

**National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035-1000**

Justification for Other than Full and Open Competition
[FAR 6.303-2(a)(1)]

Summary Information:

Initiating Office: NASA Ames Research Center
Engineering Systems Division – Code RE

Purchase Request No.: 4200414204

Procurement Title: Engineering, Design, and Fabrication Services

Total Estimated Value: **“FOIA Ex. 5”**

Period of Performance: December 1, 2011 – December 31, 2012 (13 Months)

Statutory Authority: 10 USC 2304(c)(1), *Only One Responsible Source and No Other*
[FAR 6.303-2(a)(4)] *Supplies or Services Will Satisfy Agency Requirements*

This Justification for Other than Full and Open Competition (JOFOC) has been prepared in accordance with the requirements of Federal Acquisition Regulation (FAR) 6.303 and NASA FAR Supplement (NFS) 1806.303.

Detailed Information:**A. Nature and/or description of the action being approved. [FAR 6.303-2(a)(2)]**

NASA Ames Research Center (ARC) proposes to negotiate a sole source bridge contract for Engineering, Design, and Fabrication Services with the incumbent contractor, ASRC Research and Technology Solutions (ARTS) to provide ongoing support for mission critical work at ARC pending completion of a new procurement for Project and Engineering Support Services (PESS). This bridge contract will continue critical support since the current contract NNA08AF30B will reach the maximum contract value (\$46.2 million) shortly. The bridge contract will cover a 13-month period, from December 1, 2011 through December 31, 2012.

The current contract was structured with a one year base period and four one year options with an Indefinite Delivery/Indefinite Quantity (IDIQ) maximum contract value of \$46.2 million. Currently, the third option period has been exercised covering performance through August 18, 2012; and the task orders awarded are approaching the maximum contract value.

The current contract was issued directly to ARTS under the 8(a) program (15 USC 637(a)) under NAICS code 541330 and the task orders issue have reached the IDIQ maximum contract value of \$46,200,000. Since ARTS exceeds the size standard for the NAICS code assigned to the contract, the Small Business Administration (SBA) cannot allow an increase to the current maximum contract value because ARTS is not longer eligible based on small business size and therefore the sole source authority under 8(a) does not apply. On October 14, 2011, ARC requested and obtained approval from the Alaskan SBA to remove this requirement from the 8(a) program; thereby allowing ARC to negotiate a sole source bridge contract with ARTS to continue critical mission support.

B. Description of the supplies or services required to meet the agency's needs (including estimated value). [FAR 6.303-2(a)(3)]

The bridge contract will enable the Engineering Directorate (Code R) to continue to obtain critical engineering support in the areas of project management, systems engineering, design and development, fabrication, integration and testing, operations, technical writing, and configuration management. These services are critical to ARC and to support various NASA programs and projects. The estimated value of the services for this potential 13 month (maximum) bridge contract is approximately "FOIA Ex. 5" million based on the Government's independent cost estimate (See Attachment 1) "FOIA Ex.5". The independent cost estimate was determined based on technical review of labor and materials anticipated to be necessary for continued performance of current and anticipated tests and projects through December 2012.

There are at least three critical projects and programs that require the bridge contract to cover performance through December 2012:

1. LADEE (Lunar Atmosphere Dust Environment Explorer): LADEE is currently funded out of the Exploration Systems Mission Directorate at NASA Headquarters and is ARC's' second small spacecraft project awarded in the last 5 years. LADEE is planned to launch in May 2013 with a cost of "FOIA Ex.5." Currently, ARC has more than 7 task orders with ARTS for work on LADEE and over 20 design engineers, test engineers and fabricators as critical LADEE team members. Below are examples of critical task orders which need to continue that have been awarded to ARTS –

