

**DEPARTMENT OF THE NAVY (DoN)  
24.3 Small Business Innovation Research (SBIR)  
Proposal Submission Instructions**

**IMPORTANT**

- **The following instructions apply to topics:**
  - **N243-105 through N243-106**
- Submitting small business concerns are encouraged to thoroughly review the DoD Program BAA and register for the DSIP Listserv to remain apprised of important programmatic changes.
  - The DoD Program BAA is located at: <https://www.dodsbirsttr.mil/submissions/login>. Select the tab for the appropriate BAA cycle.
  - Review the Attachments of the DoD Program BAA and ensure the correct version of the following MANDATORY item is uploaded to the Supporting Documents, Volume 5:
    - Contractor Certification Regarding Provision of Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Attachment 1)
  - Register for the DSIP Listserv at: <https://www.dodsbirsttr.mil/submissions/login>.
- The information provided in the DoN Proposal Submission Instructions document takes precedence over the DoD Instructions posted for this Broad Agency Announcement (BAA).
- **DoN Phase I Technical Volume (Volume 2) page limit is not to exceed 10 pages.**
- Proposing small business concerns that are more than 50% owned by multiple venture capital operating companies (VCOC), hedge funds (HF), private equity firms (PEF) or any combination of these are eligible to submit proposals in response to DoN topics advertised in this BAA. Information on Majority Ownership in Part and certification requirements at time of submission for these proposing small business concerns are detailed in the section titled ADDITIONAL SUBMISSION CONSIDERATIONS.
- Phase I Technical Volume (Volume 2) and Supporting Documents (Volume 5) templates, specific to DoN topics, are available at [https://www.navysbir.com/links\\_forms.htm](https://www.navysbir.com/links_forms.htm).
- The DoN provides notice that Basic Ordering Agreements (BOAs) may be used for Phase I awards, and BOAs or Other Transaction Agreements (OTAs) may be used for Phase II awards.
- This BAA is issued under regulations set forth in Federal Acquisition Regulation (FAR) 35.016 and awards will be made under “other competitive procedures”. The policies and procedures of FAR Subpart 15.3 shall not apply to this BAA, except as specifically referenced in it. All procedures are at the sole discretion of the Government as set forth in this BAA. Submission of a proposal in response to this BAA constitutes the express acknowledgement to that effect by the proposing small business concern.

**INTRODUCTION**

The DoN SBIR/STTR Programs are mission-oriented programs that integrate the needs and requirements of the DoN’s Fleet through research and development (R&D) topics that have dual-use potential, but primarily address the needs of the DoN. More information on the programs can be found on the DoN SBIR/STTR website at [www.navysbir.com](http://www.navysbir.com). Additional information on DoN’s mission can be found on the DoN website at [www.navy.mil](http://www.navy.mil).

The Acting Director of the DoN SBIR/STTR Programs is Mr. Brian Shipley. For questions regarding this BAA, use the information in Table 1 to determine who to contact for what types of questions.

**TABLE 1: POINTS OF CONTACT FOR QUESTIONS REGARDING THIS BAA**

Type of Question	When	Contact Information
Program and administrative	Always	Navy SBIR/STTR Program Management Office <a href="mailto:usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil">usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil</a> or appropriate Program Manager listed in Table 2 (below)
Topic-specific technical questions	BAA Pre-release	Technical Point of Contact (TPOC) listed in each topic. Refer to the Proposal Fundamentals section of the DoD SBIR/STTR Program BAA for details.
	BAA Open	DoD SBIR/STTR Topic Q&A platform ( <a href="https://www.dodsbirsttr.mil/submissions">https://www.dodsbirsttr.mil/submissions</a> ) Refer to the Proposal Fundamentals section of the DoD SBIR/STTR Program BAA for details.
Electronic submission to the DoD SBIR/STTR Innovation Portal (DSIP)	Always	DSIP Support via email at <a href="mailto:dodsbirsupport@reisystems.com">dodsbirsupport@reisystems.com</a>
Navy-specific BAA instructions and forms	Always	DoN SBIR/STTR Program Management Office <a href="mailto:usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil">usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil</a>

**TABLE 2: DoN SYSTEMS COMMANDS (SYSCOM) SBIR PROGRAM MANAGERS**

<u>Topic Numbers</u>	<u>Point of Contact</u>	<u>SYSCOM</u>	<u>Email</u>
N243-105	Mr. Timothy Petro and Ms. Gladis Aispuro	Naval Facilities Engineering Center (NAVFAC)	<a href="mailto:timothy.j.petro4.civ@us.navy.mil">timothy.j.petro4.civ@us.navy.mil</a> and <a href="mailto:gladis.g.aispuro.civ@us.navy.mil">gladis.g.aispuro.civ@us.navy.mil</a>
N243-106	Mr. Shadi Azoum	Naval Information Warfare Systems Command (NAVWAR)	<a href="mailto:info@navwarsbir.com">info@navwarsbir.com</a>

**PHASE I SUBMISSION INSTRUCTIONS**

The following section details requirements for submitting a compliant Phase I proposal to the DoD SBIR/STTR Programs.

(NOTE: Proposing small business concerns are advised that support contract personnel will be used to carry out administrative functions and may have access to proposals, contract award documents, contract deliverables, and reports. All support contract personnel are bound by appropriate non-disclosure agreements.)

