

Broad Agency Announcement: N00014-17-S-B004



Autonomy and Unmanned Vehicle Technologies to Support Amphibious Operations

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2). A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select for award all some or none of the proposals in response to this announcement. The ONR reserves the right to fund all, some or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

Hyperlinks have been embedded within this document and appear as underlined, blue-colored words in the midst of paragraphs. The reader may “jump” to the linked section within this document by “clicking” (CTRL + CLICK, or CLICK).

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I. GENERAL INFORMATION

A. Agency Name -

Office of Naval Research,
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

B. Research Opportunity Title -

Autonomy and Unmanned Vehicle Technologies to Support Amphibious Operations

C. Program Name –

Autonomy and Unmanned Vehicle Technologies to Support Amphibious Operations

D. Research Opportunity Number – N00014-17-S-B004

E. Response Date -

White Papers: 20 Jan 2017

Full Proposals: 31 Mar 2017

F. Research Opportunity Description -

The Office of Naval Research (ONR) is interested in receiving proposals for developing innovative science and technology which offers the potential for enabling small, swarming, autonomous, amphibious vehicles to support amphibious operations.

Background:

ONR has a broad reaching science and technology portfolio supporting autonomous systems. There have been programs related to unmanned air vehicles, underwater vehicles, sea-surface vehicles, and ground vehicles. These efforts have involved fundamental autonomy that is domain agnostic, various sensing approaches, robotics, and kinematics. Research programs have involved both single platform automation and collective behaviors of multiple unmanned platforms. These programs have typically been single domain (air, land or sea) in a relatively homogeneous environment.

ONR is now interested in exploring science and technology approaches to support a range of amphibious operations that take advantage of low-cost multi-domain (sea and land) unmanned systems. ONR envision developing autonomous amphibians that will maneuver (individually and collectively) through the surf zone and emerge and navigate ashore. ONR

anticipate leveraging the vast body of domain agnostic autonomy research that has been done to date and evolve it to address the stressing multi-domain environment. Moreover, ONR is interested in the unique Science and Technology (S&T) required to autonomously maneuver, sense, and communicate in the challenging sea-land interface in varied shore environments including surf, urban, mud-flats, rocky beach, beach with obstacles, and beach vegetation such as mangroves.

Objectives:

This call for science and technology (S&T) proposals focuses on collaborative control of teams of autonomous systems, potentially in concert with manned assets, as the first wave into contested landing zones to conduct surveillance and reconnaissance, clear mines, and secure terrain to allow follow-on forces to safely move ashore. A key focus in this effort is to develop low-cost, autonomous, amphibious vehicles that execute tasking independently or in teams.

This call for science and technology proposals focuses on two (2) aspects of the unmanned first wave:

- **Technology Area #1:** Autonomy advances in littoral and ground maneuver that provide multi-domain (littoral/land) autonomy demonstrated with individual vehicles, collaboration amongst large numbers of vehicles, and teaming with manned platforms; and
- **Technology Area #2:** Amphibious vehicle technologies that enable surface maneuver from ship to shore with low signature, high speed, and a modular payload in a small, low-cost vehicle.

Each focus area is further described below.

Technology Area 1: Autonomy and Manned-Unmanned Teaming - The primary objective of this technology area is to provide the sensing, perception, navigation, coordination, and decision making necessary for an autonomous vehicle to support the amphibious assault mission. Of particular interest is the use of large numbers of small multi-domain (sea and ground) vehicles to accomplish tasking with minimal manned oversight and direction.

This technology area is looking to explore novel approaches to the deliberative and reactive control of large teams of autonomous and manned systems for amphibious operations. Research should focus on the sensing, data fusion, dissemination, and autonomous control required to enable maneuver through the sea-land interface in a variety of environments including surf, urban, mud-flats, rocky beaches, beach with obstacles, and beach vegetation such as mangroves and then maneuver inland. To minimize costs, approaches that use low cost sensors and *a priori* information to provide a reliable and accurate world model are desirable.

The autonomy package should be capable of operating under the following environmental and operational conditions:

Condition	Minimum	Preferred
Time of Day	Day	Day and Night
Visibility	Clear Day	Natural (i.e., fog, rain) and Man-made (smoke) Obscurants
Electromagnetic Interference	No disruption	Degraded and denied radio frequency and GPS environments
Decision making framework scalable to X number of vehicles	5	100
Obstacle Density	Only friendly vehicles	Threats and obstacles in each domain to include buried and underwater obstacles

In particular, approaches to the following challenges are desired:

- Vehicle level autonomy: Develop algorithms and approaches for autonomous navigation and domain transition (sea to ground and back) of a highly maneuverable amphibious vehicle across the sea and land domains (including open water, sea-land interfaces such as surf, urban, mud-flats, rocky beaches beach with obstacles, and beach vegetation such as mangroves, and inland). Components of the autonomous navigation solution should consider:
 - Perception to include swell and breaking wave measurement, dynamic object segmentation and tracking, terrain classification, and methods for mitigating adverse environments including fog, rain, dust, and salt spray.
 - World modeling to include techniques for encapsulating multiple domain models at multiple resolutions including the surf zone as well as *a priori* data and data from other platforms in the swarm.
 - Autonomous vehicle control and path planning including maneuvers in open ocean, in and through the sea-land interface in a variety of environments including surf, urban, mud-flats, rocky beaches, beach with obstacles, and beach vegetation such as mangroves and then maneuver inland over varied terrain (unimproved roads, cross-country, urban) including coordinated behaviors of multiple vehicles.
 - Localization on both water and land including relative localization between platforms in the swarm without strict reliance on GPS.

- Collaborative Behaviors: Develop algorithms and approaches for teams of autonomous vehicles to maneuver through the battlespace. The approach should provide a resilient framework to enable collaborative execution of both deliberative and reactive behaviors. The approach should provide for dynamic task reallocation as necessary to accomplish the maneuver and mission.
- Communications: Low-cost, reliable communications and dissemination of mission critical data amongst a large number of vehicles that are moving rapidly in a littoral environment and through terrain. This topic is focused more on the system-level communications architecture than individual radios.
- Manned-Unmanned Teaming: Develop an interface to enable the supervisory command and control of platform and mission-level autonomy. The interfaces should focus on minimizing the number of users required to control multiple groups of unmanned vehicles executing independent, coordinated, or collaborative tasking during an amphibious operation. The interface should provide high-level control of missions but include the option for a user to take control when desired, and also allow for user interaction for individual go/no-go decisions.

Solutions must use a non-proprietary modular open-architecture and provide software documentation at a minimum to include a user's manual and integration specification. It is encouraged that offerors leverage existing tools including the Robotic Operating System (ROS). Component capabilities should be separated into individual software modules at lowest standalone level. Source code for all software developed under this effort will be maintained in a Government configuration management repository and will include Government purpose rights at a minimum.

The Government will make available data collected on sensor performance in littoral, surf zone, and beach environments to the offerors based on previous Government funded efforts, as well as algorithms and software were available in development of coastal mapping, navigation aids, and situational awareness. The Government will not provide any hardware to conduct coastal surveillance.

Offerors selected under Technology Area 1 will be provided with a commercial vehicle, the Gibbs Quadski, to be used as a surrogate platform of an unmanned amphibious vehicle. The vehicles provided will include a baseline drive-by-wire system. The general vehicle specifications will be provided at the request of potential offerors. Offerors will be expected to use the surrogate vehicle to demonstrate their autonomy technology development in periodic test exercises. The Government will monitor the integration and testing of individual technology area solutions. Additional vehicles may be provided as required by the Government to demonstrate the technology as described below. The offeror may modify the vehicle as necessary to support their efforts to include changes to the actuation and drive-by-wire technologies. Any modifications that would significantly alter the size, weight, shape, or fundamental functionality of the vehicle will need to be approved by the government. Modified and unmodified vehicles will remain the property of the government following the completion of the program. Any damage to the vehicles shall be reported to the Program Officer immediately.

