

REQUEST FOR PROPOSALS FOR ACQUISITION, SCHEDULING AND EVMS,
SOFTWARE DEVELOPMENT,
OOI ENGINEERING AND PROJECT MANAGEMENT SUPPORT
REQUEST FOR PROPOSALS
RFP 1412-00000

SECTION A – GENERAL INFORMATION

The Ocean Observatories Initiative will construct a networked infrastructure of science-driven sensor systems to measure the physical, chemical, geological and biological variables in the ocean and seafloor. Greater knowledge of these variables is vital for improved detection and forecasting of environmental changes and their effects on biodiversity, coastal ecosystems and climate.

The ocean is the planet's largest ecosystem. It drives an incredible range of natural phenomena, including our climate, and thus directly impacts human society. New approaches are crucial to bettering our scientific understanding of episodic and long-term changes at work in our oceans. Resolving pressing issues related to climate variability, severe weather, ocean turbulent mixing, changes in ocean ecosystems, plate tectonics and sub-seafloor chemistry and biology depend upon these new approaches. The OOI's goal is to install transformational technology in ocean observatories where it can serve researchers, policymakers and the public.

With these advances the OOI will improve the rate and scale of ocean data collection and its networked observatories will focus on global, regional and coastal science questions. They will also provide platforms to support new kinds of instruments and autonomous vehicles

The purpose of this Request for Proposals (RFP) is to select an Offeror(s) who will assist the OOI project team in meeting the program objectives and deliverables in a timely manner. Tasks pertaining to the services being sought are provided in Section C. The subaward resulting from this RFP will be a Time and Materials subaward.

The RFP addresses all of the specifics associated with this award. Special attention should be paid to Section L, Instructions to Offerors, and Section M, Evaluation Factors for award.

A.1 IMPORTANT NOTES

This RFP does not obligate Ocean Leadership to award any contract or subaward nor does it commit Ocean Leadership to pay for any costs incurred in the preparation and/or submission of proposals

A.2 ISSUING OFFICE/PROPOSAL DUE DATE

Ocean Leadership is the only point of contact for this procurement.

Any questions related to this procurement should be emailed to RFP1412-00000@oceanleadership.org by 4:00 PM EDT on May 17, 2011 and include "OOI Support

Questions” in the subject line. Responses to all Offeror questions will be posted on the Ocean Leadership website by May 20, 2011 at www.oceanleadership.org (click on “News and Resources” and then choose “Request for Proposals” from the dropdown menu).

The proposal must manifest the Offeror’s assent to the terms and conditions of the RFP, including attachments to be eligible for award. If an Offeror takes exception to any of the terms and conditions of the RFP, Ocean Leadership may consider its proposal to be unacceptable.

E-mail a signed offer/proposal in PDF format by June 10, 2011 to RFP1412-00000@oceanleadership.org include in the subject line “OOI Support RFP” and mail one (1) signed original, 2 copies, and one (1) electronic copy of each proposal volume on a CD, which must be received within 7 days after the closing date of the RFP to the following address:

Ms. Jeanine Hubler
Director of Contracts and Grants
Consortium for Ocean Leadership, Inc.
1201 New York Ave, NW, Suite 400
Washington, DC 20005

(End of Section A)

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SCOPE OF AWARD

Offeror shall provide all necessary labor and materials to support the major functional areas and tasks delineated in Section C. Performance shall be in accordance with all terms, conditions and specifications as stipulated herein.

B.2 TYPE OF AWARD

Ocean Leadership anticipates the award of one or multiple Time and Materials type Subaward(s) which provides for acquiring supplies and/or services on the basis of direct labor hours at specified fixed hourly rates that include wages, overhead, general and administrative expenses and profit. Materials and other direct costs must be clearly excluded from the labor hour rate. Material handling costs may include appropriate indirect costs allocated to direct material in accordance with the Offeror's usual accounting procedures. Offerors must propose labor costs for the entire major functional area, but are not required to propose for all major functional areas.

B.3 TOTAL ESTIMATED COSTS

AWARD LINE ITEM NUMBER

PRICE

Base Subaward (7/1/11 – 8/31/12)

To be completed at award

Functional Labor Categories:

OPTION 1 (9/1/12 – 8/31/13)

To be completed at option exercise

Functional Labor Categories:

OPTION 2 (9/1/13 – 8/31/14)

To be completed at option exercise

Functional Labor Categories:

OPTION 3 (9/1/14 – 12/31/15)

To be completed at option exercise

Functional Labor Categories:

B.4 TRAVEL

Travel to and from OL directed meetings / reviews shall be classified as business travel and charged at cost to OL if approved in writing by the COTR. This award vehicle is not a funding replacement for other OL or OOI sub-awardee awards that may have similar requirements.