**DoD SBIR/STTR Innovation Portal (DSIP).** Proposing small business concerns are required to submit proposals via the DoD SBIR/STTR Innovation Portal (DSIP); follow proposal submission instructions in the DoD SBIR/STTR Program BAA on the DSIP at <https://www.dodsbirsttr.mil/submissions>. Proposals submitted by any other means will be disregarded. Proposing small business concerns submitting through DSIP for the first time will be asked to register. It is recommended that small business concerns register as soon as possible upon identification of a proposal opportunity to avoid delays in the proposal submission process. Proposals that are not successfully certified electronically in DSIP by the Corporate Official prior to BAA Close will NOT be considered submitted and will not be evaluated by DoN. Proposals that are encrypted, password protected, or otherwise locked in any portion of the submission will be REJECTED unless specifically directed within the text of the topic to which you are submitting. Please refer to the DoD SBIR/STTR Program BAA for further information.

**Proposal Volumes.** The following seven volumes are required.

- **Proposal Cover Sheet (Volume 1).** As specified in DoD SBIR/STTR Program BAA.
- **Technical Proposal (Volume 2)**
  - Technical Proposal (Volume 2) must meet the following requirements or the proposal will be REJECTED:
    - Not to exceed ten (10) pages, regardless of page content
    - Single column format, single-spaced typed lines
    - Standard 8 ½” x 11” paper
    - Page margins one inch on all sides. A header and footer may be included in the one-inch margin.
    - No font size smaller than 10-point
    - Include, within the ten-page limit of Volume 2, an Option that furthers the effort in preparation for Phase II and will bridge the funding gap between the end of Phase I and the start of Phase II. Tasks for both the Phase I Base and the Phase I Option must be clearly identified. Phase I Options are exercised upon selection for Phase II.
    - Work proposed for the Phase I Base must be exactly six (6) months.
    - Work proposed for the Phase I Option must be exactly six (6) months.
  - Additional information:
    - A Phase I proposal template specific to DoN to meet Phase I requirements is available at [https://navysbir.com/links\\_forms.htm](https://navysbir.com/links_forms.htm)
    - A font size smaller than 10-point is allowable for headers, footers, imbedded tables, figures, images, or graphics that include text. However, proposing small business concerns are cautioned that if the text is too small to be legible it will not be evaluated.
- **Cost Volume (Volume 3).**
  - Cost Volume (Volume 3) must meet the following requirements or the proposal will be REJECTED:
    - The Phase I Base amount must not exceed \$140,000.
    - Phase I Option amount must not exceed \$100,000.

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- Costs for the Base and Option must be separated and clearly identified on the Proposal Cover Sheet (Volume 1) and in Volume 3.
- For Phase I, a minimum of two-thirds of the work is performed by the proposing small business concern. The two-thirds percentage of work requirement must be met in the Base costs as well as in the Option costs. DoN will not accept deviations from the minimum percentage of work requirements for Phase I. The percentage of work is measured by both direct and indirect costs. To calculate the minimum percentage of work for the proposing small business concern the sum of all direct and indirect costs attributable to the proposing small business concern represent the numerator and the total cost of the proposal (i.e., Total Cost before Profit Rate is applied) is the denominator. The subcontractor percentage is calculated by taking the sum of all costs attributable to the subcontractor (Total Subcontractor Costs (TSC)) as the numerator and the total cost of the proposal (i.e., Total Cost before Profit Rate is applied) as the denominator.
  - Proposing Small Business Concern Costs (included in numerator for calculation of the small business concern):
    - Total Direct Labor (TDL)
    - Total Direct Material Costs (TDM)
    - Total Direct Supplies Costs (TDS)
    - Total Direct Equipment Costs (TDE)
    - Total Direct Travel Costs (TDT)
    - Total Other Direct Costs (TODC)
    - General & Administrative Cost (G&A)

**NOTE:** G&A, if proposed, will only be attributed to the proposing small business concern.
  - Subcontractor Costs (numerator for subcontractor calculation):
    - Total Subcontractor Costs (TSC)
  - Total Cost (i.e., Total Cost before Profit Rate is applied, denominator for either calculation)
- **Cost Sharing: Cost sharing is not accepted on DoN Phase I proposals. If a value above or below \$0.00 is entered in the Cost Sharing field the proposal will be deemed non-compliant and will be REJECTED by DoN.**
- Additional information:
  - Provide sufficient detail for subcontractor, material, and travel costs. Subcontractor costs must be detailed to the same level as the prime contractor. Material costs must include a listing of items and cost per item. Travel costs must include the purpose of the trip, number of trips, location, length of trip, and number of personnel.
  - Inclusion of cost estimates for travel to the sponsoring SYSCOM's facility for one day of meetings is recommended for all proposals.
  - The "Additional Cost Information" of Supporting Documents (Volume 5) may be used to provide supporting cost details for Volume 3. When a proposal is selected for award, be prepared to submit further documentation to the SYSCOM Contracting Officer to substantiate costs (e.g., an explanation of cost estimates for equipment, materials, and consultants or subcontractors).
- **Company Commercialization Report (Volume 4).** DoD collects and uses Volume 4 and DSIP requires Volume 4 for proposal submission. Please refer to the Phase I Proposal section of the DoD SBIR/STTR Program BAA for details to ensure compliance with DSIP Volume 4 requirements.

- **Supporting Documents (Volume 5).** Volume 5 is for the submission of administrative material that DoN may or will require to process a proposal, if selected, for contract award.