The major test events and demonstrations to assess progress are:

- Phase A-1 (24 months after contract award): Demonstrate the ability to autonomously navigate at sea from at least two miles off shore through environments such as surf, urban, mud-flats, rocky beaches, beach with obstacles, and/or beach vegetation such as mangroves to a landing point at least one mile inland from the beach over unimproved roads and off-road routes. The systems will then return to the initial launch point at sea via an alternative route. Demonstrate the ability to autonomously navigate a pair of vehicles which will include the ability for the vehicles to communicate with each other to adapt the route based on external cues. In this event, vehicles will conduct basic maneuvers such as leader – follower or split and meet at a way point at the same time. A generic list of terrains, potential obstacles and a set of maneuvers will be provided to the offeror at the initiation of Phase A-1 planning.
- Phase A-2 (48 months after contract award): Demonstrate the ability to autonomously navigate a large team of vehicles (3-10) in complex formations and maneuvers in the same environment as Phase A-1. The vehicles must adapt to the environment and scenario based on organic sensors and external cues. It is expected that vehicles will be able to maneuver not just through the sea-land interface to transition from open water to land, but operate in the surf zone and shallow off-shore waters to conduct mine countermeasure and other tasks. A basic mission profile will be provided to the offeror at the initiation of Phase A-2 after completion of Phase A-1.

Technology Area 2: Amphibious Vehicle Technologies - The primary objective of this technology area is to develop technologies for a small, low-cost amphibious vehicle culminating in a full scale development of up to 20 vehicles. ONR seeks to minimize the size and cost of the vehicles to allow for experimentation with a very large number of vehicles.

These unmanned amphibious vehicles must navigate from over the horizon through the sea-land interface, onto and around the shore, and execute missions with no man in the loop. The vehicles must be able to integrate the autonomy kit developed in TA 1. The key focus of the vehicle technology development is technologies that enable low-cost systems that can effectively execute tasking in a rapidly changing environment in multiple domains. These vehicle technologies may modify existing vehicles or develop custom vehicles that achieve the desired performance by developing an individual subsystem or component that enables high performance at low system cost. The following sections describe the performance characteristics of the vehicle, but these may be traded off in order to attain a more cost effective solution.

The waterborne portion of the operating environment consists of the vehicle being launched from a delivery vehicle (or from the shore), operating in an open ocean environment at moderate sea states, and maneuvering to the shore through a surf zone. When in the water, the vehicle should be able to:

Condition	Minimum	Preferred
Sea State	Operate in 3 foot significant wave height (SWH), survive (maintain buoyancy, self-righting, course correction, and continue to make headway) up to 10 foot SWH	Operate in 5 foot SWH; Survive in 20 foot SWH
Speed	20 knots (in calm seas)	40 knots (in calm seas)
Surf Zone	Move through 4 foot plunging surf	Move and operate in a 4 foot plunging surf
Sea-Land Interface	Operate through and in: <ul style="list-style-type: none"> - Sandy beaches - Urban interfaces 	Operate through and in: <ul style="list-style-type: none"> - Rocky beaches - Mud-flats - Vegetation such as mangrove swamps

The land portion of the operating environment primarily consists of improved or unimproved terrain. Improved terrain consists of high quality paved roads, rough pavement, loose surfaces with potholes, and cobblestone, which contain lower grades. Unimproved roads, such as sandy beaches, mud flats, trails, cross country terrain, and may contain much higher grades. When on land, the vehicle should be able to:

Condition	Minimum	Preferred
Soft Soil Rating Cone Index (RCI)	Traverse soft soil with RCI of 30	Traverse soft soil with RCI of 25
Dry Sand Slope	20% slope	40% slope
Ascend, descend, stop and hold on natural and reinforced slopes up to	40%	60%
Speed	30 mph on primary roads with 5% grade	60 mph on primary roads with 5% grade
Obstacle Traversal	12 inches in height	24 inches in height
Ditch Traversal	1 feet in depth and 1 feet in width	2 feet in depth and 2 feet in width
Health Monitoring	Integrated health, built-in-test (BIT), and other sensors to support the autonomy (wheel encoders, steering angle, RPM, throttle position, fuel level, engine temperature, water depth sensor, water speed, water sensor to determine if vehicle is in or out of water, integrated emergency stop system, etc.)	

In all terrains and conditions, the vehicle must:

Condition	Minimum	Preferred
Deployable	Navy Amphibious ship well deck, LCAC	MV-22
Payload	400 lbs	800 lbs
Operational Range	10 nm water mission at 2 ft SWH followed by a 10 mile land mission on an unimproved surface (trail or cross-country terrain) in a fully loaded state	25 nm water mission at 2 ft SWH followed by a 25 mile land mission on an unimproved surface (trail or cross-country terrain) in a fully loaded state
Onboard Hotel Power	2 KW continuous at low RPM; powered for at least 1 hour with engine off	5 KW continuous at low RPM; powered for at least 1 hour with engine off

The major phases of technology areas (TA) 2 will be:

- Phase B-1 (0-12 months after award): Conduct conceptual and preliminary design of unmanned amphibious vehicle. The end product of this phase is a drawing package approved by the Government that can be used for prototype development. The Government will determine if a prototype is to be developed at the end of this phase.
- Phase B-2 (13-21 months after award): Fabricate up to two prototype vehicles and demonstrate performance in realistic environment. This requires the offeror to prove the vehicle can maneuver from open water to the beach in a benign environment using tele-operation. The focus of the demonstration is on the ability of the vehicle to drive with no onboard human intervention, transition between modes, and handle the different environments.
- Phase B-3 (22-36 months after award): Fabricate up to twenty vehicles and demonstrate each in the same environment as Phase B-2.

The final vehicle built in TA 2 is intended to integrate the autonomy applique kit developed in TA 1 in a future effort. The offeror must include and document an open vehicle control interface in the development of the vehicle. The offeror will deliver an interface control document that describes how the autonomy applique kit can interface to the vehicle control including physical, electrical, and logical interfaces. The offeror will be provided integration specifications for the autonomy kit developed in TA 1 as available. The offeror must deliver a vehicle which is physically capable of individual maneuvers and transition between operational states (open water, surf zone, land) without direct human physical intervention.

Offerors may propose against one or both of the Technology Areas identified in this announcement, but proposals should be submitted separately for each of the two technology areas. In the event an offeror is selected for both areas, with ONR's approval, the offeror may substitute their custom vehicle for the Gibbs Quadski surrogate at any phase of the autonomy development.

ONR plans to make awards to multiple offerors to develop a comprehensive solution for each Technology Area within budget constraints. At program reviews and at the end of each major demonstration phase, ONR may determine that an offeror's approach or technology maturation level is not appropriate for further development.

Each offeror will be evaluated on their ability to demonstrate the successful completion of the mission objectives and/or the vehicle performance metrics listed above. The Government will define the test range and test metrics used to evaluate each offeror's performance; details of the test evaluation criteria will be provided to the teams at least six (6) months prior to the test.

The Research and Development efforts to be funded consist of applied research and advanced technology development. The funds available to support awards are Budget Activity 2, and 3.

G. Point(s) of Contact -

Comments or questions submitted should be concise and to the point, eliminating any unnecessary verbiage. In addition, the relevant part and paragraph of the Broad Agency Announcement (BAA) should be referenced.

