



**S²MARTS Project: Classified Test Material for Hypersonics (CTMH)
Project TalX Question & Answer | Date: July 25, 2022**

1. Will this be a fixed price effort? Is there a budget target?

Answer: This is a FFP effort with a \$5.085M budget.

2. We have a demonstrated alternative to CVI/C/SiC. CVI is time consuming and traps porosity. Would that be of interest to Lockheed Martin?

Answer: The government has no opinion on the interest level of a member of industry. This effort is focused on fabricating the stated components using CVI C/SiC as the material. Depending on the concept being proposed, this may have applicability to other material manufacturing processes.

3. What is the procedure to apply for this program? We would like to know more about this program. Please share us more details on this.

Answer: Please continue to monitor the posting for future events and Request for Solutions (RFS) release. The RFS will provide all of the instructions to submit a solution for this opportunity. Meanwhile, please contact the marketing/membership team to sign up for our newsletter and additional information on becoming a member. Thank you again for your email and feel free to reach out with any additional questions.

4. Has the Project TALX (presentation by the gov't customer) already finished? If not, when it is scheduled? If so, where is the recording? Where are the slides and recorded video of the Innovator NETWORKX located?

Answer: Project TALX was completed on 14 July 2022. All resources can be found at <https://nstxl.org/opportunity/classified-test-material-for-hypersonics-ctmh/>.

5. We registered for this event but only get a survey monkey site. Any new request only gets us to a web page saying we already registered. We would like to talk with the technical team.

Answer: Thank you for registering for the Classified Test Material for Hypersonics (CTMH) event, and we regret to hear that you've experienced some technical difficulties. Unfortunately, we cannot provide the contact information to the technical team due to concerns regarding procurement integrity and source selection policies. NSTXL has worked with the government to provide as much information as possible by providing Innovator NetworkX that will give you more information about the requirement and also the opportunity to network with other performers. We also have a "submit the question" feature on the opportunity page that is collected and submitted to the government during the Q&A timeframe. Hope this helps! Please continue to monitor the opportunities page for more information and any updates.

6. What is the CVI process size requirement for this opportunity? Does the required equipment size need to be installed at the initiation of the project?

Answer: The CVI process capability should be of sufficient size to fabricate the individual components called out in the RFS. Component size is defined in Section 3: the initial unclassified part would fit in a volume approximately 2.5' long by 2' in diameter. Corresponding process infrastructure must accommodate this scale for initial proof of feasibility, and the ability to process larger (roughly double) length parts is required. An offeror who has existing process capability and experience to meet the requirements of the RFS will have a competitive edge.



7. Will CVI in combination with other processes to create effective/efficient C/SiC be considered?

Answer: CVI processing is the primary objective and should be adequately presented; however, the best technical proposal that meets the requirements stated in the RFS will be awarded. The technical approach to achieve this is up to the offeror.

8. Opportunity Overview - Page 1: Contracting Activity is listed as ""Naval Surface Warfare Center (NSWC), Crane Division"". Will the final OTA contract be executed with NSWC Crane as the party receiving invoices from the Performer?

Answer: NSWC Crane will be executing the OTA with NSTXL, and receiving invoices from/paying invoices to NSTXL, who will then distribute to performer(s).

9. SECURITY INFORMATION & RESTRICTIONS - Section C.2. / Page 6 - First bullet point reads: "Awardees/Prototype Level Performers must hold an active SECRET Facility Clearance, prior to 3. Test Article Classified Design." Question: Please clarify if the numeral "3" is a typographical error that should read "5" instead?

Answer: That is correct; the first bullet point on page 6 under section C.2 should read "prior to 5. Test Article Classified Design."

10. Please provide a copy of the applicable Agreement and other relevant mandatory flow-down terms and conditions that will apply to this effort.

Answer: The applicable agreement with the relevant mandatory flow down terms and conditions will be provided once the evaluations are complete and a selection has been made. NSTXL members can find a Performers Agreement template on the portal.

11. Is a separate offer or cover letter allowed without affecting the page count requirement?

Answer: A Cover page and other items will not affect the page count. This information is in the Request for Solutions (RFS).

12. With regards to additional capabilities or project phases that may be proposed by Respondent over and above the advertised amount, will the Government consider alternative contract types rather than Firm Fixed Price, such as a cost-type contract (ie. Cost Plus Fixed Fee, Cost Reimbursement)?