All proposing small business concerns must review and submit the following items, as applicable:

- **Telecommunications Equipment Certification.** Required for all proposing small business concerns. The DoD must comply with Section 889(a)(1)(B) of the FY2019 National Defense Authorization Act (NDAA) and is working to reduce or eliminate contracts, or extending or renewing a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As such, all proposing small business concerns must include as a part of their submission a written certification in response to the clauses (DFAR clauses 252.204-7016, 252.204-7018, and subpart 204.21). The written certification can be found in Attachment 1 of the DoD SBIR/STTR Program BAA. This certification must be signed by the authorized company representative and is to be uploaded as a separate PDF file in Volume 5. Failure to submit the required certification as a part of the proposal submission process will be cause for rejection of the proposal submission without evaluation. Please refer to the instructions provided in the Phase I Proposal section of the DoD SBIR/STTR Program BAA.
- **Majority Ownership in Part.** Proposing small business concerns which are more than 50% owned by multiple venture capital operating companies (VCO), hedge funds (HF), private equity firms (PEF), or any combination of these as set forth in 13 C.F.R. § 121.702, are eligible to submit proposals in response to DoN topics advertised within this BAA. Complete certification as detailed under ADDITIONAL SUBMISSION CONSIDERATIONS.
- Additional information:
  - Proposing small business concerns may include the following administrative materials in Supporting Documents (Volume 5); a template is available at [https://navysbir.com/links\\_forms.htm](https://navysbir.com/links_forms.htm) to provide guidance on optional material the proposing small business concern may want to include in Volume 5:
    - Additional Cost Information to support the Cost Volume (Volume 3)
    - SBIR/STTR Funding Agreement Certification
    - Data Rights Assertion
    - Allocation of Rights between Prime and Subcontractor
    - Disclosure of Information (DFARS 252.204-7000)
    - Prior, Current, or Pending Support of Similar Proposals or Awards
    - Foreign Citizens
  - Details of Request for Discretionary Technical and Business Assistance (TABAs), if proposed, is to be included under the Additional Cost Information section if using the DoN Supporting Documents template.
  - Do not include documents or information to substantiate the Technical Volume (Volume 2) in Volume 5 (e.g., resumes, test data, technical reports, or publications). Such documents or information will not be considered.
  - A font size smaller than 10-point is allowable for documents in Volume 5; however, proposing small business concerns are cautioned that the text may be unreadable.

- **Fraud, Waste and Abuse Training Certification (Volume 6).** DoD requires Volume 6 for submission. Please refer to the Phase I Proposal section of the DoD SBIR/STTR Program BAA for details.
- **Disclosures of Foreign Affiliations or Relationships to Foreign Countries (Volume 7).** In accordance with Section 4 of the SBIR and STTR Extension Act of 2022 and the SBA SBIR/STTR Policy Directive, the DoD will review all proposals submitted in response to this BAA to assess security risks presented by small business concerns seeking a Federally funded award. Small business concerns must complete the Disclosures of Foreign Affiliations or Relationships to Foreign Countries webform in Volume 7 of the DSIP proposal submission. Please refer to the Phase I Proposal section of the DoD SBIR/STTR Program BAA for details.

### **PHASE I EVALUATION AND SELECTION**

The following section details how the DoN SBIR/STTR Programs will evaluate Phase I proposals.

Proposals meeting DSIP submission requirements will be forwarded to the DoN SBIR/STTR Programs. Prior to evaluation, all proposals will undergo a compliance review to verify compliance with DoD and DoN SBIR/STTR proposal eligibility requirements. Proposals not meeting submission requirements will be REJECTED and not evaluated.

- **Proposal Cover Sheet (Volume 1).** The Proposal Cover Sheet (Volume 1) will undergo a compliance review to verify the proposing small business concern has met eligibility requirements and followed the instructions for the Proposal Cover Sheet as specified in the DoD SBIR/STTR Program BAA.
- **Technical Volume (Volume 2).** The DoN will evaluate and select Phase I proposals using the evaluation criteria specified in the Phase I Proposal Evaluation Criteria section of the DoD SBIR/STTR Program BAA, with technical merit being most important, followed by qualifications of key personnel and commercialization potential of equal importance. The information considered for this decision will come from Volume 2. This is not a FAR Part 15 evaluation and proposals will not be compared to one another. Cost is not an evaluation criterion and will not be considered during the evaluation process; the DoN will only do a compliance review of Volume 3. Due to limited funding, the DoN reserves the right to limit the number of awards under any topic.

The Technical Volume (Volume 2) will undergo a compliance review (prior to evaluation) to verify the proposing small business concern has met the following requirements or the proposal will be REJECTED:

- Not to exceed ten (10) pages, regardless of page content
- Single column format, single-spaced typed lines
- Standard 8 ½” x 11” paper
- Page margins one inch on all sides. A header and footer may be included in the one-inch margin.
- No font size smaller than 10-point, except as permitted in the instructions above.
- Include, within the 10-page limit of Volume 2, an Option that furthers the effort in preparation for Phase II and will bridge the funding gap between the end of Phase I and the start of Phase II. Tasks for both the Phase I Base and the Phase I Option must be clearly identified.
- Work proposed for the Phase I Base must be exactly six (6) months.

- Work proposed for the Phase I Option must be exactly six (6) months.
- **Cost Volume (Volume 3).** The Cost Volume (Volume 3) will not be considered in the selection process and will only undergo a compliance review to verify the proposing small business concern has met the following requirements or the proposal will be REJECTED:
  - Must not exceed values for the Base (\$140,000) and Option (\$100,000).
  - Must meet minimum percentage of work; a minimum of two-thirds of the work is performed by the proposing small business concern. The two-thirds percentage of work requirement must be met in the Base costs as well as in the Option costs. DoN will not accept deviations from the minimum percentage of work requirements for Phase I.
  - **Cost Sharing: Cost sharing is not accepted on DoN Phase I proposals. If a value above or below \$0.00 is entered in the Cost Sharing field the proposal will be deemed non-compliant and will be REJECTED by DoN.**
- **Company Commercialization Report (CCR) (Volume 4).** The CCR (Volume 4) will not be evaluated by the Navy nor will it be considered in the Navy's award decision. However, all proposing small business concerns must refer to the DoD SBIR/STTR Program BAA to ensure compliance with DSIP Volume 4 requirements.
- **Supporting Documents (Volume 5).** Supporting Documents (Volume 5) will not be considered in the selection process and will only undergo a compliance review to ensure the proposing small business concern has included items in accordance with the PHASE I SUBMISSION INSTRUCTIONS section above.
- **Fraud, Waste, and Abuse Training Certificate (Volume 6).** Not evaluated.
- **Disclosures of Foreign Affiliations or Relationships to Foreign Countries (Volume 7).** Disclosures of Foreign Affiliations or Relationships to Foreign Countries (Volume 7) will be assessed as part of the Due Diligence Program to Assess Security Risks. Refer to the DoD SBIR/STTR Program BAA to ensure compliance with Volume 7 requirements.

