Detailed instructions regarding registration and proposal submission via DSIP are provided in the DoD SBIR Program BAA.

Proposal Volumes are key in the qualification of the proposal. Offerors shall complete each of the following volumes: (1) Cover Sheet, (2) Technical Volume, (3) Cost Volume, (4) Company Commercialization Report, and (5) Fraud, Waste and Abuse Training.

Please Note:

1. It is the Offeror's responsibility to make sure all DoD and USSOCOM instructions are followed, and all required documents are submitted. The DSIP (DoD's SBIR/STTR proposal submission website) will NOT be able to ensure your submission is in accordance with both DoD and USSOCOM instructions. The DSIP notice "100% submitted" means that the upload process is complete; it does NOT mean the proposal submission complies with the stated instructions and that all required documentation is successfully uploaded.
2. USSOCOM does not assist Offerors with proposal preparation nor does USSOCOM review proposals for completeness. We recommend you use your local and state resources for assistance. (See DoD Instructions for resources information.)
3. Due to lengthy file names USSOCOM has encountered issues while downloading proposals, Offerors shall not use more than 20 characters (to include spaces) in any of the proposal documents titles.
4. The identification of foreign national involvement in a USSOCOM SBIR topic is needed to determine if a firm is ineligible for award on a USSOCOM topic that falls within the parameters of the United States Munitions List, Part 121 in the International Traffic in Arms Regulation (ITAR). A firm employing a foreign national(s) (as defined section in the titled "Foreign Nationals" of the DoD SBIR Program BAA) to work on a USSOCOM ITAR topic must possess an export license to receive a SBIR Phase I contract.
5. **USSOCOM prohibits a Government Letter of Support (LoS). Any Government LoS provided will deem the proposal to be non-responsive (Disqualified).**

Cover Page (Volume 1)

Volume 1 is created as part of the DoD Proposal Submissions process. Follow all instructions provided in the DoD SBIR Program BAA and DSIP.

Technical Volume (Volume 2)

The technical volume is Not to Exceed (NTE) five (5) pages and must follow the formatting requirements provided in the "SBIR 24.4 Annual Program BAA", "Format of Technical Volume" and "Content of Technical Volume". USSOCOM will only evaluate the first (5) pages of the Technical Volume, additional pages will not be considered or evaluated.

Content of the Technical Volume

Required items are specified in the DoD SBIR Program BAA Phase I Format of Technical Volume instructions, reference <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/> then scroll to the bottom of the page and click on the tab titled "Supporting Documents and Attachments". At the bottom of the list, select the document titled "Phase I Technical (Vol 2) Sample Template".

Contract Data Requirement Lists (CDRLs): CDRLs identifies which data products must be delivered by the contractor to the Government. Please make sure you read all required CDRLs requirements (each using a DD Form 1423-1) prior to developing your proposal. All five of the required Phase I CDRLs are available on <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.

Cost Volume (Volume 3)

The Phase I Base amount must not exceed \$175,000.00. Costs must be identified on the Proposal Cover Sheet (Volume 1) and in Volume 3. Once the proposal is initiated in DSIP, the Offeror will have access to the required USSOCOM specific Cost Volume instructions and template.

A minimum of 67% of the research and/or analytical work in Phase I must be conducted by the proposing firm. The percentage of work is measured by both direct and indirect costs as a percentage of the total contract cost.

Please review the updated Percentage of Work (POW) calculation details included in section 5.3 of the DoD Program BAA. USSOCOM will not accept any deviation to the POW requirements on these Phase I topics.

The cost volume template (Volume 3 template) is located on DSIP during proposal submission and <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.

Company Commercialization Report (CCR) (Volume 4)

Completion of the CCR (Volume 4) of the proposal submission in DSIP is required. Please refer to the DoD SBIR Program BAA for full details on this requirement. Information contained in the CCR will be considered by USSOCOM during proposal evaluations.

Supporting Documents (Volume 5)

All proposing small business concerns are REQUIRED to submit the following documents to Volume 5:

1. Contractor Certification Regarding Provision of Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (BAA Attachment 1)
2. Disclosures of Foreign Affiliations or Relationships to Foreign Countries (BAA Attachment 2)
3. The Verification of Eligibility of Small Business Joint Ventures (BAA Attachment 3) is required, if applicable to the proposing small business.
4. Section K - Titled "Representations, Certifications, and other statements of Offerors": If Section K is not submitted with the proposal, the proposal will still be considered responsive, but the completed Section K shall be required at the time of award. Section K is available at <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.
5. Resumes: Include resumes.