Travel to and from the base reporting location for the support positions of the OL Washington, DC office and living expenses will not be paid separately by OL beyond the specific content of the proposal(s) submitted by Offeror(s). If a proposed specific human resource can't be stationed local to the OL Washington, DC office at their own cost then specific arrangements and cost must be defined and quoted in an Offeror's proposal in response to this SOW to be considered by OL and this type of travel shall be classified as locality travel.

(End of Section B)

SECTION C – STATEMENT OF WORK

C.1 GENERAL

C.1.1 Ocean Observatories Initiative (OOI)

Although the ocean is central to the habitability of our planet, it is largely unexplored. Biological, chemical, physical, and geological processes interact in complex ways in the ocean, at the seafloor, and at the air-sea interface. Our ability to learn more about these processes is severely limited by technical infrastructure and developing a more fundamental scientific understanding of these relationships requires new and transformational approaches to ocean observation and experimentation.

The Ocean Observatories Initiative (OOI) will lay the foundation for future ocean science observations. OOI will enable powerful new scientific approaches by transforming the ocean community's focus from expedition-based data gathering to persistent, controllable observations from a suite of interconnected sensors. The OOI's networked sensor grid will collect ocean and seafloor data at high sampling rates over years to decades. Researchers will make simultaneous, interdisciplinary measurements to investigate a spectrum of phenomena including episodic, short-lived events (tectonic, volcanic, oceanographic, biological, and meteorological), and more subtle, longer-term changes and emergent phenomena in ocean systems (circulation patterns, climate change, ocean acidity, and ecosystem trends).

The OOI will enable multiple scales of marine observations that are integrated into one observing system via common design elements and an overarching, interactive cyberinfrastructure. Coastal-scale assets of the OOI will expand existing observations off both U.S. coasts, creating focused, configurable observing regions. Regional cabled observing platforms will 'wire' a single region in the Northeast Pacific Ocean with a high speed optical and high power grid. Global components address planetary-scale changes via moored open-ocean buoys linked to shore via satellite. Through a unifying cyberinfrastructure, researchers will control sampling strategies of experiments deployed on one part of the system in response to remote detection of events by other parts of the system.

A more detailed discussion of the Oceans Observatories Initiative can be found in the OOI Final Network Design available on the OOI website at www.oceanleadership.org.

The Ocean Observing Initiative (OOI) project within the Consortium for Ocean Leadership (OL) requests proposals for acquisition, scheduling and EVMS, software development, engineering and project management support for the OOI project.

C.1.2 Document Scope and Purpose

This Statement of Work (SOW) defines the required activities (e.g., meetings, updates to schedule, modifications, action item lists) that the Offeror must perform to support the acquisition management, scheduling and earned value management, software development, engineering and

project management needs of the OOI program. The Offeror(s) shall furnish all personnel, materials, services, and facilities necessary to perform all requirements set forth in this SOW.

C.1.3 Contract Structure

This SOW is for one or more awards to perform tasks in one or more of the five major functional areas – 1) acquisition management support; 2) scheduling and earned value management support, 3) software platform development and operational support, 4) engineering support and 5) supplemental project management support.

The OL Director of Contracts & Grants may decide to make one overall award for all five functional areas to a single Offeror, or single functional area awards to multiple Offerors. No single functional area will be awarded to more than one Offeror.

The major functional areas, tasks, positions, resources and deliverables listed in this Statement of Work (SOW) are to be provided by the Offeror(s). All positions numbers are for one staff resource per position at the level noted in the tables in this SOW unless otherwise specified. A 100% full time equivalent estimate corresponds to at least 40 hours of actual work time (lunch and breaks excluded) at the OL Washington, DC office per week. Offeror(s) must bid for all positions listed within a single major functional area and can bid for one or major functional areas defined in this SOW.

Proposals for each major functional area will be judged per the evaluation factors listed in Section M of this RFP.