#### **ADDITIONAL SUBMISSION CONSIDERATIONS**

This section details additional items for proposing small business concerns to consider during proposal preparation and submission process.

**Due Diligence Program to Assess Security Risks.** The SBIR and STTR Extension Act of 2022 (Pub. L. 117-183) requires the Department of Defense, in coordination with the Small Business Administration, to establish and implement a due diligence program to assess security risks presented by small business concerns seeking a Federally-funded award. Please review the Program Description section of the DoD SBIR/STTR Program BAA for details on how DoD will assess security risks presented by small business concerns. The Due Diligence Program to Assess Security Risks will be implemented for all Phases.

**Discretionary Technical and Business Assistance (TABAs).** The SBIR and STTR Policy Directive section 9(b) allows the DoN to provide TABAs (formerly referred to as DTAs) to its awardees. The purpose of TABAs is to assist awardees in making better technical decisions on SBIR/STTR projects; solving technical problems that arise during SBIR/STTR projects; minimizing technical risks associated with SBIR/STTR projects; and commercializing the SBIR/STTR product or process, including intellectual property protections. Proposing small business concerns may request, in their Phase I Cost Volume

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(Volume 3) and Phase II Cost Volume, to contract these services themselves through one or more TABA providers in an amount not to exceed the values specified below. The Phase I TABA amount is up to \$6,500 and is in addition to the award amount. The Phase II TABA amount is up to \$25,000 per award. The TABA amount, of up to \$25,000, is to be included as part of the award amount and is limited by the established award values for Phase II by the SYSCOM (i.e. within the \$2,000,000 or lower limit specified by the SYSCOM). As with Phase I, the amount proposed for TABA cannot include any profit/fee by the proposing small business concern and must be inclusive of all applicable indirect costs. TABA cannot be used in the calculation of general and administrative expenses (G&A) for the SBIR proposing small business concern. A Phase II project may receive up to an additional \$25,000 for TABA as part of one additional (sequential) Phase II award under the project for a total TABA award of up to \$50,000 per project. A small business concern receiving TABA will be required to submit a report detailing the results and benefits of the service received. This TABA report will be due at the time of submission of the final report.

Request for TABA funding will be reviewed by the DoN SBIR/STTR Program Office.

If the TABA request does not include the following items the TABA request will be denied.

- TABA provider(s) (firm name)
- TABA provider(s) point of contact, email address, and phone number
- An explanation of why the TABA provider(s) is uniquely qualified to provide the service
- Tasks the TABA provider(s) will perform (to include the purpose and objective of the assistance)
- Total TABA provider(s) cost, number of hours, and labor rates (average/blended rate is acceptable)

TABA must NOT:

- Be subject to any indirect costs, profit, or fee by the SBIR proposing small business concern
- Propose a TABA provider that is the SBIR proposing small business concern
- Propose a TABA provider that is an affiliate of the SBIR proposing small business concern
- Propose a TABA provider that is an investor of the SBIR proposing small business concern
- Propose a TABA provider that is a subcontractor or consultant of the requesting small business concern otherwise required as part of the paid portion of the research effort (e.g., research partner, consultant, tester, or administrative service provider)

TABA requests must be included in the proposal as follows:

- Phase I:
  - Online DoD Cost Volume (Volume 3) – the value of the TABA request.
  - Supporting Documents (Volume 5) – a detailed request for TABA (as specified above) specifically identified as “TABA” in the section titled Additional Cost Information when using the DoN Supporting Documents template.
- Phase II:
  - DoN Phase II Cost Volume (provided by the DoN SYSCOM) - the value of the TABA request.
  - Supporting Documents (Volume 5) – a detailed request for TABA (as specified above) specifically identified as “TABA” in the section titled Additional Cost Information when using the DoN Supporting Documents template.

Proposed values for TABA must NOT exceed:

- Phase I: A total of \$6,500
- Phase II: A total of \$25,000 per award, not to exceed \$50,000 per Phase II project



If a proposing small business concern requests and is awarded TABA in a Phase II contract, the proposing small business concern will be eliminated from participating in the DoN SBIR/STTR Transition Program (STP), the DoN Forum for SBIR/STTR Transition (FST), and any other Phase II assistance the DoN provides directly to awardees.

All Phase II awardees not receiving funds for TABA in their awards must participate in the virtual Navy STP Kickoff during the first or second year of the Phase II contract. While there are no travel costs associated with this virtual event, Phase II awardees should budget time of up to a full day to participate. STP information can be obtained at: <https://navystp.com>. Phase II awardees will be contacted separately regarding this program.