- Under task order titled, "LADEE Thermal Engineering", "LADEE UVS System", "Guidance, Navigation and Control", and "LADEE Flight Structures", ARTS supports the design, development, fabrication, integration and test of the LADEE spacecraft system. ARTS is involved in the thermal design, the structural design, the design and fabrication of the wiring harness, the design of the Guidance, Navigation, and Controls system and its 3 Degree of Freedom Testbed, design and fabrication of the ground support hardware and software, as well as the subsystem and system level integration and testing. This task order has been ongoing for the last two years, therefore, and ARTS has critical knowledge and experience with the LADEE specific systems that is required for successful integration and testing. Integration and testing for various components of LADEE will start in December 2011 and continue through December 2012 with final observatory testing.
- Under the task order titled, "LADEE Engineering Support", ARTS is building the Mechanical Ground Support Equipment (MGSE) for Integration and Testing which needs to be completed before December 2012. ARTS designed and developed the MSGE and needs to continue to support it as it undergoes integration for the LADEE project to meet its schedule and budget guidelines. If the contractor's technical knowledge is lost during this period, the LADEE project could be severely negatively impacted during the integration of the spacecraft and the observatory. Also, as issues arise during testing, the rationale for designs, as well as possible fixes, must be provided quickly to ensure no disruption to schedule.
- Under other task orders such as the "LADEE UVS EEL", ARTS is responsible for testing the spacecraft, the UVS and the observatory. ARTS test engineers have years of experience and technical knowledge operating the test equipment located at ARC. ARTS is currently refining test requirements and processes with the LADEE team. Bringing in another contractor during this critical testing would impact the LADEE schedule because the new contractor would have to be trained on the testing equipment and procedures in order to run the test successfully. This would introduce an unacceptable risk to both cost and schedule.

2. A critical program to both ARC and to NASA is SOFIA, the Stratospheric Observatory for Infrared Astronomy. SOFIA houses a 3.5 meter telescope in a 747 aircraft in order to conduct astronomical observations utilizing many instruments. Currently ARTS is providing support to the EXES instrument

and project management support. SOFIA will need both tasks to continue with the expertise and knowledge of ARTS staff as critical milestones are occurring in 2012. Under the EXES instrument task order, ARTS is working on supporting two critical milestones, 1) code changes to optimize EXES performance for December 2011 and 2) consulting support for EXEC Tier Testing in February 2012. Under the project management support task order, ARTS is maintaining the Integrated Management Schedule Program wide. The Integrated Management Schedule Program allows two Centers working together with an international consortium to plan and execute the continued development and missions for the observatory. Two major re-plan efforts are underway to better refine upcoming upgrades to the observatory and post upgrade mission plans. These activities will be occurring during the next nine months.

3. Also, ARTS is supporting the NanoSat program for NASA, by providing mechanical, electrical and software engineering, fabrication, integration and test support to three specific projects. The three projects currently being developed for NASA are E-CamSAT, MIST (Microsatellite, In-Situ Technologies), and NLAS (NASA Launch Adaptor System). Each of these is expected to launch in Spring/Summer of 2012, therefore the continued technical expertise and knowledge by ARTS staff is necessary to ensure critical milestones are met. The budget margins for the NanoSat projects are already difficult to maintain, so if a new contractor had to transition during the middle of the development or testing, the projects could experience schedule slips and budget impacts based on transitioning in a new contractor which could jeopardize the NanoSat program.

Although there presumably are contractors with engineers capable of performing similar types of engineering requirements, there are no contractors that can do so within the required timeframe, program or project budget limitations, and with the necessary and critical historical technical knowledge. Substantial duplication of costs would occur in awarding to a potential new contractor to complete the requirements discussed above. Costs that would be duplicated include those associated with start-up and learning activities required to ensure that a new contractor has proper knowledge of the work requirements necessary to support these highly specialized and critical ARC engineering requirements. These costs are estimated at more than "FOIA Ex. 5". In addition to the duplication of costs, the lapse in critical service that would be a result from competing this short-term contract would cause unacceptable disruption in engineering support services.

ARTS has about 32 different engineers working on the various LADEE, SOFIA, and NanoSat tasks. Some engineers are working on a single task and others are working on several tasks. Recently the Government added a new civil servant project manager to the LADEE Engineering Support task. It took over two months for the project manager to get familiar with task and it will be another few weeks before he is up to speed. This two month learning curve provides the basis for the above estimate regarding the necessary transition time and the estimated duplication of cost. Also the fabrication and testing performed on all programs and projects in the Engineering Evaluation Lab is currently performed by three ARTS test technicians with many years of experience. If these technicians are replaced, it would require at least a year of training on the highly specialized Ames equipment

C. An identification of the statutory authority permitting other than full and open competition. [FAR 6.303-2(b)(4)]

The statutory authority for this procurement is 10 USC 2304(c)(1), Only One Responsible Source.