Any Offeror for the engineering support functional area shall provide a Project Manager that is at least 50% dedicated to OL OOI activities (at least 20 hours of actual work time per week with lunch and breaks excluded) at no additional other charge or fee to OL beyond the proposed position number rates will be permitted. He/she shall:

- a) Monitor the award's cost, schedule commitments, and technical requirements fulfillment;
- b) Act as the single Point of Contact to the OL Contract Management Team for all technical and contractual activities;
- c) Ensure their activities are adequately staffed with personnel possessing the appropriate skills and experience for the respective major functional areas, tasks, position numbers and deliverables defined in this SOW;
- d) Keep OL advised of its activities in support of this award, keeping them informed of the current status, issues, barriers, risks, and any other item potentially impacting the OOI or Offeror's abilities to perform the work defined in this SOW;
- e) Utilize processes and mechanisms, provided by OL for OOI, in particular where Offeror is requested to provide assistance to Ocean Leadership in the construction and review of OOI deliverables;
- f) Coordinate with and interacts with other OOI Offerors, as required or directed by OL;

- g) Plan for and support travel, as required, and specifically authorized in writing by the COTR;
- h) Maintain, backup, and recover the document and drawing files, as required or directed by OL;
- i) Maintain consistency for naming conventions and other key parameters in the TDP development environment, as required or directed by OL and the OOI CMP;
- j) Prepare and submit a transition plan for any accepted specific staff resources in a proposal for key personnel positions within an awarded major functional area that leave the project prior to the end of each PoP;
- k) Perform any other tasks and provide deliverables listed in this SOW within the allotted 50% OOI project assignment period per week.

Project management and administrative management (travel, status reporting to base organization, vendor management costs for recruiting, travel and timesheet processing, and any other administrative costs) of the scope, deliverables and people within any individual position number for all other major functional areas in this SOW must also be included in the T&M resource rates quoted by the Offeror for each position number under each major functional area regardless of the quantity of major functional area numbers ultimately awarded and will not be applicable for direct charge to OL.

Offerors must provide comprehensive narrative statements that illustrate the support they can offer. At a minimum, the Offeror should provide a Management Plan for responding to the requests and services required per this SOW and Experience and Qualifications per the major functional support areas and position numbers.

Management Plan

As part of their proposal, Offerors must provide comprehensive narrative statements that set out the management plan they intend to follow to respond to requests for services including the ability to provide additional resources in an emergency situation. Identify the personnel and their availability to begin work upon award. Offerors shall also address the need for any subcontracting and clearly identify which position numbers are being subcontracted. The Offeror should also describe how he/she intends to ensure effective customer support to the major functional areas and tasks outlined in this SOW.

Experience and Qualifications

As part of their proposal, Offerors must provide a narrative description of the project team and a personnel roster, including resumes in accordance with Section L of this RFP that identify personnel that will work on the award as well as key personnel, and address the training and experience of proposed personnel.

Upon review and evaluation of the proposal, OL may require additional supporting information from the Offeror in order to clarify the proposal.

The positions listed below in each functional area are considered essential and key personnel to the work being performed hereunder. Prior to removing, replacing, or diverting the individuals proposed and awarded for these positions, Offeror shall notify OL's Director of Contracts and Grants three weeks in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact of such substitution upon the successful performance of this Subaward. No diversion shall be made by Offeror without the written notification and consultation with Ocean Leadership. Positions may be added to this clause during performance of the Subaward by mutual agreement of both parties.

C.2 MAJOR FUNCTIONAL AREA # 1 - ACQUISITION MANAGEMENT AND SUPPORT

This functional area requires the Offeror to perform activities and provide staffing resources associated with all phases of acquisition management and requirements development. More specifically, the Offeror shall perform the following tasks.

C.2.1 TASKS

C.2.1.1 Support Management Specifications and RFP Development

The Offeror shall assist OL in analyzing project needs relative to technical specifications and Requests for Proposals (RFP) production. The Offeror shall provide the Senior Project Manager (SPM) and Senior Systems Engineer (SSE) with reports, proposals and schedules to support management of specifications and RFP development needs of the project.

C.2.1.2 Develop Strategies, Procedures and Processes

The Offeror shall advise and work with OCEAN LEADERSHIP to develop strategies, procedures and processes to solicit, review, select and procure solutions that satisfy the needs and requirements of the project, related to technical work to transform a set of requirements for scientific measurement, instruments or other devices and assemblies into technical specifications and associated RFPs.