**Disclosure of Information (DFARS 252.204-7000).** In order to eliminate the requirements for prior approval of public disclosure of information (in accordance with DFARS 252.204-7000) under this award, the proposing small business concern shall identify and describe all fundamental research to be performed under its proposal, including subcontracted work, with sufficient specificity to demonstrate that the work qualifies as fundamental research. Fundamental research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons (defined by National Security Decision Directive 189). A small business concern whose proposed work will include fundamental research and requests to eliminate the requirement for prior approval of public disclosure of information must complete the DoN Fundamental Research Disclosure and upload as a separate PDF file to the Supporting Documents (Volume 5) in DSIP as part of their proposal submission. The DoN Fundamental Research Disclosure is available on [https://navysbir.com/links\\_forms.htm](https://navysbir.com/links_forms.htm) and includes instructions on how to complete and upload the completed Disclosure. Simply identifying fundamental research in the Disclosure does **NOT** constitute acceptance of the exclusion. All exclusions will be reviewed and, if approved by the government Contracting Officer, noted in the contract.

**Majority Ownership in Part.** Proposing small business concerns that are more than 50% owned by multiple venture capital operating companies (VCOC), hedge funds (HF), private equity firms (PEF), or any combination of these as set forth in 13 C.F.R. § 121.702, **are eligible** to submit proposals in response to DoN topics advertised within this BAA.

For proposing small business concerns that are a member of this ownership class the following must be satisfied for proposals to be accepted and evaluated:

- a. Prior to submitting a proposal, small business concerns must register with the SBA Company Registry Database.
- b. The proposing small business concern within its submission must submit the Majority-Owned VCOC, HF, and PEF Certification. A copy of the SBIR VC Certification can be found on [https://navysbir.com/links\\_forms.htm](https://navysbir.com/links_forms.htm). Include the SBIR VC Certification in the Supporting Documents (Volume 5).
- c. Should a proposing small business concern become a member of this ownership class after submitting its proposal and prior to any receipt of a funding agreement, the proposing small business concern must immediately notify the Contracting Officer, register in the appropriate SBA database, and submit the required certification which can be found on [https://navysbir.com/links\\_forms.htm](https://navysbir.com/links_forms.htm).

**System for Award Management (SAM).** It is strongly encouraged that proposing small business concerns register in SAM, <https://sam.gov>, by the Close date of this BAA, or verify their registrations are still active and will not expire within 60 days of BAA Close. Additionally, proposing small business

concerns should confirm that they are registered to receive contracts (not just grants) and the address in SAM matches the address on the proposal. A small business concern selected for an award MUST have an active SAM registration at the time of award or they will be considered ineligible.

**Notice of NIST SP 800-171 Assessment Database Requirement.** The purpose of the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171 is to protect Controlled Unclassified Information (CUI) in Nonfederal Systems and Organizations. As prescribed by DFARS 252.204-7019, in order to be considered for award, a small business concern is required to implement NIST SP 800-171 and shall have a current assessment uploaded to the Supplier Performance Risk System (SPRS) which provides storage and retrieval capabilities for this assessment. The platform Procurement Integrated Enterprise Environment (PIEE) will be used for secure login and verification to access SPRS. For brief instructions on NIST SP 800-171 assessment, SPRS, and PIEE please visit <https://www.sprs.csd.disa.mil/nistsp.htm>. For in-depth tutorials on these items please visit <https://www.sprs.csd.disa.mil/webtrain.htm>.

**Human Subjects, Animal Testing, and Recombinant DNA.** Due to the short timeframe associated with Phase I of the SBIR/STTR process, the DoN does **not** recommend the submission of Phase I proposals that require the use of Human Subjects, Animal Testing, or Recombinant DNA. For example, the ability to obtain Institutional Review Board (IRB) approval for proposals that involve human subjects can take 6-12 months, and that lengthy process can be at odds with the Phase I goal for time-to-award. Before the DoN makes any award that involves an IRB or similar approval requirement, the proposing small business concern must demonstrate compliance with relevant regulatory approval requirements that pertain to proposals involving human, animal, or recombinant DNA protocols. It will not impact the DoN's evaluation, but requiring IRB approval may delay the start time of the Phase I award and if approvals are not obtained within two months of notification of selection, the decision to award may be terminated. If the use of human, animal, and recombinant DNA is included under a Phase I or Phase II proposal, please carefully review the requirements at: <https://www.nre.navy.mil/work-with-us/how-to-apply/compliance-and-protections/research-protections>. This webpage provides guidance and lists approvals that may be required before contract/work can begin.

**Government Furnished Equipment (GFE).** Due to the typical lengthy time for approval to obtain GFE, it is recommended that GFE is not proposed as part of the Phase I proposal. If GFE is proposed, and it is determined during the proposal evaluation process to be unavailable, proposed GFE may be considered a weakness in the technical merit of the proposal.

**International Traffic in Arms Regulation (ITAR).** For topics indicating ITAR restrictions or the potential for classified work, limitations are generally placed on disclosure of information involving topics of a classified nature or those involving export control restrictions, which may curtail or preclude the involvement of universities and certain non-profit institutions beyond the basic research level. Small businesses must structure their proposals to clearly identify the work that will be performed that is of a basic research nature and how it can be segregated from work that falls under the classification and export control restrictions. As a result, information must also be provided on how efforts can be performed in later phases if the university/research institution is the source of critical knowledge, effort, or infrastructure (facilities and equipment).

## **SELECTION, AWARD, AND POST-AWARD INFORMATION**

**Notifications.** Email notifications for proposal receipt (approximately one week after the Phase I BAA Close) and selection are sent based on the information received on the proposal Cover Sheet (Volume 1). Consequently, the e-mail address on the proposal Cover Sheet must be correct.

**Debriefs.** Requests for a debrief must be made within 15 calendar days of select/non-select notification via email as specified in the select/non-select notification. Please note debriefs are typically provided in writing via email to the Corporate Official identified in the proposal of the proposing small business concern within 60 days of receipt of the request. Requests for oral debriefs may not be accommodated. If contact information for the Corporate Official has changed since proposal submission, a notice of the change on company letterhead signed by the Corporate Official must accompany the debrief request.