Questions of a business nature, and suggestions for improvement, should be submitted to:

Primary Point of Contact:

Darnell Griffin
Contract Specialist
ONR Code 251
875 North Randolph Street
Suite 1272F
Arlington VA 22203-1995
Darnell.griffin@navy.mil

Secondary Point of Contact:

Vera M. Carroll
Acquisition Branch Head
ONR Code 251
875 North Randolph Street
Suite 1279
Arlington VA 22203-1995
vera.carroll@navy.mil

Questions of a technical nature should be submitted to:

Troy Hendricks
Program Officer
ONR Code 30
Office of Naval Research
875 North Randolph Street
Suite 645
Arlington VA 22203-1995
troy.hendricks@navy.mil

NOTE: A copy of the technical questions should be sent to the business points of contacts shown above.

Questions of a Security nature should be submitted to:

Torri Woodfolk
Industrial Security Specialist
Office of Naval Research
Security Department, Code 43
One Liberty Center
875 North Randolph Street
Arlington, VA 22203-1995
Email Address: torri.powell@navy.mil

NOTE: All UNCLASSIFIED communications shall be submitted via e-mail to the Technical Point of Contract (POC) with a copy to the designated Business POC.

CLASSIFIED questions shall be handled through the ONR Security Point of Contact (POC). Specifically, any entity wanting to ask a CLASSIFIED question shall send an UNCLASSIFIED email to the ONR Security POC with a copy to both the Technical POC and the Business POC stating that the entity would like to ask a CLASSIFIED question. DO NOT EMAIL ANY CLASSIFIED QUESTIONS. The Security POC will contact the entity and arrange for the CLASSIFIED question to be asked through a secure method of communication.

Questions submitted within two (2) weeks prior to a deadline may not be answered, and the due date for submission of the white paper and/or full proposal will not be extended.

Amendments to this BAA will be posted to one or more of the following web pages:

- Federal Business Opportunities (FedBizOpps) Webpage – <https://www.fbo.gov/>
- Grants.gov Webpage – <http://www.grants.gov/>
- ONR Broad Agency Announcement (BAA) Webpage - <http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

H. Instrument Type(s) -

Awards may take the form of contracts. ONR reserves the right to award a different instrument type if deemed to be in the best interest of the Government.

Any contract award resulting from this BAA will incorporate the most current FAR, DFARS, NMCARS, and ONR clauses.

Examples of model contracts can be found on the ONR website at the following link: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/contract-model-awards.aspx>. ONR Contract specific representations and certifications can be accessed on the following page of the ONR website: <http://www.onr.navy.mil/en/Contracts-Grants/submit-proposal/contracts-proposal.aspx>.

The model contracts at the links above are only provided as examples. In the event of any conflict between these examples and current FAR, DFARS, NMCARS, or ONR clauses, current FAR, DFARS, NMCARS, or ONR clauses will govern.

I. Catalog of Federal Domestic Assistance (CFDA) Numbers - 12.300

J. Catalog of Federal Domestic Assistance (CFDA) Titles -

Department of Defense (DOD), Department of the Navy, Office of Chief of Naval Research, Basic and Applied Scientific Research

K. Other Information -

This BAA is intended for proposals related to basic research, applied research, or advanced technology development and that part of development not related to the development of a specific system or hardware procurement. With regard to any restrictions on the conduct or outcome of work funded under this BAA, ONR will follow the guidance on and definition of “contracted fundamental research” as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010.

As defined therein the definition of “contracted fundamental research,” in a DoD contractual context, includes research performed under grants and contracts that are (a) funded by Research, Development, Test and Evaluation Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget Activity 2 (Applied Research) and performed on campus at a university. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant.

Pursuant to DoD policy, research performed under grants and contracts that are a) funded by Budget Activity 2 (Applied Research) and NOT performed on-campus at a university or b) funded by Budget Activity 3 (Advanced Technology Development) does not meet the definition of “contracted fundamental research.” In conformance with the USD (AT&L) guidance and National Security Decision Directive 189, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or executive order. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the *prime contractor’s responsibility* in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer.

Normally, fundamental research is awarded under grants with universities and under contracts with industry. Non-fundamental research is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of such research results due to subject matter sensitivity. Potential offerors should consult with the appropriate ONR Technical POCs to determine whether the proposed effort would constitute basic research, applied research or advanced research.

FAR Part 35 restricts the use of Broad Agency Announcements (BAAs), such as this, to the acquisition of basic and applied research and that portion of advanced technology development not related to the development of a specific system or hardware procurement. Contracts and grants and other assistance agreements made under BAAs are for scientific study and experimentation directed towards advancing the state of the art and increasing knowledge or understanding.

THIS ANNOUNCEMENT IS NOT FOR THE ACQUISITION OF TECHNICAL, ENGINEERING AND OTHER TYPES OF SUPPORT SERVICES.

II. AWARD INFORMATION

A. Funded Amount and Period of Performance-

The Office of Naval Research anticipates multiple awards ranging from \$250,000 to \$4,000,000 per year for a period up to forty-eight (48) months. Contracts awarded under this BAA will be incrementally funded and will contain a base and option(s) periods. The following table provides an estimate (in \$k) of the anticipated funding planned for this effort. The funded amount and period of performance of each proposal selected for award may vary depending on the research area and the technical approach to be pursued by the offeror selected.

	FY17	FY18	FY19	FY20	FY21	Total
TA 1 (\$k)	\$500	\$7,500	\$7,500	\$9,000	\$9,000	\$33,500
TA 2 (\$k)	\$500	\$1,500	\$2,000	\$3,550	\$0	\$7,550
						\$41,050

Although ONR expects the above described program plan to be executed, ONR reserves the right to make changes.

B. Production and Testing of Prototypes-

ONR may modify a contract awarded under this BAA to add a contract line item or contract option for the provision of advanced component development or for the delivery of an initial or additional prototype units. However, such a contract addition shall be subject to the limitations contained in Section 819 of the National Defense Authorization Act (NDAA) for Fiscal Year 2010, as modified in Section 811 of the NDAA for Fiscal Year 2015.

III. ELIGIBILITY INFORMATION

A. All responsible sources from academia and industry may submit proposals under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for Small Business or other socio-economic participation. All businesses both small and large are encouraged to submit proposals and compete for funding consideration.

B. Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal Offerors are allowed so long as such arrangements are permitted under the sponsoring agreement between the Government and the specific FFRDC.

C. Navy laboratories, military universities, and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit either white papers or full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR Technical POC to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other eligible sources from academia and industry that are submitting proposals under this BAA.

D. University Affiliated Research Centers (UARCs) are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contract.

E. Teams are also encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors selected by ONR.

F. Offerors should be aware of recent changes in export control laws. Offerors are responsible for ensuring compliance with all International Traffic in Arms Regulation (ITAR)(22 CFR §120 *et. seq.*) requirements, as applicable. In some cases, developmental items funded by the Department of Defense are now included on the United States Munition List (USML) and are therefore subject to

ITAR jurisdiction. Offerors should address in their proposals whether ITAR restrictions apply or do not apply, such as in the case when research products would have both civil and military application, to the work they are proposing to perform for ONR. The USML is available online at <http://www.ecfr.gov/cgi-bin/text-idx?node=pt22.1.121> . Additional information regarding the President's Export Control Reform Initiative can be found at <http://export.gov/ecr/index.asp>.

G. Cost sharing is not expected and will not be used as a factor during the merit review of any proposal hereunder. However, the Government may consider voluntary cost sharing if proposed.