A completed proposal submission in DSIP does NOT indicate that the mandatory supporting documents have been uploaded. It is the responsibility of the proposing small business concern to ensure that the mandatory documents listed above have been uploaded and included with the proposal submission.

Fraud, Waste and Abuse Training (Volume 6)

Fraud, Waste and Abuse (FWA) training is required for Phase I proposals. Please refer to the DoD SBIR Program BAA instructions for full details.

DISCRETIONARY TECHNICAL AND BUSINESS ASSISTANCE (TABAs): USSOCOM does not provide TABAs for Phase I awards.

INQUIRIES: USSOCOM does not allow direct communication with the topic authors (differs from the DoD SBIR Program BAA instructions).

During the Pre-Release and Open Periods of the DoD SBIR Program BAA, only and all technical questions that enhance the Offerors understanding of the topic's requirements must be submitted to the online Defense SBIR/STTR Innovation Portal (DSIP) Topic Q&A. All questions and answers submitted to DSIP Topic Q&A will be released to the general public.

USSOCOM does NOT allow inquirers to communicate directly in any manner to the topic authors (differs from the DoD STTR Program BAA instructions). Only questions pertaining to the proposal preparation instructions should be directed to: sbir@socom.mil. All inquiries must include the topic number in the subject line of the e-mail.

Consistent with DoD SBIR instructions, USSOCOM will not answer programmatic questions, such as who the technical point of contact is, the number of contracts to be awarded, the source of funding, transition strategy.

Physical site visits will not be permitted during the Pre-release and Open Periods of the DoD SBIR Program BAA.

EVALUATION AND SELECTION

All proposals will be evaluated in accordance with the evaluation criteria listed in the DoD SBIR Program BAA, with the following exceptions:

1. Proposals missing any of the six stated Volumes, or those that do not comply with the requirement of the minimum percentage of work (67%) to be executed by the proposing firm, or those proposals that exceed the maximum price allowed as per Table 1 of these instructions, will be considered non-responsive. Non-responsive proposals will not be evaluated.
2. The technical evaluation will address the Evaluation Criteria provided in DoD SBIR Program BAA instructions.

The evaluation of the Technical Volume will address the Evaluation Criteria provided in the DoD SBIR Program BAA. Once the evaluations are complete, all Offerors will be notified in a timely manner.

3. The Cost Volume (Volume 3) evaluation:
For this Phase I, the award amount is set at a not to exceed (NTE) amount and a technical evaluation of the proposal cost will be completed to assess price fair and reasonableness. The team will assess the technical approach presented for the effort based on the number of labor hours by labor categories, the key personnel level of involvement, materials, subcontractors, and consultants (scope of work, expertise, participation, and proposed effort), and other direct cost as proposed.
4. As stated in the DoD Program BAA and in accordance with the SBIR and STTR Extension Act of 2022 (Pub. L. 117-183), USSOCOM will conduct a security due diligence on cybersecurity practices, patent analysis, employee analysis, foreign ownership of offerors, and financial ties and obligations for every offeror. Please refer to the DoD Program BAA for additional information.

Additionally, input on technical aspects of the proposals may be solicited by USSOCOM from non-Government consultants and advisors who are bound by appropriate non-disclosure requirements. When appropriate, non-government advisors may have access to Offeror's proposals and may be utilized to objectively review a proposal in a particular functional area and provide comments and recommendations to the Government's decision makers. They may not establish final assessments of risk, or rate or rank Offerors' proposals. All advisors shall comply with procurement Integrity Laws and shall sign Non-Disclosure and Rules of Conduct/ Conflict of Interest statements. The Government shall take into consideration requirements for avoiding conflicts of interest. Submission of a proposal in response to this request constitutes approval to release the proposal to Government support contractors.

Offerors will be notified of selection or non-selection via DSIP within 90 calendar days of the closing date of the BAA. This notification will be sent to the Corporate Official identified by the Offeror during proposal submission. The Government will also notify the Offerors if their proposal is considered non-responsive (disqualified).

A non-selected Offeror can request informal feedback via DSIP, within 30 calendar days of receipt of notification. USSOCOM will only provide informal feedback after receipt of an Offeror’s submitted request.