**Protests.** Interested parties have the right to protest in accordance with the procedures in FAR Subpart 33.1.

Pre-award agency protests related to the terms of the BAA must be served to: osd.ncr.ousd-r-e.mbx.SBIR-STTR-Protest@mail.mil. A copy of a pre-award Government Accountability Office (GAO) protest must also be filed with the aforementioned email address within one day of filing with the GAO.

Protests related to a selection or award decision should be filed with the appropriate Contracting Officer for an Agency Level Protest or with the GAO. Contracting Officer contact information for specific DoN Topics may be obtained from the DoN SYSCOM Program Managers listed in Table 2 above. For protests filed with the GAO, a copy of the protest must be submitted to the appropriate DoN SYSCOM Program Manager and the appropriate Contracting Officer within one day of filing with the GAO.

**Awards.** Due to limited funding, the DoN reserves the right to limit the number of awards under any topic. Any notification received from the DoN that indicates the proposal has been selected does not ultimately guarantee an award will be made. This notification indicates that the proposal has been selected in accordance with the evaluation criteria and has been sent to the Contracting Officer to conduct compliance review of Volume 3 to confirm eligibility of the proposing small business concern, and to take other relevant steps necessary prior to making an award.

**Contract Types.** The DoN typically awards a Firm Fixed Price (FFP) contract or a small purchase agreement for Phase I. In addition to the negotiated contract award types listed in the section of the DoD SBIR/STTR Program BAA titled Proposal Fundamentals, for Phase II awards the DoN may (under appropriate circumstances) propose the use of an Other Transaction Agreement (OTA) as specified in 10 U.S.C. 4021/10 U.S.C. 4022 and related implementing policies and regulations. The DoN may choose to use a Basic Ordering Agreement (BOA) for Phase I and Phase II awards.

**Funding Limitations.** In accordance with the SBIR and STTR Policy Directive section 4(b)(5), there is a limit of one sequential Phase II award per small business concern per topic. The maximum Phase I proposal/award amount including all options is \$240,000. The Phase I Base amount must not exceed \$140,000 and the Phase I Option amount must not exceed \$100,000. The maximum Phase II proposal/award amount including all options (including TABA) is \$2,000,000 (unless non-SBIR/STTR funding is being added). Individual SYSCOMs may award amounts, including Base and all Options, of less than \$2,000,000 based on available funding. The structure of the Phase II proposal/award, including maximum amounts as well as breakdown between Base and Option amounts will be provided to all Phase I awardees either in their Phase I award or a minimum of 30 days prior to the due date for submission of their Initial Phase II proposal.

**Contract Deliverables.** Contract deliverables for Phase I are typically a kick-off brief, progress reports, and a final report. Required contract deliverables (as stated in the contract) must be uploaded to <https://www.navybirprogram.com/navydeliverables/>.

**Payments.** The DoN makes three payments from the start of the Phase I Base period, and from the start of the Phase I Option period, if exercised. Payment amounts represent a set percentage of the Base or Option value as follows:

Days From Start of Base Award or Option	Payment Amount
15 Days	50% of Total Base or Option
90 Days	35% of Total Base or Option
180 Days	15% of Total Base or Option

**Transfer Between SBIR and STTR Programs.** Section 4(b)(1)(i) of the SBIR and STTR Policy Directive provides that, at the agency's discretion, projects awarded a Phase I under a BAA for SBIR may transition in Phase II to STTR and vice versa.

### **PHASE II GUIDELINES**

**Evaluation and Selection.** All Phase I awardees may submit an **Initial** Phase II proposal for evaluation and selection. The evaluation criteria for Phase II is the same as Phase I (as stated in this BAA). The Phase I Final Report and Initial Phase II Proposal will be used to evaluate the small business concern's potential to progress to a workable prototype in Phase II and transition the technology to Phase III. Details on the due date, content, and submission requirements of the Initial Phase II Proposal will be provided by the awarding SYSCOM either in the Phase I contract or by subsequent notification.

**Awards.** The DoN typically awards a Cost Plus Fixed Fee contract for Phase II; but, may consider other types of agreement vehicles. Phase II awards can be structured in a way that allows for increased funding levels based on the project's transition potential. To accelerate the transition of SBIR/STTR-funded technologies to Phase III, especially those that lead to Programs of Record and fielded systems, the Commercialization Readiness Program was authorized and created as part of section 5122 of the National Defense Authorization Act of Fiscal Year 2012. The statute set-aside is 1% of the available SBIR/STTR funding to be used for administrative support to accelerate transition of SBIR/STTR-developed technologies and provide non-financial resources for the small business concerns (e.g., the Navy STP).

### **PHASE III GUIDELINES**

A Phase III SBIR/STTR award is any work that derives from, extends, or completes effort(s) performed under prior SBIR/STTR funding agreements, but is funded by sources other than the SBIR/STTR programs. This covers any contract, grant, or agreement issued as a follow-on Phase III award or any contract, grant, or agreement award issued as a result of a competitive process where the awardee was an SBIR/STTR firm that developed the technology as a result of a Phase I or Phase II award. The DoN will give Phase III status to any award that falls within the above-mentioned description. Consequently, DoN will assign SBIR/STTR Data Rights to any noncommercial technical data and noncommercial computer software delivered in Phase III that were developed under SBIR/STTR Phase I/II effort(s). Government prime contractors and their subcontractors must follow the same guidelines as above and ensure that companies operating on behalf of the DoN protect the rights of the SBIR/STTR firm.