IV. APPLICATION AND SUBMISSION INFORMATION

A. Application and Submission Process -

White Papers: The due date for white papers is no later than 5:00 PM (Eastern Standard Time (EST)) on Friday, 20 January 2017. White papers are to be submitted as a pdf file via electronic mail (email) only to Troy Hendricks at troy.hendricks@navy.mil. The subject line must read "White Paper Submission in Response to N00014-17-S-B004." If an Offeror does not submit a white paper before the specified due date and time, it is not eligible to participate in the remaining Full Proposal submission process and is not eligible for funding. Each white paper should state that it is submitted in response to this BAA and cite the particular sub-section of the Research Opportunity Description that the white paper is primarily addressing.

White Paper Evaluation/Notification: Navy evaluations of the white papers will be issued via email notification on or about Friday, 3 February 2017. An expanded oral presentation will be subsequently requested from those Offerors whose proposed technologies have been identified as being of "particular value" to the Navy. However, any such request does not assure a subsequent award. Any Offeror whose white paper technology was not identified as being of "particular value" to the Navy is ineligible to make an oral presentation or to submit a full proposal under this BAA.

Oral Presentations: ONR requests that Principal Investigators (PIs) provide expanded presentations of their selected white papers. The purpose of the oral presentation is to provide additional information and address how the proposed technology will affect military applications. The time, location, and briefing format of the oral presentations, if requested, will be provided at a later date via email notification.

Oral Presentation Evaluation/Notification: Navy evaluations of the oral presentations will be issued via email notification within ten (10) business days after the oral presentations. A full proposal will be subsequently encouraged from those Offerors whose proposed technologies have been identified through the aforementioned email as still being of "particular value" to the Navy. Any Offeror whose oral presentation was not identified as being of "particular value" to the Navy is ineligible to submit a full proposal under this BAA.

Full Proposals: The due date for receipt of Full Proposals is 5:00 PM (Eastern Standard Time (EST)) Friday, 31 March 2017. It is anticipated that final selections will be made within four (4) weeks after full proposal submission. As soon as the final full proposal evaluation process is

completed, PI's will be notified via email of their project's selection or non-selection for FY17 funding. Full proposals received after the published due date and time will not be considered for funding in FY17.

B. Content and Format of White Papers/Full Proposals -

White Papers and Full Proposals submitted under this BAA are expected to be unclassified; however, classified proposals are permitted. If a classified proposal is submitted and selected for award, the resultant contract will be unclassified. An 'unclassified' Statement of Work (SOW) must accompany any classified proposal.

For both classified and unclassified proposals, a non-proprietary version of the Statement of Work must also be submitted. Do not put proprietary data or markings in or on the Statement of Work. For proposals containing data that the offeror does not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, the contractor shall mark the title page with the following legend:

“This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate the proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in (insert numbers or other identification of sheets).”

Also, mark each sheet of data that the offeror wishes to restrict with the following legend:

“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.”

Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and should not be merely a copy of the title of this solicitation.

1. Unclassified Proposal Instructions:

Unclassified proposals shall be submitted in accordance with this Section.

2. Special Instructions for Classified White Papers and Proposal:

Classified proposals shall be submitted directly to the attention of ONR's Document Control Unit at the following address and marked in the following manner:

**OUTSIDE ENVELOPE
(no classification marking):**

“Office of Naval Research
Attn: Document Control Unit
ONR Code 43
875 North Randolph Street
Arlington, VA 22203-1995”

The inner wrapper of the classified White Paper and/or Full Proposal should be addressed to the attention of the cognizant TPOC, ONR Code XX and marked in the following manner:

**INNER ENVELOPE
(stamped with the overall classification of the material)**

“Program Name:
Office of Naval Research
ATTN: ONR Program Officer Name
ONR Code: ONR Program Officer Code
875 North Randolph Street
Arlington, VA 22203-1995”

All proposal submissions will be protected from unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

STATEMENT OF WORK (SOW)

An ‘unclassified’ SOW must accompany any classified proposal.

For both classified and unclassified proposals, a non-proprietary version of the SOW must also be submitted.

IMPORTANT NOTE: Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

a. WHITE PAPERS

White Paper Format

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing –single-spaced
- Font – Times New Roman, 12 point
- Page limit: twenty (20) pages excluding cover page and resumes.

White Paper Submission

Electronic (email) submissions should be sent to the attention of the TPOC at: troy.hendricks@navy.mil. The subject line of the email shall read “N00014-17-S-B004” White Paper Submission”. The white paper must be a Microsoft Word 2010 compatible, or PDF format attachment to the email. There is an email size limit of 5MB per email.

NOTE: Do not send:

- 1) Hardcopies of White Papers (including Facsimiles). Only electronic submissions will be accepted and reviewed;**
- 2) ZIP files; and**
- 3) Password protected files.**

White Paper Content

- **Cover Page:** The Cover Page shall be labeled “WHITE PAPER” and shall include the BAA Number N00014-17-S-B004 proposed title, technical points of contact, telephone number, facsimile number, and e-mail address.
- **Technical Concept:** There is considerable freedom to formulate the main body of the white paper as the Offeror sees fit. The bulk of the main body of white paper should be devoted to the technical discussion and innovation. Here is some general guidance on what may be included in the technical concept: a description of the project objectives, technical approach, what's new, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the objectives, a plan for demonstrating and evaluating the operational effectiveness of the Offeror's product in laboratory or simulated environment including evaluation metrics, proprietary aspects of the project and any assertions of data rights applicable to the results of this effort.
- **Operational Naval Concept (where applicable)** – A description of the project objectives, the concept of operation for the new capabilities to be delivered, and the expected operational performance improvements.
- **Operational Utility Assessment Plan (where applicable)** – A plan for demonstrating and evaluating the operational effectiveness of the Offeror’s proposed products or processes in field experiments and/or tests in a simulated environment.
- **Rough Order of Magnitude (ROM)** – A ROM cost estimate by year segregated by both task and the Government’s fiscal year (FY) (01 October through 30 September) over the proposed period of performance (e.g., FY 2018, FY 2019, FY 2020, and FY 2021). The Government’s FY starts 01 October and ends on 30 September. The ROM shall not exceed one (1) page.

b. FULL PROPOSALS

NOTE: If page limits are not specified, then consult with your cognizant technical POC.

i. INSTRUCTIONS FOR CONTRACTS

Proposal Package:

The following five (5) documents with attachments comprise a complete proposal package:

- (1) Proposal Checklist (pdf)
- (2) Technical Proposal Template (pdf)
- (3) Cost Proposal Spreadsheet (Excel)
- (4) Adequacy Checklist for Pre Award Audit (SF 1408) (as applicable)
- (5) Stand-alone non-proprietary Statement of Work (SOW) in Word

NOTE: The electronic file name for all documents submitted under this BAA must not exceed sixty-eight (68) characters in length, including the file name extension.

Items 1 – 5 above are located at: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/>. All have instructions imbedded into them that will assist in completing the documents. Also, both the Proposal Checklist and the Cost Proposal Spreadsheet require completion of cost-related information. Please note that attachments can be incorporated into the Proposal Checklist.

The format requirements for attachments are as follows:

- Paper Size - 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing - single or double spaced
- Font- Times New Roman, 12 point

Offerors responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if offerors fail to identify any intellectual property restrictions in their proposals. Include all proprietary claims to results, prototypes, and/or deliverables. If no restrictions are intended, then the offeror should state “NONE.”