Answer: No, the Government will not consider other contract types.

13. Do you require 2D lay up? can 3D composite material participate?

Answer: The RFS defines preforms in Section 3, but 2D and 3D architectures would both be desired/ accepted. Alternatives to 2D lay-up must be comparable relative to weight, thermostructural loads, cost and schedule.

14. What is the prepreg - is there a carbon interphase with the prepreg resin?

Answer: The prepreg material is proprietary, and the fabric is 2-D woven from T-300 fiber.

15. Is there a density and porosity requirement?

Answer: Component fabricated must meet component performance requirements specified in RFS, set by thermostructural loads experienced. Acceptable material properties that meet the component design requirements will determine density and porosity requirements. Density and porosity requirements will differ with different layup architectures.



16. Is there a carbon to Carbon SiC ratio that is desired?

Answer: Fiber density ratio needs to meet design requirements to be acceptable.

17. Does the 30-month Period of Performance (PoP) include classified components?

Answer: Yes, the 30-month PoP is inclusive of all requirements.

18. Are the demonstration units intended to be subscale?

Answer: The unclassified component scales are provided in the RFS to prove feasibility. The classified components scales will be provided after contract award and the DD254 is processed. Although demonstration units are intended to be subscale, offers must adhere to the component dimensions stated in the RFS.

19. Can we submit different architecture and or processes?

Answer: 2D layup and 3D architectures are permitted for this effort. The objective of this effort is to produce CVI C/SiC solutions.

20. What are the envelope dimensions for the Classified component? Or if not sharable, can it be confirmed if the dimensions fall within the max envelope dimensions of the Unclassified components?

Answer: The unclassified scale for initial proof of feasibility components have been provided as an example. The proposal should address the offeror's ability to scale up, and define limitations and risks associated with processing, machining, integrating, and delivering larger components. Additionally, the Government will provide classified dimensions after Award once the offeror is able to safeguard classified information. The classified component dimensions are currently undefined but are expected to be at least double the length of the unclassified component.

21. Are there any quality or performance requirements for any of the components? (material properties, target costs, etc.) Is there a target or requirement for maximum residual porosity?

Answer: Quality/ performance requirements of material components is better than or equal to performance of legacy CVI C/SiC, to include material properties and residual porosity.

22. Are alternatives to autoclave processing acceptable?

Answer: The CVI process is required for this effort; wherein there is no known alternative to autoclave processing. However, if the offeror has a unique, innovative solution, the Government will consider those proposals.

23. Are there other NDE techniques or acceptance criteria beyond listed CMM inspection?

Answer: CMM is the minimum NDE technique required, but the Government is interested in seeing additional NDE techniques beyond CMM as they meet the offeror's technical needs. A proposal that lists other NDE techniques such as thermal imaging, X-ray CT, and ultrasound would be favorably reviewed.

24. Are there any requirements for co-processed witness material?

Answer: Producing co-processed witness coupons and tag-ends are an industry best practice and can support NDE processes and testing; the lack of which may be considered a technical risk. The decision to employ witness coupons is left to the offeror.



25. Are there specific surface finish requirements that can be shared?

Answer: There are no surface finish requirements stated, but minimal OML machining is expected as required by the CVI process. Interfaces and seal regions might require specific surface finishes. For acreage Thermal Protection System (TPS), the finish can be minimal to reduce costs, and only mating surfaces might require enhanced machining. Ultimately, surface finish requirements will vary with architectures proposed.

26. For the classified component, could an estimated percentage of the component volume which is expected to be machined be provided for costing?

Answer: It is difficult to provide an estimated percentage, but the classified component will be processed in a near net shape with minimal machining dictated by the CVI processing needs. The CVI process that is proposed will drive the amount of machining required, with a near net shape to minimize costs associated with machining and risk associated with repeated tooling and mounting for machining.

27. Could more detail regarding the testing requirements be shared from the following statement in section B.3. - "All capabilities should be proven through testing and prototyping."

Answer: Offerors should propose any additional testing to ensure component meets the design intent and needs to be within cost constraints. The test articles provided as deliverables to the Government should be representative material that has been through mechanical testing and verified to be defect-free, for use in further ground testing by the Government.

28. Is this project included as part the FY23 budget? Or is it intended to be funded as a Congressional Interest item?

Answer: This project is fully funded with FY22 dollars from OSD and AFRL.