D. Demonstration of the proposed contractor's unique qualification or the nature of the acquisition requires use of the authority cited. [FAR 6.303-2(a)(5)]

In accordance with FAR 6.302-1(a)(2)(iii), for DoD, NASA, and the Coast Guard, services may be deemed to be available only from the original source in the case of follow-on contracts for the continued provision of highly specialized services when it is likely that award to any other source would result in substantial duplication of cost to the Government that is not expected to be recovered through competition, or unacceptable delays in fulfilling the agency's requirements.

As described in Item B. above, ARTS has the unique base of technical knowledge and experience; including the required historical knowledge of LADEE, SOFIA, and the NanoSat program in developing detailed design trade-offs, spares and materials selection, manufacturing processes, controls algorithm development, thermal design and spacecraft operability that are critical in performing spacecraft and observatory integration and testing, as well as in solving engineering issues during integration and testing. A change in contractor prior to the completion of key milestones would severely impact these programs and projects. ARTS has clearly demonstrated that they possess the highly specialized capabilities and skills necessary to accomplish the requirements described herein.

Although ARC is working on a new procurement (PESS) which has a projected award date of May/June 2012, the bridge contract is necessary to ensure the technical expertise and historical knowledge required to support LADEE, SOFIA, and the NanoSat program continues through December 2012. Each of these requirements has key milestones which need to be accomplished by ARC. In addition, the current contract is approaching the maximum contract value; therefore, support for these projects and programs cannot continue without a bridge contract in place to provide critical support and prevent any unacceptable delays in completing key milestones. For example –

LADEE: ARTS is building the Mechanical Ground Support Equipment (MGSE) for integration and testing which needs to be completed before December 2012. For LADEE to meet its schedule and budget guidelines, it is important that ARTS continue to support the MSGE as the spacecraft undergoes integration since ARTS designed and developed MSGE. If the contractor's technical knowledge is lost during this period, LADEE could be severely impacted during the integration of the spacecraft and the observatory.

SOFIA: ARTS is providing support to the EXES instrument and project management support. SOFIA will need both tasks to continue with the expertise and knowledge of ARTS staff as critical milestones are occurring throughout 2012.

NanoSat: ARTS is supporting the NanoSat program by providing mechanical, electrical and software engineering, fabrication, integration and test support to three specific projects. The three projects currently being developed are E-CamSAT, MIST (Microsatellite, In-Situ Technologies), and NLAS (NASA Launch Adaptor System). Each of these is expected to launch in Spring/Summer of 2012.

As stated above, if this bridge follow-on contract to the incumbent, ARTS, for these highly specialized, mission critical services is not awarded as requested herein, the result will be, as described above in detail in paragraph B., a substantial duplication of costs to the Government, as well as unacceptable delays in the performance of these essential contract requirements.

E. Description of efforts made to ensure that offers are solicited from as many potential sources as is practicable, including whether a notice was or will be publicized as required by [FAR Subpart 5.2](#) and, if not, which exception under [5.202](#) applies. [FAR 6.303-2(a)(6)]

In accordance with Part 5.2 of the FAR, a synopsis was issued on October 20, 2011 through the Federal Business Opportunities (FedBizOpps), to inform the public of NASA's intent to enter into a bridge contract with ARTS in order to continue performance for a potential of 13 months. The synopsis provided instructions for interested parties to submit capabilities and qualifications to perform the effort to the Contracting Officer. To date, no capability/qualifications have been received.

F. A determination by the Contracting Officer that the anticipated cost to the Government will be fair and reasonable. [FAR 6.303-2(b)(7)]

Upon receipt of a cost proposal from ARTS, an evaluation of the proposal will be conducted in accordance with FAR Part 15.404, Proposal Analysis, to ensure that the cost to the Government is fair and reasonable. The proposal analysis will ensure that the final agreed-to Cost Plus Fixed Fee value is fair and reasonable. Analysis will include the appropriate cost and price evaluation techniques. Pre-

negotiation objectives will be prepared prior to the initiation of negotiations and will be in accordance with FAR Part 15.406-1, Prenegotiation Objectives prior to starting negotiations.