For proposals below the simplified acquisition threshold (less than or equal to \$150K), the Technical Proposal Template and Proposal Checklist documents, and the Cost Proposal Spreadsheet are required. Purchase orders can also contain options, as long as the total amount of the base and all options does not exceed \$150K.

For proposed subcontracts or interorganizational transfers over \$150,000, Offerors must provide a separate fully completed Cost Proposal Spreadsheet in support of the proposed costs. This

spreadsheet, along with supporting documentation, must be provided either in a sealed envelope with the prime’s proposal or via e-mail directly to both the Program Officer and the Business Point of Contact at the same time the prime proposal is submitted. The e-mail should identify the proposal title, the prime Offeror and that the attached proposal is a subcontract, and should include a description of the effort to be performed by the subcontractor.

Offerors should submit an appropriate number of hard copies as discussed with the cognizant Program Officer of their proposal package.

The electronic copy should be submitted in a secure, pdf-compatible format, except for the electronic file of the Cost Proposal Spreadsheet which must be submitted in a Microsoft Excel 2010 compatible format and the Statement of Work Template which must be submitted in Microsoft Word format. All attachments to any required proposal documents should be submitted in a secure, pdf-compatible format.

The secure pdf-compatible format is intended to prevent unauthorized editing of the proposal prior to any award. A password should not be required for opening the proposal document, but the Government must have the ability to print and copy text, images, and other content. Should an Offeror amend its proposal, the amended proposal should be submitted following the same hard and electronic copy guidance applicable to the original proposal.

Any proposed options that are identified in the Technical Proposal Template or Proposal Checklist documents, but are not fully priced out in the Cost Proposal Spreadsheet, will not be included in any resulting contract, cooperative agreement, or other transaction. If proposing options, they **must** be separately priced and separate spreadsheets should be provided for the base period and each option. In addition to providing summary by period of performance (base and any options), the Contractor is also responsible for providing a breakdown of cost for each task identified in the Statement of Work. The sum of all costs by task worksheets **MUST** equal the total cost summary.

The electronic submission of the Excel spreadsheet should be in a “useable condition” to aid the Government with its evaluation. The term “useable condition” indicates that the spreadsheet should visibly include and separately identify within each appropriate cell any and all inputs, formulas, calculations, etc. The Offeror should not provide “value only spreadsheets” similar to a hard copy.

Fixed Fees on ONR Contracts: The Government Objective is set in accordance with the DFARS 215.404-71. See the below table for range and normal values:

Contract Risk Factor	Contract Type	Assigned Value (Normal range)	Normal Value
Technical (1)		3% - 7% (2)	5%
Management/Cost Control (1)		3% - 7% (2)	5%
Contract Type Risk	Firm Fixed Price	2% - 6% (3)	3% - 5% (4)
Contract Type Risk	Cost Plus Fixed Fee	0% - 1% (2)	0.5%

- (1) Assign a weight (percentage) to each element according to its input to the total performance risk. The Total of the two weights equal 100%
- (2) Assign a weighting score relative to the Risk Factor.
- (3) Depends on the specific Contract Type (With/without financing, performance-based payments, and/or progress payments).
- (4) Depends on the specific Contract Type.

Technology Incentive (TI) is rarely utilized at ONR, because the contracts issued by ONR typically are not eligible for TI (See DFARS 215.404-71-2(c) (2)). Any consideration of TI requires strong and convincing justification in the proposal, which are then subject to negotiation and determination of a fair and reasonable fee, within the context of the specific award.

Typically the range of fee is 5% to 7.5% on an ONR awarded contract.

For submission instructions, see Part IV, Section F. [Submission of White Papers and Full Proposals for Contracts.](#)

C. Significant Dates and Times -

Anticipated Schedule of Events *		
Event	Date (MM/DD/YEAR)	EST (Eastern Standard Time)
White Papers Due Date	20 January 2017	5 PM
Notification of Initial Navy Evaluations of White Papers*	3 February 2017	
Oral Presentation of White Papers*	As requested by the Program Officer	
Notification of Navy Evaluations of Oral Presentations*	Within ten (10) business days after oral presentations	
Full Proposals Due Date	31 March 2017	5 PM
Notification of Selection for Award *	21 April 2017	
Contract Awards*	08 September 2017	
Kickoff Meeting*	22 September 2017	

***These dates are estimates as of the date of this announcement.**

D. Submission of Late Proposals (Applicable to White Papers and Full Proposals)

Any proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and

- (a) If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- (b) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government's control prior to the time set for receipt of proposals; or
- (c) It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

E. Submission of Full Proposals for Contracts

Full Proposals for Contracts shall be sent to the Office of Naval Research at the following address:

Office of Naval Research
Attn: Troy Hendricks
ONR Department Code: 30
875 North Randolph Street – Suite 645
Arlington, VA 22203-1995

V. EVALUATION INFORMATION

A. Evaluation Criteria –

Awards under this BAA will be made in accordance with FAR 35.016(e). The primary basis for selecting proposals for acceptance will be technical, importance to agency programs, and fund

availability. Cost realism and reasonableness will also be considered when selecting proposals. ONR reserves the right to request and require any additional information and documentation after it makes the award instrument determination. ONR reserves the right to remove Offerors from award consideration when the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or when the Offeror fails to timely provide requested or required additional information.

Offerors' proposals will be evaluated against the following criteria:

1) Overall scientific and technical merits of the proposal and responsiveness to the topic

Overall scientific and technical merits of the proposal and responsiveness to the topic (i.e., the degree of innovation, soundness of technical concept, Offeror's awareness of the state of the art and understanding of the scope of the problem, significance and originality of the technical approach and effort needed to address/solve the problem, and anticipated scientific impact within the field. The following areas will also be considered:

- Offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives;
 - Offerors should provide specific examples of their experience with autonomous platforms in both the ground and maritime domains.
 - Development and testing of ocean-going autonomous amphibious vehicles will require frequent access to a specific set of test areas. Offerors should provide details on where and how they plan to conduct their experimentation and testing.
- Offeror's demonstration of the understanding of the complexity of the problem and detailed technical explanation of significant and original approaches to those challenges for each of the major autonomy components and/or the vehicle design, and
- Offeror's comprehensiveness and balance of the approach to achieve success across all operating domains (land, surf, and sea).

2) Potential Naval relevance and contribution to the ONR and Department of Navy mission

The following areas will be considered:

- Assessment of the Offeror's system design, architecture, and underlying technologies to support multiple Navy and Marine Corps missions, system upgrades, and large scale production in the event of transition.
 - For TA 1, the assessment will include affordability and robustness of the technologies to apply to other amphibious platforms.
 - For TA 2, the assessment will include the ability to scale to large quantities of vehicles quickly and with significant unit cost reductions.
- The use of standard open-architectures and the modularity of the software and vehicle design to enable maximum future extensibility.

3) Qualifications, capabilities, and experience of the proposed Principal Investigator (PI), team leader, and key personnel who are critical in achieving the proposal objects.

4) Industry-Academia Partnering

The following area will be considered:

- ONR highly encourages partnering among industry and academia with a view toward speeding the incorporation of new science and technology into fielded systems. Proposals that utilize industry-academic partnering which enhances the development of novel S&T advances will be given favorable consideration.

5) The availability of funds.

Criterion 1 is most important. Criterion 2 through 5 are equally important.

Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. ONR's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

The ultimate recommendation for award of proposals is made by ONR's scientific/technical community. Recommended proposals will then be forwarded to the ONR Contracts and Grant Awards Management office. Any notification received from ONR that indicates that the Offeror's full proposal has been recommended does not ultimately guarantee an award will be made. This notice indicates that the proposal has been selected in accordance with the evaluation criteria stated above and has been sent to the Contracting Department to conduct cost analysis, determine the offeror's responsibility, to confirm whether funds are available, and to take other relevant steps necessary prior to commencing negotiations with the offeror.