C.2.1.3 Develop Templates and Work Instructions

The Offeror shall develop templates and work instructions for Implementing Organizations (IOs), SEs, Project Scientists, and procurement personnel to use in developing RFPs and technical specifications.

C.2.1.4 Develop RFPs, Requests for Information (RFI) and Request for Quotes (RFQs)

The Offeror shall develop, review, edit and comment on specifications, RFIs, RFQs and RFPs.

C.2.1.5 Data and Information Gathering

The Offeror shall work with the OOI SE, System Architects, and Project Scientists in their effort to elicit and analyze data and information from project and non-project sources including OOI Science Questions, Science User Requirements, Operational Requirements, System Requirements, Interface Agreements, Subsystem Requirements, and Element Requirements (i.e., functional, interface, and performance), specifications, RFPs, plans, policies, procedures and guides for Program Management and Systems Engineering of a large scale integrated system of systems program as required or directed by OCEAN LEADERSHIP in the development of sensor / instrument or other specifications, RFIs, RFPs, evaluations, selection and procurement.

C.2.1.6 Data and Information Acquisition and Analysis

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI project staff to establish a working relationship and review existing documentation. Travel requests must be approved in writing (including email) by the OL COTR in advance of travel.

C.2.1.7 Program Reviews and Meetings

The Offeror shall participate in select OOI teleconferences, and/or attend other scheduled OOI Program meetings / reviews, as directed by OCEAN LEADERSHIP and directly related to the deliverables of this SOW.

C.2.1.8 Deliverables

- Perform post contract management activities
- Management Plan (Due 3 weeks after contract award)
- Analyses of project needs and development of procurement strategy
- Sensor/instrument specifications or other specifications, as coordinated with OL/OOI

- Sensor/instrument or other RFPs, as coordinated with OL/OOI
- Sensor/instrument or other RFIs as coordinated with OL/OOI, including documentation
- Procurement strategies, processes, and process management related to OOI sensors/instruments and subsystems, including participation in the source selection process, from RFP development through contract award
- Upload digital copies of the deliverables, files, documents, to the document management system as coordinated with OCEAN LEADERSHIP
- Deliverables and documents to be developed and provided in accordance with the *OOI Configuration Management Plan* policy, including document tracking metadata and names
- Bi-weekly Report (written) status updates to the COTR, Senior Project Manager and Senior Systems Engineer

C.2.2 ACQUISITION MANAGEMENT SUPPORT STAFFING

The Offeror shall provide the following staff resources at appropriate levels of capability, qualifications and experience to perform functions associated with the tasks contained in Section C.2. Upon review and evaluation of the proposal, OL may require additional supporting information from the Offeror in order to clarify the proposal.

The positions listed below in each functional area are considered essential and key personnel to the work being performed hereunder. Prior to removing, replacing, or diverting the individuals proposed and awarded for these positions, the Offeror shall notify OL's Director of Contracts and Grants three weeks in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact of such substitution upon the successful performance of this Subaward. No diversion shall be made by Offeror without the written notification and consultation with Ocean Leadership. Positions may be added to this clause during performance of the Subaward by mutual agreement of both parties.

Acquisition and Management Support Major Functional Area #1

Position Title & Number		Base	Option 1	Option 2	Option 3
Position No.	Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.1	Acquisition Management Specialist	100%	100%	100%	100%

POSITION DESCRIPTION (ACQUISITION AND MANAGEMENT SUPPORT)

P.1 - Acquisition Management Specialist (AMS): Monitors and coordinates contract and award activities related to Ocean Observatories Initiative (OOI) common acquisitions in support of the OOI Senior Project Manager (SPM), Project Management Office (PMO) Contracting Officer's Technical Representative (COTR), and the Ocean Leadership Director of Contracts and Grants (DCG). The AMS shall develop, execute, and maintain the post-award contract management activities associated with commercial contracts awarded by the Ocean Leadership DCG for common procurements for the OOI. Additionally, AMS shall provide technical guidance on an as-needed basis to support the commercial contract acquisition activities of the Implementing Organizations (IOs) and provide PMO level monitoring of commercial contract actions for the overall OOI project.