Version 2

**Navy SBIR 24.3 Phase I  
Topic Index**

N243-105	Compatibility of Tier 4 Diesel Engines with JP-8
N243-106	Drone RF Optimized Nodal Element (DRONE) Antenna System

N243-105 TITLE: Compatibility of Tier 4 Diesel Engines with JP-8

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Sustainment

OBJECTIVE: Develop a solution or set of solutions that will enable the use of JP-8 in current Tier 4 diesel engines without adverse effects. The solution should apply as broadly as possible to multiple systems and engine types.

DESCRIPTION: Navy expeditionary forces require equipment compatible with JP-8 to meet DoD level guidance prescribing JP-8 as the single fuel for expeditionary operations. JP-8 is an aviation fuel with up to 3000 ppm of sulfur. Current Tier 4 diesel engines are unable to meet the JP-8 compatibility requirement due to these engines requiring the use of ultra low sulfur diesel (ULSD) with a 15 ppm limit on sulfur. The use of ULSD is needed both to meet Tier 4 emissions requirements, but also to prevent degradation or damage to the engine and the emission components. Emissions components in Tier 4 engines such as catalysts and particulate filters are sulfur sensitive, they clog or are destroyed if JP-8 or high sulfur diesel fuels are used.

Navy expeditionary forces currently satisfy this JP-8 requirement via the use of Tier 3 or lower or “export” market engines. These engines are becoming increasingly obsolete and progressively more difficult to procure and sustain. Increased procurement costs result from the need to source and integrate these engines into commercial items that are designed to be EPA compliant with Tier 4 engines for the U.S. market.

Performance Requirements: The solution or solution set will need to allow for the fielding of commercial items using standard Tier 4 engines. The solution will need to allow for operation with both ULSD fuel supplies while in CONUS and JP-8 fuel supplies during expeditionary operations. The solution will need to result in no net increase in lifecycle cost and not negatively impact the performance of the engine beyond what is expected when using JP-8 in Tier 3 or lower engines. This includes power output, fuel efficiency, and ability to run throughout the range of worldwide environmental conditions. Lifecycle cost calculations will assume quantities of 100 for a single unique end item. The solution should apply as broadly as possible to multiple system and engine types (including different makes and models, both on and off-highway engines) and sizes of diesel engines ranging from small 10hp pony motors through large commercial truck engines. Demonstrate the solution via instrumented testing.

Current equipment operates under an EPA exemption for national security. Any solution is permitted to result in exhaust emissions that no longer meet Tier 4 requirements. Exhaust emissions should meet or exceed the requirements of the equivalent Tier 3 engine.

PHASE I: Define, design, and establish the feasibility of a concept that will result in the ability to procure equipment with current Tier 4 engines and operate this equipment during expeditionary operations with JP-8 fuel supplies. Produce a prototype engineering design with major components identified as either existing commercial items or those requiring no further development under Phase II. Ensure that any development components should be of sufficient maturity such that a full-scale prototype can be developed and demonstrated under Phase II.

Identify and calculate expected procurement and sustainment costs for the concept. Identify any potential limitations or impacts to the system resulting from the concept, which could include any limitations on application (e.g., horsepower limitation) or increases in weight, among other possible characteristics.

Provide a Phase II plan.

PHASE II: Produce and demonstrate a prototype of the concept developed under Phase I. Include a minimum of 50 hours (threshold), preferably 100 hours or greater (objective), of run time using JP-8 or the CONUS equivalent F-24 as the supplied fuel. Demonstrate the prototype on an engine that is, of a minimum, in the 19-56 kW category (Threshold) to the 56-130 kW (or higher) category with a diesel exhaust fluid (DEF) system (Objective). Perform any small-scale demonstrations or testing of developmental components, as needed, to increase the maturity of the technology in support of a physical prototype of the Phase I concept.

Perform any instrumented tests needed to validate the performance requirements of the prototype (e.g., dynamometer, instrumentation of the engine, or exhaust analysis).

PHASE III DUAL USE APPLICATIONS: The end goal of Phase II is expected to be a design that, with further engineering development and testing to refine the design and develop manufacturing, would result in an end item the government can procure or component(s) and/or modifications that vendors of end items can incorporate into their systems that are procured by the expeditionary Navy. Phase III would concentrate on that additional engineering and commercialization effort required to prepare the solution(s) for a successful transition.

The final solution(s) would be applied across the full spectrum of future equipment within the expeditionary Navy, such as civil engineering support equipment, construction equipment, and tactical and light ground vehicles. The solution would also be made available and socialized with the joint services, including the Army, Air Force, and Marine Corps.

Any solutions developed under this SBIR topic which have potential commercial applications will be communicated to potential commercialization partners, such as engine manufacturers. These include any sulfur reduction filters or sulfur tolerate emissions components which could be applied to improve emissions in diesel engines in markets with high sulfur diesel.

#### REFERENCES:

1. "40 CFR Part 1039, PART 1039—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD COMPRESSION-IGNITION ENGINES." <https://www.ecfr.gov/current/title-40/part-1039>
2. "40 CFR 1068.225, § 1068.225 Exempting engines/equipment for national security." <https://www.ecfr.gov/current/title-40/section-1068.225>
3. Rohrbach, Ron et al. "Desulfurization Fuel Filter." Honeywell, 24 August 2006, pp.1-22. <https://www.energy.gov/eere/vehicles/articles/desulfurization-fuel-filter>
4. Tran, D.T.; Palomino, J.M. and Oliver, S.R.J. "Desulfurization of JP-8 jet fuel: challenges and adsorptive materials." RSC Advances, 8(13), February 2018, pp. 7301-7314. doi: 10.1039/c7ra12784g. PMID: 35540312; PMCID: PMC9078402.

KEYWORDS: JP-8; diesel; engine; Expeditionary; Tier 4; sulfur

N243-106 TITLE: Drone RF Optimized Nodal Element (DRONE) Antenna System

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Integrated Network Systems-of-Systems;Microelectronics;Advanced Materials

OBJECTIVE: Develop a tunable Drone RF Optimized Nodal Element (DRONE) Antenna System using tethered drones.