Refer to the DoD SBIR Program BAA for procedures to protest the Announcement.

As further prescribed in FAR 33.106(b), FAR 52.233-3, Protests after Award should be submitted to: sbir@socom.mil.

PATH TO PHASE II

If awarded a Phase I contract, the Small Business will automatically be invited to propose a Phase II proposal, unless otherwise informed by USSOCOM. To obtain the Phase II requirements, refer to the Contract Data Requirements List (CDRL) A004. The Final Technical Report will be due on or before 6 months of the start of the Period of Performance (PoP) In Accordance With (IAW) CDRL A003. Your Phase II proposal will be due on or before the 195th day of the start of the PoP IAW CDRL A005.

All CDRLs are available on <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>. There are two different attachments for CDRL 5. Please refer to the section titled “Award and Contract Information” for the contracting path pertaining to the topic.

The Government reserves the right to issue any of the following type of awards for Phase II:

1. FAR type contract
2. Non-FAR based fixed price (level of effort type):
 - a. Other Transactions Agreements (OTA). Successful completion of the prototype under an OTA may result in a follow-on production OTA or contract. Successful completion of the prototype is defined as meeting one or more threshold requirements.
 - b. USSOCOM may use a Partnership Intermediary Agreement to award SBIR contracts and agreements to small business concerns. This may be done through USSOCOM’s intermediary partner, SOFWERX (www.SOFWERX.org) resulting in a commercial contract between the firm and DEFENSEWERX. The is authorized by the National Defense Authorization Act (NDAA) for Fiscal Year 2022, Section 852, MODIFICATION OF PILOT PROGRAM FOR DEVELOPMENT OF TECHNOLOGY- ENHANCED CAPABILITIES WITH PARTNERSHIP INTERMEDIARIES. The Government will conduct the evaluation and select the proposals to be funded for award.

AWARD AND CONTRACT INFORMATION

Table 1: Consolidated SBIR Topic Information

| Topic Phase I | Technical Volume | Period of Performance | Award Amount | Contract Type |
|----------------------|-------------------------|------------------------------|---------------------|----------------------|
| SOCOM244-007 | NTE 5 pages | NTE 7 months | NTE \$175,000 | Firm-Fixed-Price |
| SOCOM244-008 | NTE 5 pages | NTE 7 months | NTE \$175,000 | Firm-Fixed-Price |

The Government will conduct evaluations and selections for all SBIR Phase I topic award(s) listed in this BAA.

ADDITIONAL INFORMATION

Phase I proposals shall NOT include:

- 1) Any travel for Government meetings. All meetings with the Government will be conducted via electronic media.
- 2) Government furnished property or equipment.
- 3) Priced or Unpriced Options.
- 4) "Basic Research" (or "Fundamental Research") defined as a "Systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and/or observable facts without specific applications toward processes or products in mind."
- 5) Human or animal studies.
- 6) TABA

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|--------------|---|
| SOCOM244-007 | Thermal Barrier Minimal Deflection Handguard |
| SOCOM244-008 | Ruggedized Additive Mobile Manufacturing Unit (RAMMU) |

SOCOM244-007

TITLE: Thermal Barrier Minimal Deflection Handguard

OUUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Future G; Advanced Materials; Human-Machine Interfaces

OBJECTIVE: The objective of this topic is twofold. First, research thermodynamics involved in an over the suppressor handguard design. Secondly, designing a handguard with a toolless means of mounting. The Sig Sauer Rattler .300BO weapon system and the Sig Sauer SLH Suppressor is the host weapon associated with this SBIR.

IMPORTANT: For SOCOM instructions: please visit: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/>. Go to the bottom of the page and click "DoD SBIR 24.4 Annual". Once there, go to the SOCOM SBIR24.4

DESCRIPTION: Research should be focused on thermal conductivity of the handguard to allow rapid fire while maintaining a surface temperature below the level of discomfort given continual interface with an ungloved hand. Heat dissipation shall address standoff, thickness, insulation, materials of the handguard. Composite materials for inlays or surface panels shall be considered. Overall weight and ergonomics of the handguard is a key consideration. Insulating the heat of the suppressor is a key concern. When selecting materials related to rapid firing, it's crucial to choose those that can withstand high temperatures without decomposing and releasing toxic chemicals. The second aspect of this research is a tool less mounting system for the handguard that will allow removal for maintenance of the piston system. No modifications shall be made to the rifle. While operating, the rail shall remain rigid and returns to within (\leq) .5 milliradian's of mounting center while force is applied and removed by the shooter. Handguard should be between 9 and 11inches in length. Proposers shall provide options for individual components and options for a fully integrated Thermal Barrier Minimal Deflection Handguard.