Any contract related actions must be performed under the guidance of OL's Director of Contract and Grants. Support tasks within the overall services provided by AMS shall include, but not be specifically limited to, the following: coordinating post-award actions through contract and award kick-off and notice to proceed; implementing contracted schedule and budget; developing and incorporating standards for availability, maintainability, and safety into contract and award performance and coordination with IOs; monitoring vendor contract performance and compliance; processing and tracking delivery order administration within the cognizance of Ocean Leadership; monitoring vendor performance to ensure satisfactory deliverable quality assurance; supporting development of contract modifications; developing and ensuring coordination of vendor compliance with contract requirements with regard to testing, operations, and maintenance; providing for ongoing review of product improvements and technical refresh through market research and vendor communication and developing contract modifications as required; providing ongoing support to IOs in procurement development, source selection, contract awards, and contract execution and management; and coordinating with SPM, PMO COTR, Ocean Leadership DCG, PMO Master Scheduler, PMO Budget/Financial Manager, and other staff for regular monitoring, reporting, and reviewing contract and award performance and developing and implementing corrective actions.

Qualifications:

AMS personnel should have a Bachelor's Degree in business, operations/project management, engineering, or equivalent from an accredited college or university with at least 10 years of overall experience and at least five years of experience in government or commercial acquisition services. Demonstrated planning, decision-making, and problem-solving capabilities; ability to work independently to prioritize work and complete projects with general direction. Excellent writing, editorial, and communication skills are a must. Agility with standard office software tools, email, Word, Excel, and Internet tools. Demonstrated understanding of corporate protocol: ability to work successfully within a

hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

C.3 MAJOR FUNCTIONAL AREA #2- SCHEDULING AND EARNED VALUE MANAGEMENT SUPPORT

Support for this major functional area requires resources that have the skills necessary to manage the scheduling aspects of OOI, including implementation of standard processes, tools, and program planning & control practices. This includes participating in the development of and coordination of the integrated master plan and integrated master schedule to meet all program objectives – as well as managing efforts to define, organize, and structure work elements of the plan.

C.3.1 TASKS

C.3.1.1 Perform Scheduling, Budgeting and Earned Value (EV) Tasks

The Offeror shall ensure OOI scheduling, budgeting and Earned Value (EV) tasks are executed and deliverables to external clients (e.g., NSF) and internal clients (e.g., OL, CGSN) are met. The Offeror shall be responsible for the definition and implementation of key scheduling and EV processes, policies and procedures.

C.3.1.2 Develop Baseline Information

The Offeror shall develop a baseline set of information relative to 1) cost estimate (costbook), 2) budget (Cobra), 3) NSF funding, 4) distributions and allocations of funding (commitments/obligations) in a system or systems that can be maintained by users and provide a single source of program budget summary information.

C.3.1.3 Develop Processes

The Offeror shall develop the processes to provide data to the baseline set, event driven updates, monthly updates, and queries to the information. The processes shall be delivered in a process document.

C.3.1.4 Manage Scheduling

The Offeror shall manage the scheduling aspects of OOI, including implementation of standard processes, tools, and program planning & control practices. This includes participating in the development of and coordination of the integrated master plan and integrated master schedule to meet all program objectives – as well as managing efforts to define, organize, and structure work elements of the plan.

C.3.1.5 Perform Risk Analysis

The Offeror shall track plans and schedules, performs risk analysis, identify and resolve critical path and network logic conflicts on all schedules. This includes providing schedule performance visibility to program management through metrics, reports and briefings – as well as training appropriate staff in planning and scheduling systems and techniques.

C.3.1.6 Identify Problems and Develop Solutions

The Offeror shall ensure that financial/schedule reporting is consistent with contractual obligations and company policies. This includes identifying actual or potential problem areas relating to budget variances and potential cost overruns – as well as developing potential solutions to problem areas and with program concurrence, implements corrective actions.

C.3.1.7: Develop Accurate Budgets

The Offeror shall oversee development of OOI and IO budgetary plans and refine as necessary. This includes analyzing the data to ensure the estimates, budgets and funding is accurately predicted, documented, reported and explained.

C.3.1.8 Apply Earned Value Management Techniques

The Offeror shall utilize charts, earned value management and other Program Management techniques to gauge progress and identify performance variances to facilitate focus and intervention on critical areas. This includes providing guidance and advice to the PM and COTRs relative to EV and performance of Offerors

C.3.1.9 Data and Information Acquisition and Analysis

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI project staff to establish a working relationship and review existing documentation. Travel requests must be approved in writing (including email) by the OCEAN LEADERSHIP COTR in advance of travel. The Offeror shall work with OCEAN LEADERSHIP to define required inputs for documentation development and utilization of digital communication tools (including email, the OOI Software Architecture Framework (SAF), Alfresco, Confluence, and OOI document management systems).