B. Commitment to Small Business-

The Office of Naval Research is strongly committed to providing meaningful prime and subcontracting opportunities for small businesses, small disadvantaged businesses (SDBs), woman-owned small businesses (WOSBs), historically underutilized business zone (HUBZone) small businesses, veteran-owned small business (VOSBs), service disabled veteran-owned small businesses (SDVOSBs), historically black colleges and universities, and minority institutions, and other concerns subject to socioeconomic considerations through its awards.

Businesses unfamiliar with doing business with the government and that require assistance may contact the state-specific Department of Defense (DoD) Procurement Technical Assistance Center (PTAC). DoD PTACs serve as a resource for businesses pursuing and performing under contracts with DoD, other federal agencies, state and local governments and with government prime contractors. Assistance provided by the PTACs is usually free of charge. PTAC support includes registration in systems such as SAM, identification of contract opportunities, understanding requirements and preparing and submitting proposals. The PTACs have a presence in each state, Puerto Rico and Guam. To locate a local PTAC visit:

<http://www.dla.mil/SmallBusiness/Pages/ProcurementTechnicalAssistanceCenters.aspx> or

<http://www.aptac-us.org/new/> .

1) Subcontracting Plan - For proposed contract awards exceeding \$700,000, large businesses and non-profits (including educational institutions) shall provide a Subcontracting Plan (hereafter known as 'the Plan') that contains all elements required by FAR Subpart 19.704, FAR 52.219-9 and as supplemented by DFARS 252.219-7003.

NOTE: Small businesses are exempt from this requirement to submit a subcontracting plan.

The Plan must be submitted as an attachment to the "Proposal Checklist" and will not be included in the page count. If a company has a Master Subcontracting Plan, as described in FAR 19.701 or a Comprehensive Subcontracting Plan, as described in DFARS 219.702, a copy of the Plan shall also be submitted as an attachment to the "Proposal Checklist".

Plans will be reviewed for adequacy, ensuring that the required information, goals, and assurances are included. FAR 19.702 requires the apparent successful offeror to submit an acceptable Plan. If the apparent successful offeror fails to negotiate a Plan acceptable to the contracting officer within the time limit prescribed by the contracting officer, the offeror will be ineligible for award.

Offerors shall propose a plan that ensures small businesses (inclusive of SDBs, WOSBs, HUBZone, VOSBs and SDVOSBs) will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

As a baseline, Offerors shall, to the best extent possible, propose realistic goals to ensure small business participation in accordance with the current or most recent fiscal year subcontracting goals found on the DoD Office of Small Business Program website at:

<http://www.acq.osd.mil/osbp/>. If proposed goals are below the statutory requirements, then the

offeror shall include in the Plan a viable written explanation as to why small businesses are unable to be utilized and what attempts were taken to ensure that small business were given the opportunity to participate in the effort to the maximum extent practicable.

2) Small Business Participation Statement –

If subcontracting opportunities exist, all prime Offerors shall submit a Small Business Participation Statement regardless of size in accordance with DFARS 215.304 when receiving a contract for more than the simplified acquisition threshold (i.e., \$150,000). All offerors shall provide a statement of the extent of the offeror's commitment in providing meaningful subcontracting opportunities for small businesses and other concerns subject to socioeconomic considerations through its awards and must agree that small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs concerns will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

This assertion will be reviewed to ensure that it supports this policy by providing meaningful subcontracting opportunities. The statement should be submitted as an attachment to the "Proposal Checklist" and will not be included in the page count.

3) Subcontracting Resources -

Subcontracting to a prime contractor can be a good way to participate in the contracting process. The following is a list of potential resources that may assist in locating potential subcontracting partners/opportunities/resources:

- *Companies Participating in DoD Subcontracting Program Report
- *DAU Small Business Community of Practice (SB COP)
- *DefenseLink \geq \$7.0 M Award Notices
- *DoD OSBP Prime Contractors and Subcontractors with Subcontracting Plans
- *Dynamic Small Business Search
- *Electronic Subcontracting Reporting System (eSRS)
- *Federal Business Opportunities (FEDBIZOPPS)
- *Navy SBIR/STTR Search – Website or Brochure
- *DoD Procurement Technical Assistance Centers (PTAC)
- *Small Business Administration (SBA) Subcontracting Opportunities Directory
- *SBA Subnet

For a description and associated websites visit the ONR Office of Small Business webpage at:
<http://www.onr.navy.mil/Contracts-Grants/small-business.aspx>.

In accordance with FAR Subpart 5.206, the following entities may transmit a notice to a Government Point of Entry (GPE) to seek competition for subcontracts, to increase participation by qualified small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs, and to meet established subcontracting plan goal as follows:

- (a) A contractor awarded a contract exceeding \$150,000 that is likely to result in the award of any subcontracts;
- (b) A subcontractor or supplier, at any tier, under a contract exceeding \$150,000, that has a subcontracting opportunity exceeding \$15,000.

The notices must describe—

- (a) The business opportunity;
- (b) Any prequalification requirements; and
- (c) Where to obtain technical data needed to respond to the requirement.

An example of a GPE is the SBA SUB-Net which is a place in which prime contractors may post solicitations or sources sought notices for small business. The SUB-Net database provides a listing of subcontracting solicitations and opportunities posted by large prime contractors and other non-federal agencies.

C. Options -

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government

to exercise the options during contract performance.

D. Evaluation Panel -

Technical and cost proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-4 and 15.207. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this BAA will be required to sign a non-disclosure statement prior to receipt of any proposal submissions.

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

A. North American Industry Classification System (NAICS) code – The NAICS code for this announcement is 541712 with a small business size standard of 500 employees.

B. System for Award Management (SAM): All Offerors submitting proposals or applications must:

- 1) be registered in the SAM prior to submission;
- 2) maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and
- 3) provide its DUNS number in each application or proposal it submits to the agency.

The System for Award Management (SAM) is a FREE WEBSITE that consolidates the capabilities you used to find in CCR/FedReg, ORCA, and EPLS. Future phases of SAM will add the capabilities of other systems used in Federal procurement and awards processes.

SAM may be accessed at <https://www.sam.gov/portal/public/SAM/>

C. Access to your Grant, Cooperative Agreement, Other Transaction and Contract Award

Office of Naval Research (ONR) award/modification documents are only available via the Department of Defense (DoD) Electronic Document Access System (EDA) within the WideArea WorkFlow e-Business Suite (<https://wawf.eb.mil/>).

EDA is a Web-based system that provides secure online access, storage and retrieval of awards and modifications to DoD employees and vendors.

ONR creates an award notification profile for every award.

For grants, the notification profile will use the email addresses from the Application for Federal Assistance, SF424, to notify the recipient of an award. ONR is using the following three email addresses entered by the grantee on the SF424 application to create the EDA notification profile:

- a. Project Director / Principal Investigator (Block 14 - Email)
- b. Applicant Information (Block 5 - Email)
- c. Authorized Representative (Block 19 - Email)

For all other awards, the notification profile will use the email address from the Business Point of Contact to notify the recipient of an award.

IMPORTANT: In some cases, EDA notifications are appearing in recipients' Junk Email folder. If you are experiencing issues receiving EDA notifications, please check your junk email. If found, please mark EDA notifications as "not junk."