PHASE I: Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraphs entitled "Objective" and "Description."

The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study ("Technology Readiness Level 3") to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all options that meet or exceed the minimum performance parameters specified below:

- Handguard surface temperature should not exceed 120 deg F when the weapon system is fired with 1 round a sec for 90 rounds with 30secs between magazine changes.
- The handguard should not require tools to install or remove.
- The handguard should remain within .5 miliradian of center once a force of 30lb is applied vertically and horizontally to the end of the handguard.

Currently Arisaka Zero Retention Clamps and a specialty bushing screw is used to stabilize the Sig Handguard. This requires two different torque sizes to remove/install. This is considered armorer level maintenance due to the necessary torque and tightening pattern to ensure the rail will return close to zero. This prevents the end user from removing the piston system to maintain their own rifle and in turn increase the change of malfunctions increasing risk. Rail mounted lasers do not retain zero decreasing accuracy and limiting capability also increasing risk. Firing at a medium rate of fire causes the handguard

to get excessively hot preventing holding the rifle without gloves limiting dexterity also increasing risk. Payoffs of this technology is increased rail stiffness across all the Sig MCX weapon systems to include the SOCOM RAZOR and the Army M7. This technology will also advance heat mitigation technology on handguards that will be necessary for higher velocity projectiles in the future as well. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study on a Thermal Barrier Minimal Deflection Handguard.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military applications to include the Army M7 rifle and any short barrel rifle configuration. Any small arms weapons where user interface of a handguard and mitigating heat is a concern.

REFERENCES: TOP 3.2.045A Test Operations Procedure for Small Arms
<https://apps.dtic.mil/sti/citations/ADA481861>

KEYWORDS: Sig Rattler; Handguard; Thermal Modeling; Composites; Rail

SOCOM244-008

TITLE: Ruggedized Additive Mobile Manufacturing Unit (RAMMU)

OBJECTIVE: The objective of this topic is to develop applied research toward an innovative capability to use additive manufacturing in a deployed environment with the ability to decrease down time for foreign and non-standard weapons parts, motor pool parts, and dental accessories.

IMPORTANT: For SOCOM instructions: please visit: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/>. Go to the bottom of the page and click "DoD SBIR 24.4 Annual". Once there, go to the SOCOM SBIR24.4

DESCRIPTION: As a part of this feasibility study, the proposers shall address all viable overall system design options with respective specifications on materials used to improve or sustain the weapons system without added failures to other parts within the weapons systems with multiple types of materials within the RAMMU used. This Additive Manufacturing (AM) shall be able to print different types of materials, being metal, plastics, polys, and steel, all while keeping the container below a 10Klbs. Threshold. The unit must be a standalone unit with a priority with limited Heavy Operating Equipment at certain locations. The ability to connect into the forward operating bases power is a must. All aspects of environmental awareness for austere environments found at all corners of the world. Operation and maintenance of this equipment can NOT rely on WIFI, Bluetooth or the internet to provide updates or services. The system must be easy to use with plug and play capability as to not increase manpower to operate the RAMMU.

PHASE I: Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraphs entitled "Objective" and "Description."

The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study ("Technology Readiness Level 3") to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study on a deployable platform to be shipped anywhere in the world under the worst conditions and still maintain OEM type output.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military applications where any soldier is deployed in the world with little to no loss in operational usage of the weapons systems. To have the capability to get a weapon operational in a shorter time frame, within 24 hours of that part being broken.

REFERENCES: Navy Post Graduate School has established the Consortium for Advanced Manufacturing Research and Education (CAMRE) to create an environment where the technology being requested can come to fruition through AM tooling. In the whitepaper included, they have partnered with multiple

agencies and companies to push these limits on a NAVY vessel. The idea is to scale this platform to a smaller size in order to achieve the desired endstate.

KEYWORDS: Additive Manufacturing; Poly; metal; 3D printing; CNC machining; CNC; mobile; container; ruggedized