DESCRIPTION: The Navy is heavily reliant on communications to function in all operating environments. Thus, there is a need for solutions that contribute to the redundancy and/or resiliency of communications capabilities. The process to install new antenna systems aboard Navy platforms is both time consuming and costly. The transition targets are Naval systems within the High Frequency (HF) to Very High Frequency (VHF) bands, to include Digital Modular Radio (DMR). DMR is a software defined radio capable of four channels that can simultaneously support both voice and data networks and various waveforms.

The tunable antenna system using tethered drones must enable the following (at a minimum):

- Cover the military HF to the VHF bands (Threshold: 3 MHz - 88 MHz; Objective: 2 MHz - 300 MHz)
- Handle high-power levels
  - HF: 40 dBW (Threshold), 50 dBW (Objective)
  - VHF: 30 dBW (Threshold), 40 dBW (Objective)
- Match the desired frequency through means such as tether length, matched filters, current probes, switched current clamps, etc. (Threshold: 1/4 wave; Objective: 1/2 wave)
- Provide beam forming/nulling capabilities with an array of elements (Objective)
- Reduce the Radar Cross Section (RCS) of the drones by means such as radar absorptive materials, active signals interactions, etc. (Objective)

This SBIR topic focuses on addressing these challenges with the DRONE Antenna System, a novel antenna system utilizing tethered drones. This solution shall operate from the military HF band to the VHF band. To cover this frequency range, the tethered antenna shall adjust to 1/4 (Objective: 1/2) of the desired center frequency/antenna element. The drones shall employ precision flight patterns/maneuvers to address the arc of the tether to avoid polarization issues, as well as allow for the safety of flight away from the naval platform. Additionally, the DRONE Antenna System shall be easily and quickly deployable and be scalable to form an array of drones.

Work produced in Phase II may become classified. Note: The prospective contractor(s) must be U.S. owned and operated with no foreign influence as defined by 32 U.S.C. § 2004.20 et seq., National Industrial Security Program Executive Agent and Operating Manual, unless acceptable mitigating procedures can and have been implemented and approved by the Defense Counterintelligence and Security Agency (DCSA) formerly Defense Security Service (DSS). The selected contractor must be able to acquire and maintain a secret level facility and Personnel Security Clearances. This will allow contractor personnel to perform on advanced phases of this project as set forth by DCSA and NAVWAR in order to gain access to classified information pertaining to the national defense of the United States and its allies; this will be an inherent requirement. The selected company will be required to safeguard classified material during the advanced phases of this contract IAW the National Industrial Security Program Operating Manual (NISPOM), which can be found at Title 32, Part 2004.20 of the Code of Federal Regulations.



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PHASE I: Conduct a study to determine the technical feasibility of the DRONE Antenna System, that covers the operational HF and VHF frequencies. Describe the technical solution based on the investigation and technical trade-offs.

For the identified solution, develop the SBIR Phase II Project Plan to include a detailed schedule (in Gantt format), spend plan, performance objectives, and transition plan for the target Program of Record (PoR).

PHASE II: Develop the prototype DRONE Antenna System. Demonstrate and validate its performance in a laboratory environment.

Develop a set of performance specifications for the DRONE Antenna System. Conduct the Systems Engineering Technical Review (SETR) Process (i.e., System Requirements Review (SRR), Preliminary Design Review (PDR), and Critical Design Review (CDR)).

Engage and collaborate with the Program Office and Naval Information Warfare Center (NIWC) Pacific engineers. Establish a working relationship with PMW/A 170 and NIWC Pacific engineers to perform integration studies to include the identification of any necessary engineering changes to the target PoR system(s).

Develop a SBIR Phase III Project Plan to include a detailed schedule (in Gantt format) and spend plan, performance requirements, and revised transition plan for the target PoR system(s). Develop the life-cycle support strategies and concepts for the system.

It is probable that the work under this effort will be classified under Phase II (see Description section for details).

PHASE III DUAL USE APPLICATIONS: Refine and fully develop the Phase II prototype to produce a Production Representative Article (PRA) of the DRONE Antenna System. Perform Formal Qualification Tests (FQT) (e.g., field testing, operational assessments) of the PRA solution with the target PoR system(s). Provide life-cycle support strategies and concepts for the DRONE Antenna System by developing a Life-Cycle Sustainment Plan (LCSP). Additionally, investigate the dual use of the developed technologies for commercial applications. Commercial applications include rapid deployment of mobile networks for disaster relief, business continuity backup communications systems, and temporary augmentation of Major Network Operators (e.g., AT&T) to support events in remote locations that lacks infrastructure.

### REFERENCES:

1. Law, Preston E. Jr. "Shipboard Antennas, Second Edition." Artech House, Boston | London, August 1, 1986, ISBN-13: 978-0890062111 or ISBN-10: 0890062110. <https://us.artechhouse.com/Shipboard-Antennas-Second-Edition-P248.aspx>
2. Defense Advancement Staff. "Tethered Drone System Released for Military Communications Relay." Defense Advancement, March 14, 2023. <https://www.defenseadvancement.com/news/tethered-drone-system-released-for-military-communications-relay/>
3. National Industrial Security Program Executive Agent and Operating Manual (NISP), 32 U.S.C. § 2004.20 et seq. (1993). <https://www.ecfr.gov/current/title-32/subtitle-B/chapter-XX/part-2004>.

KEYWORDS: Antenna; Battle Force Tactical Network; BFTN; Digital Modular Radio; DMR; High Frequency; HF; Very High Frequency; VHF; Tactical Communications Modernization; TACCOM; TACCOMS