C.3.1.10 Participate in OOI Program Meetings and Reviews

The Offeror shall participate in select OOI teleconferences, and/or attend other scheduled OOI Program meetings/reviews, as directed by OCEAN LEADERSHIP COTR and directly related to the deliverables of this SOW.

C.3.1.11 Deliverables

- Management support to develop a schedule and manage the delivery of work performed by the Offeror to that schedule to ensure the timely and high quality delivery, subject to authority afforded by the COTR. Analyses of project progress, weekly metric reports, weekly schedule files and reports needs and strategy for development, maintenance and query of budget and funding information.
- Written project management, budget and EV strategies, processes and process management implementation of such, related to the OOI project, through the proposal evaluation and award phases of any contract or project.
- Upload of digital copies of the deliverables, files, documents, drawings, etc. to the document management system as coordinated with OCEAN LEADERSHIP
- Weekly Report (written) status updates to the COTR, Project Manager and Senior Systems Engineer

C.3.2 SCHEDULING AND EVMS SUPPORT STAFFING

The Offeror shall provide the following staff resources at appropriate levels of capability, qualifications and experience to perform functions associated with the tasks contained in Section C.3. Upon review and evaluation of the proposal, OL may require additional supporting information from the Offeror in order to clarify the proposal.

The positions listed below in each functional area are considered essential and key personnel to the work being performed hereunder. Prior to removing, replacing, or diverting the individuals proposed and awarded for these positions, the Offeror shall notify OL's Director of Contracts and Grants three weeks in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact of such substitution upon the successful performance of this Subaward. No diversion shall be made by Offeror without the written notification and consultation with Ocean Leadership. Positions may be added to this clause during performance of the Subaward by mutual agreement of both parties.

Scheduling and EVMS Staffing Support Major Functional Area #2
Scheduling Support

		Base	Option 1	Option 2	Option 3
Position No.	Position Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.2	Master Scheduler	100%	100%	100%	100%
P.3	Scheduler	100%	100%	100%	100%
P.4	O&M Scheduler	100%	100%	100%	100%

		Base	Option 1	Option 2	Option 3
Position No.	Position Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.5	Earned Value Manager	100%	100%	100%	100%
P.6	Earned Value Analyst	100%	100%	100%	100%

Position Descriptions (Scheduling Support)

P.2 - Master Scheduler: Evaluate and diagnose the OOI Integrated Master Program Schedule and to insure the Ocean Leadership and Implementing Organization (IO) Integrated Master Schedules (IMS) are fully integrated with other program management tools, i.e., EVMS, WBS, SOWs, CDRLs, Risks, Critical Path Method modeling and Schedule Risk Management.

The Master Scheduler must be able to develop, review, evaluate, correct, update and maintain program overview schedules; coordinate with internal and external organizational entities and insure that all detailed work plans are consistent with the IMS; develop and maintain program schedule status metrics; model, perform and analyze schedule risk assessments, provide Program Management and Customers with schedule related status and reports. This resource must have significant prior Microsoft Project and Microsoft Project Server experience and be able to converse with the system engineers, technical consultants, programmatic and engineering staff from all parties involved defining and scoping program tasks to meet desired delivery needs. The Master Scheduler must be adept in resource leveling, task analysis for appropriate progress demonstrative milestone development, aggregation of data sets supporting schedule generation and management, and quality checks and control of schedule artifacts.

Qualifications:

The Master Scheduler shall have demonstrated experience in acquisition planning, proposal planning, and schedule risk assessment models and methods including schedule projections and analysis; Expert in Microsoft Project; significant experience with Project Server, schedule assessment tools, EVMS, reporting and risk management tools such as wInsight, Cobra, etc.; fluency in concepts such as work breakdown structure, program scheduling and status reporting, program reporting, and resource planning; familiar with Microsoft Office tools, including MS Word, MS PowerPoint, and MS Excel and MS Access; ability to work as a team member in a diverse group; ability to deal effectively with both Government and contracted workforce members; excellent verbal and written communication skills.