If you do not currently have access to EDA, you may complete a self-registration request as a "Vendor" via <https://wawf.eb.mil/> following the steps below:

1. Click "Accept"
2. Click "Register" (top right)
3. Click "Agree"
4. In the "What type of user are you?" drop down, select "Vendor"
5. Select the systems you would like to access (iRAPT at a minimum)
6. Complete the User Profile and follow the site instructions

Allow five business days for your registration to be processed. EDA will notify you by email when your account is approved.

To access awards after your registration has been approved, log into <https://wawf.eb.mil/>, select "EDA", select either EDA location, Select "Contracts", select your search preference, enter the Contract Number (or, if applicable, enter the Grant Number in the Contract Number field), and select "View".

Registration questions may be directed to the EDA help desk toll free at 866-618-5988, commercial at 801-605-7095, or via email at disa.ogden.esd.mbx.cscassig@mail.mil

VII. OTHER INFORMATION

- A. Applies to Contracts only
 - i. Government Property/Government Furnished Equipment (GFE) and Facilities
 - ii. Use of Arms, Ammunition and Explosives
 - iii. System for Award Management (SAM)
 - iv. Employment Eligibility Verification (E-verify)
 - v. Conflicts of Interest
 - vi. FAR / DFARS Clauses

- vii. Combating Trafficking in Person
- viii. Certification Regarding Trafficking in Persons Compliance Plan
- ix. Updates of Information regarding Responsibility Matters

* Click on the above hyperlinks to navigate directly to your desired section.

- i. Government Property/Government Furnished Equipment (GFE) and Facilities:
Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should indicate in the Proposal Checklist, Section II, Blocks 8 and 9, which of these facilities are critical for the project's success.

- ii. Use of Arms, Ammunition and Explosives:

Safety

The Offeror is required to be in compliance with DoD manual 4145.26-M, *DoD Contractor's Safety Manual for Ammunition and Explosives* if ammunitions and/or explosives are to be utilized under the proposed research effort. (See DFARS 223.370-5 and DFARS 252.223-7002)

If ammunitions and/or explosives (A&E) are to be utilized under the proposed research effort, the Government requires a preaward safety survey in accordance with DFARS PGI 223.370-4(C)(iv) entitled *Preaward survey*. The Offeror is solely responsible for contacting the cognizant Defense Contract Management Agency (DCMA) office and obtaining a required preaward safety survey before proposal submission. The Offeror should include required preaward safety surveys with proposal submissions.

If the Offeror proposes that the Government provide Government-furnished A&E containing any nitrocellulose-based propellants and/or nitrate ester-based materials (such as nitroglycerin) or other similar A&E with a tendency to become chemically unstable over time, then NMCARS 5252.223-9000 will also apply to a resulting contract award. (See NMCARS 5223.370-5)

Security

If arms, ammunition or explosives (AA&E) are to be utilized under the proposed research effort, the Government requires a preaward security survey. The Offeror is solely responsible for contacting the cognizant DCMA office and obtaining a required preaward security survey before proposal submission. The Offeror should include a required preaward security survey with proposal submission. (See DoD manual 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition and Explosives*, paragraph C1.3.1.4)

If AA&E are to be utilized under the proposed research effort, the Government may require the Contractor to have perimeter fencing around the place of performance in accordance with DoD 5100.76-M, Appendix 2.

If AA&E are to be utilized under the proposed research effort, the Offeror is required to provide a written copy of the Offeror's AA&E accountability procedures in accordance with DoD 5100.76-M. If the Offeror is required to provide written AA&E accountability procedures, the Offeror should provide the respective procedures with its proposal submission. See DoD 5100.76-M Appendix 2.12.

iii. System for Award Management (SAM):

FAR 52.204-7 System for Award Management and FAR 52.204-13 System for Award Management Maintenance are incorporated into this BAA, and FAR 52.204-13 will be incorporated in all awards.

iv. Employment Eligibility Verification (E-verify):

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as Federal Contractors in E-verify and use E-verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification."

v. Conflicts of Interest:

(1) Disclosure. An offeror shall state in its proposal whether it is aware of any information bearing on the existence of any actual or potential organizational conflict of interest (OCI) as defined in FAR 2.101 and as further discussed in FAR Subpart 9.5 as to itself and any proposed subcontractors, partners, consultants or other affiliates. Offerors performing systems engineering and technical assistance (SETA) for ONR are

considered to have an OCI that may not be susceptible to mitigation. See ONR's Statement of Policy on OCIs, which can be found at the following address:

<http://www.onr.navy.mil/en/About-ONR/compliance-protections/Organizational-Conflicts-Interest.aspx>

The nondisclosure or misrepresentation of an interest creating an OCI may result in the disqualification of an offeror for award, or if such nondisclosure or misrepresentation is discovered after award, the Government may terminate the contract for default, recommend that the contractor be disqualified from subsequent related contracts, or be subject to such other remedial actions as may be permitted or provided by law (see 18 U.S.C. § 1001 and 31 U.S.C. § 3802(a)(2)). Therefore, offerors should interpret the requirements of this section broadly.

An offeror who does not provide support services to ONR or concludes no actual or potential OCI exists shall include the following statement in its proposal: "I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that **NO** actual or potential organizational conflict of interest (OCI) exists under [BAA NUMBER]. I

understand that the failure to disclose the existence of actual or potential OCI shall result in the offeror not being considered for award.”

An offeror who does provide support services to ONR or is aware circumstances exist that may result in the appearance that it may have an unfair competitive advantage shall submit the following with its proposal:

(a) The name of the entity the offeror, its subcontractors, partners, consultants or affiliates supports.

(b) The number of the contract, subcontract, or agreement that creates the actual or potential OCI. If ONR did not award the contract or agreement, provide a copy of the document. If ONR awarded the contract, provide the name of the technical point of contact.

(c) A description of the actual or potential OCI. The statement must describe in a concise manner all relevant facts concerning any past, present or currently planned interest (financial, contractual, organizational, or otherwise) relating to the work to be performed hereunder and bearing on whether the offeror has a possible organizational conflict of interest with respect to (1) impartial, technically sound, and unbiased assessments, recommendations, or evaluations, or (2) being given an unfair competitive advantage. If relevant, offerors shall address the personal conflicts of their employees.

(d) A Mitigation Plan. Offerors should refer to FAR Subpart 9.5 for policies and procedures for avoiding, neutralizing, or mitigating organizational conflicts of interest.

(e) A concluding statement as follows: “I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that I have, to the best of my knowledge and belief, disclosed all actual or potential organizational conflicts of interest (OCI) under [BAA NUMBER]. I understand that the failure to disclose the existence of an actual or potential OCI shall result in the offeror not being considered for award.”

(2) OCI Mitigation Plan Contents. At a minimum, a Mitigation Plan shall:

(a) Provide organizational charts showing the offeror’s (and, as appropriate, those of its subcontractors, partners, consultants, and affiliates) structure as it relates to performance under the contract awarded under this BAA and all contracts and agreements relevant to the OCI, highlighting those elements that create the actual or apparent OCI.

(b) Demonstrate how the elements that create the actual or apparent OCI will be isolated from the resources that will perform work under the contract awarded under this BAA.

(c) Provide information showing whether the organizational elements that will perform work under the contract awarded under this BAA will be geographically or physically separated from the elements that create the actual or apparent OCI.

(d) For each contract or agreement relevant to the OCI, describe the process for reassigning personnel, including those belonging to subcontractors, partners, consultants, and affiliates, from one organization to another. Include restrictions that apply.

(e) For each contract or agreement relevant to the OCI, describe the any controls, including nondisclosure agreements, that are exercised over the future employment of departing employees as it relates to the OCI.