G. Description of the market research conducted and the results or a statement of the reason market research was not conducted. [FAR 6.303-2(b)(8)]

Limited market research was conducted in support of the decision to award a short-term bridge contract to ARTS, because of the short timeframe to put a contract in place (less than two months) to prevent any major disruption to support of critical NASA programs and projects. Based on Code R's technical knowledge of the current requirements and necessary capabilities required to support LADEE and SOFIA schedules, there are no known companies that have the ability to quickly transition in a short period (less than two months) without adversely impacting the program and project milestones. A notice to FedBizOpps was published to announce NASA ARC's intentions to award a sole source bridge contract. The result of the synopsis is addressed in Item E. Also, the Contracting Officer and the Contracting Officer's Technical Representative reviewed other Center's engineering support services contracts and determined either the requirements were not within the scope or the contracts did not have extra capacity (value).

H. Any other facts supporting the use of other than full and open competition. [FAR 6.303-2(a)(9)]

The Engineering Systems Division has determined that ARTS is highly qualified to perform the proposed bridge contract at ARC through December 2012 – and is, as outlined above, the only responsible source reasonably capable of supporting critical programs and projects while the PESS procurement is being completed. Based on the latest past performance evaluation, ARTS received excellent ratings in the areas of technical, schedule, quality, safety and cost. The Contractor's excellent performance resulted in the exercise of Option 3 for the period August 19, 2011 to August 18, 2012.

I. Listing of the sources, if any, that expressed, in writing, an interest in the acquisition. [FAR 6.303-2(a)(10)]

A synopsis was issued on October 20, 2011 through FedBizOpps. To date, no capability/qualifications have been received.

J. Statement of the actions, if any, the agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required. [FAR 6.303-2(a)(11)]

Currently, ARC is in the process of conducting a new competitive procurement for Project and Engineering Support Services (PESS) anticipating award in May/June 2012. PESS will provide research and development for new NASA and ARC programs and projects by providing support in the areas engineering, systems engineering, design and development, fabrication, testing, mission operations, project management, and project management. PESS may provide support to new SOFIA and NanoSat requirements after PESS is awarded.

However, the key LADEE support being provided by ARTS addressed in Item B is necessary through December 2012 to ensure no slip in the integration of the LADEE spacecraft and the observatory. As stated above, ARTS is providing support in the design, fabrication and integration of critical LADEE components which cannot be transition to a new contractor until the December 2012 prevent any unacceptable delays

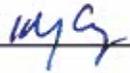
For the foregoing reasons, the follow-on bridge contract for highly specialized services needs to be awarded to the incumbent, ARTS, to provide continued critical engineering support in the areas of project management, systems engineering, design and development, fabrication, integration and testing, operations, technical writing, and configuration management in order to prevent any unacceptable delays to critical programs and projects and to prevent substantial duplication of costs to the Government.

Therefore, it is recommended that this follow-on bridge contract be awarded to ARTS, as requested herein, under the authority of 10 USC 2304(c)(1).

Requirement Initiator:

Kevin Carey
Contracting Officer's Technical
Representative

I certify that the facts presented in this justification are accurate and complete.



Signature

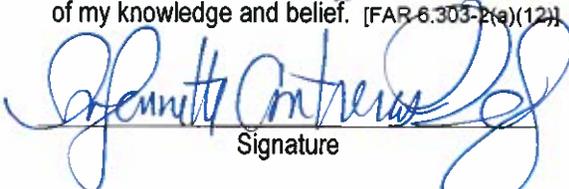
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Date

Contracting Officer:

Anjennette Contreras-Rodriguez

I hereby determine that the anticipated cost to the Government will be fair and reasonable and certify that this justification is accurate and complete to the best of my knowledge and belief. [FAR 6.303-2(a)(12)]



Signature

11/29/11

Date

CONCURRENCE:

Directorate Manager:

Phil M. Luna
Acting Director,
Engineering Directorate



Signature

11/29/11

Date

Procurement Officer:

Kelly G. Kaplan
Acting Procurement Officer



Signature

11/29/11

Date

Center Competition Advocate:

Deborah L. Feng
Acting Deputy Center Director



Signature

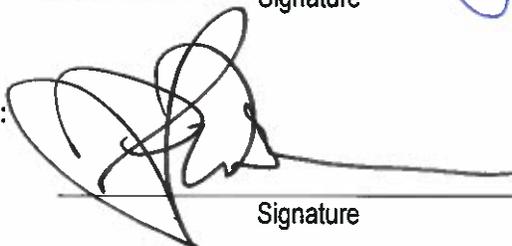
12.1.11

Date

APPROVAL:

Head of the Contracting Activity:

S. Pete Worden
ARC Center Director



Signature

12/2/11

Date

Attachment

cc (after approval):
JAB/241-1