The Master Scheduler should have a Bachelor's Degree in business, operations/project management, engineering or equivalent from an accredited college or university with at least 10 years of overall experience and at least five years of experience in MS Project, EVMS, Critical Path development and schedule performance analysis.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.3 - Scheduler: Maintain Integrated Master Program Schedule and ensure the Integrated Master Schedules (IMS) are fully integrated with other program management tools, i.e., EVMS, WBS, SOWs, CDRLs, Risks, Critical Path Method modeling and Schedule Risk Management.

The Scheduler must be able to develop and maintain program overview schedules; coordinate with internal and external organizational entities and insure that all detailed work plans are consistent with the IMS; develop and maintain program schedule status metrics; model, perform and analyze schedule risk assessments, provide Program Management and Customers with schedule related status and reports. This resource must have significant prior Microsoft Project and Microsoft Project Server experience and be able to converse with the system engineers, technical consultants, programmatic and engineering staff from all parties involved defining and scoping program tasks to meet desired delivery needs.

Qualifications:

The Scheduler shall have solid experience in acquisition planning, proposal planning, and schedule risk assessment models and methods including schedule projections and analysis; expert in Microsoft Project; significant experienced with Project Server, schedule assessment tools, EVMS, reporting and risk management tools such as wInsight, Cobra, etc.; fluency in concepts such as work breakdown structure, program scheduling and status

reporting, program reporting, and resource planning; familiar with Microsoft Office tools, including MS Word, MS PowerPoint, and MS Excel and MS Access; ability to work as a team member in a diverse group; ability to deal effectively with both Government and contracted workforce members; excellent verbal and written communication skills.

The Scheduler should have a Bachelor's Degree in business, operations/project management, engineering or equivalent from an accredited college or university with at least with five years of overall experience and at least three years of experience in MS Project, EVMS, Critical Path development and schedule performance analysis.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.4 - O&M Scheduler/Planner: Support the O&M Manager, Engineer and others in planning and scheduling operation and maintenance activities for the OOI devices. The O&M Scheduler is to maintain the Integrated Master Schedule for O&M activities and to insure that it can be imported into the overall Integrated Master Program Schedule and other program management tools, i.e., EVMS, WBS, SOWs, CDRLs, Risks, Critical Path Method modeling and Schedule Risk Management.

The O&M Scheduler must be able to develop and maintain O&M overview schedules; coordinate with internal and external organizational entities and insure that all detailed work plans are consistent with the O&M IMS; develop and maintain program schedule status metrics; model, perform and analyze schedule risk assessments, provide Program Management and Customers with schedule related status and reports. This resource must have significant prior Microsoft Project and Microsoft Project Server experience and be able to converse with the system engineers, technical consultants, programmatic and engineering staff from all parties involved defining and scoping program tasks to meet desired delivery needs.

Qualifications:

The O&M Scheduler shall have solid experience in operations and maintenance planning and schedule risk assessment models and methods including schedule projections and analysis; expert in Microsoft Project; significant experience with Project Server, schedule assessment tools, EVMS, reporting and risk management tools such as wInsight, Cobra, etc.; fluency in concepts such as work breakdown structure, program scheduling and status reporting, program reporting, and resource planning; familiar with Microsoft Office tools, including MS Word, MS PowerPoint, and MS Excel and MS Access; ability to work as a team member in a diverse group; ability to deal effectively with both government and contracted workforce members; excellent verbal and written communication skills.

The O&M Scheduler should have a Bachelor's Degree in business, operations/project management, engineering or equivalent from an accredited college or university with at least five years of overall experience and at least three years of experience in MS Project, EVMS, critical path development and schedule performance analysis.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

Position Descriptions (Earned Value Management Support)

P.5 - Earned Value Manager (EVM): Serves as the manager of the OOI earned value (EV) management infrastructure/system and is responsible for all Earned Value related activities for the project. Reports directly to the Senior Project Manager (SPM) and includes coordinating with the IO PMs, IO EVMS/Analysts, OOI Deputy Project Manager, OOI Chief Systems Engineer, and other PMO and IO staff for regular monitoring, reporting and reviewing program management earned value and scheduling activities and developing and implementing corrective actions. This effort also includes integrated project planning, collaboration toolsets, project control, associated management and direct administrative support functions.