(f) For each contract or agreement relevant to the OCI, describe any OCI training the employees are offered or required to attend, along with the timing (before or after starting work on a government contract), frequency, length, and content of such training.

(g) Provide evidence of facts and circumstances that the offeror asserts mitigate or address the concerns related to the actual or potential OCI.

(3) Review. The Contracting Officer will review an offeror's certifications, statements, and OCI Mitigation Plan (if applicable) submitted and may require additional relevant information from an offeror. All such information and any other relevant information will be used by the Contracting Officer to determine whether an award to the offeror may create an OCI. If found to exist, the Government may: (1) impose appropriate conditions which avoid such conflict, (2) disqualify the offeror, (3) determine that it is otherwise in the best interest of the Government to award a contract to the offeror and include appropriate conditions mitigating such conflict in the award, or (4) seek a waiver. If the Contracting Officer determines that an actual or significant potential conflict of interest exists that cannot reasonably be avoided, neutralized or mitigated, the offeror will be ineligible for award. If accepted, the Mitigation Plan shall become part of the contract.

An offeror who has refused to disclose the information or make the certification required by this BAA concerning an actual or potential OCI shall be disqualified from consideration for award.

vi. FAR / DFARS Provisions:

For purposes of illustration and not of limitation, the following provisions may be applicable to ONR contracts:

#	Provision
52.204-7	System for Award Management
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass Through Charges - Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards

52.217-4	Evaluation of Options Exercised at time of Contract Award
52.217-5	Evaluation of Options
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Applies if exceeds \$10M)
52.226-2	Historically Black College or University and Minority Institution Representation
52.230-7	Proposal Disclosure - Cost Accounting Practice Changes
52.232-15	Progress Payments not included
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-3	Alterations in Solicitation
52.252-5	Authorized Deviations in Provisions
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7004	Alternate A, System for Award Management
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls (DEC 2015)
252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting (DEC 2015)
252.215-7003	Requirements for Submission of Data Other than Certified Cost or Pricing Data - Canadian Commercial Corporation
252.219-7000	Advancing Small Business Growth

vii. Combating Trafficking in Persons:

Appropriate language from FAR Clause 52.222-50 will be incorporated in all awards.

viii. Certification Regarding Trafficking in Persons Compliance Plan:

Prior to award of a contract, for the portion of the contract that is for supplies, other than commercially available off-the-shelf items, to be acquired outside the United States, or services to be performed outside the United States, and which has an estimated value that exceeds \$500,000, the contractor shall submit the certificate as specified in paragraph (c) of 52.222-56, Certification Regarding Trafficking in Persons Compliance Plan.

ix. Updates of Information regarding Responsibility Matters:

FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matter, will be included in all contracts valued at \$500,000 where the contractor has current active Federal contracts and grants with total value greater than \$10,000,000.

B. Applies to Contracts:

- i. Security Classification
- ii. Requirements Concerning Live Organisms
- iii. Institutional Dual Use Research of Concern
- iv. Department of Defense High Performance Computing Program
- v. Project Meetings and Reviews

i. Security Classification:

In order to facilitate intra-program collaboration and technology transfer, the Government will attempt to enable technology developers to work at the unclassified level to the maximum extent possible. If access to classified material will be required at any point during performance, the Offeror must clearly identify such need in Section II, Block 11 of the Proposal Checklist.

If it is determined that access to classified information will be required during the performance of an award, a Department of Defense (DD) Form 254 will be attached to the contract, and FAR 52.204-2 - Security Requirements will be incorporated into the contract.

ii. Requirements Concerning Live Organisms:

(2) Use of Animals:

If animals are to be utilized in the research effort proposed, the Offeror must submit prior to award a Full Appendix or Abbreviated Appendix with supporting documentation (copies of IACUC Approval, IACUC Approved Protocol, and most recent USDA Inspection Report) prior to award. For assistance with submission of animal research related documentation, contact the ONR Animal Use Administrator

at (703) 696-4046. Guidance: <http://www.onr.navy.mil/en/About-ONR/compliance-protections/Research-Protections/Animal-Recombinant-DNA.aspx>

(2) Use of Human Subjects in Research:

(a) You must protect the rights and welfare of individuals who participate as human subjects in research under this award and comply with the requirements of the Common Rule at 32 CFR part 219 and applicable provisions of DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research (2011), the DON implementation of the human research protection program contained in SECNAVINST 3900.39D (or its replacement), 10 USC 980 "Limitation on Use of Humans as Experimental Subjects," and when applicable, Food and Drug Administration (FDA) and other federal and state law and regulations.

(b) For proposals containing activities that include or may include “research involving human subjects” as defined in DoDI 3216.02, prior to award, the Offeror must submit documentation of:

(i) Approval from an Institutional Review Board (IRB) (IRB-approved research protocol, IRB- approved informed consent document, and other material they considered); proof of completed human research training (e.g., training certificate or institutional verification of training for the principal investigator, and any co-investigators; and the Offeror’s Department of Health and Human Services (DHHS)-issued Federalwide Assurance (FWA#),

(ii) Any claimed exemption under 32 CFR 219 101(b), including the category of exemption, supporting documentation considered by your institution in making the determination (e.g., protocol, data collection tools, advertisements, etc.). The documentation shall include a short rationale statement from the IRB Chair (or IRB vice Chair, designated IRB administrator or official of the human research protection program) supporting the exemption determination. This documentation should be signed by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(iii) Any determinations that the proposal does not contain activities that constitute research involving human subjects, including supporting documentation considered by your institution in making the determination. This documentation should be issued by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(c) Documentation must be submitted to the ONR Human Research Protection Official (HRPO), by way of the ONR Program Officer. If the research is determined by the IRB to be greater than minimal risk, you also must provide the name and contact information for the independent research monitor and a written summary of the monitors’ duties, authorities, and responsibilities as approved by the IRB. For assistance with submission of human subject research related documentation, contact the ONR Human Research Protection Official (HRPO) at (703) 696-4046.

(d) For contracts and orders, the award and execution of the contract, order, or modification to an existing contract or order will include a statement indicating successful completion of the HRPO review. This statement serves as notification from the Contracting Officer to the Contractor that the HRPO has approved the assurance as appropriate for the research under the Statement of Work and that the HRPO has reviewed the protocol and accepted the IRB approval or determination for compliance with Federal, DoD and DON research protection requirements. See, DFARS 252.235-7004. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Human-Subject-Research.aspx>

(3) Use of Recombinant DNA or Synthetic Nucleic Acid Molecules:

Proposals which call for experiments using recombinant or synthetic nucleic acid molecules must include documentation of compliance with NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines), approval of the Institutional Biosafety Committee (IBC), and copies of the DHHS Approval of the IBC letter. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Animal-Recombinant-DNA.aspx>

iii. Institutional Dual Use Research of Concern:

As of September 24, 2015, all institutions and United States Government (USG) funding agencies subject to the [United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern](#) must comply with all the requirements listed therein. If your research proposal directly involves certain biological agents or toxins, contact the cognizant Technical Point of Contact.. U.S. Government Science, Safety, Security (S3) guidance may be found at <http://www.phe.gov/s3/dualuse>.

iv. Department of Defense High Performance Computing Program:

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and RDT&E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and other assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at <http://www.hpcmo.hpc.mil/>.

v. Project Meetings and Reviews:

Individual program reviews between the ONR sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near ONR, Arlington VA and 60% at other contractor or government facilities. (This statement does not apply to international offerors submitting proposals to ONRG. International offerors should contact the cognizant ONRG Administrative Director (AD) for guidance prior to submitting a proposal.) Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.