The EVM must be able to develop, review, evaluate, correct, update and maintain program overview earned value management software programs, performance reports, graphs and schedules; coordinate with internal entities and external IO entities and insure that all detailed work plans are consistent with the IMS; develop and maintain program schedule status metrics; model, perform and analyze schedule risk assessments, provide Program Management and Customers with schedule related status and reports. This resource must have significant prior experience with the practical application of scheduling principals such as WBS development, task definition, cross project dependencies, critical path methodology, resource forecasting and resource leveling, This resource must be capable of defining processes necessary for baseline development, baseline management, change control , schedule status incorporation and schedule artifact management. Experience with industry standard enterprise scheduling software (e.g. Microsoft Project and Microsoft Project Server) is required. This resource must possess the communications skills necessary to converse with system engineers, technical consultants, programmatic and engineering staff from all parties involved with defining and scoping program tasks to meet desired delivery needs. The EVM must be adept in the concepts of Earned Value and their practical application to a large construction project. In depth knowledge with earned value management metric calculations such as BCWS, BCWP, ACWP, ETC, EAC, BAC, SPI, CPI, CV, SV project scheduling techniques is required.

The EV Manager also:

- Implements earned value management policies and procedures based on ANSI/EIA 748 guidelines and industry best practices.
- Performs EVMS analysis to determine overall program performance, variances and risk areas. Participates in planning meetings and reports project health to project team members.
- Validates and processes monthly ACWP data supplied by the major subOfferors. Analyzes the data to ensure the integrity of the data. Works with major subOfferors to reconcile data discrepancies.
- Validates and processes monthly schedule status data supplied by the OOI Master Scheduler. Analyzes the data to ensure the integrity of the data. Works with the OOI Master Scheduler to reconcile any data discrepancies.
- Develops, maintains and analyzes cost performance reports, custom performance reports, NSF analysis reports, baseline change requests, master baseline log and variance analysis. Writes technical and management reports and prepares briefings.

Qualifications:

The Earned Value Manager shall have a minimum 10 years of experience in application of ANSI/EIA 748 Earned Value Management Criteria and project management of large engineering or science project integration involving the design, construction and testing of large and complex devices. Must be very experienced in using earned value management methods and project management processes with at least seven years of direct use of one or more industry standard enterprise schedule, cost and EV software packages (e.g. Microsoft Project Server, Deltek Cobra). Any provided resource shall have a Bachelor's Degree in Engineering or Business from an accredited college or university, Master's Degree and possession of a Project Management Professional (PMP) certification preferred.

Knowledge of integrated master scheduling, critical path analysis, schedule risk assessment, resource forecasting and resource leveling is required. A high level of proficiency with Microsoft Project and other automated scheduling and EVM software tools that integrate and support EVM and proficiency with accounting systems used to track project costs such as Solomon is required. The Earned Value Manager shall have demonstrated experience in acquisition planning, proposal planning, budgets, contract evaluation, basic accounting principles, and other budgetary and fiscal processes, schedule and other risk assessment models and methods including schedule projections and analysis; fluency in concepts such as work breakdown structure, program scheduling and status reporting, program reporting,

and resource planning; familiar with Microsoft Office tools, including MS Word, MS PowerPoint, and MS Excel and MS Access.

The Earned Value Manager must be experienced in solving practical problems, communicating tasks and responsibilities, and training of other personnel. Demonstrated ability to make sound professional judgments and recommendations based on analysis and interpretation of data. Possesses strong leadership, organizational and communication skills, including knowledge of collaborative applications and tools. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Ability to manage and motivate subordinates. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.6 - Earned Value Analyst: Responsible for the systems, processes, and data that support the OOI Earned Value Management System (EVMS). This position collects, processes, and distributes the information necessary to support the monthly EVM reporting cycle to the OOI Senior Project Manager and the National Science Foundation (NSF). The OOI EV Analyst supports the Implementing Organizations (major subOfferors) with their delivery of EV based inputs, participates in the configuration/change control process and ensures that the OOI EVMS is representative of the actual performance of the OOI program. This effort also includes integrated project planning, collaboration toolsets, project control, associated management, direct administrative support functions, developing and implementing corrective actions. The EV Analyst also:

- Implements earned value management policies and procedures based on ANSI/EIA 748 guidelines and industry best practices.
- Performs EVMS analysis to determine overall program performance, variances and risk areas. Participates in planning meetings and reports project health to project team members.
- Validates and processes monthly ACWP data supplied by the major subOfferors. Analyzes the data to ensure the integrity of the data. Works with major subOfferors to reconcile data discrepancies.
- Validates and processes monthly schedule status data supplied by the OOI Master Scheduler. Analyzes the data to ensure the integrity of the data. Works with the OOI Master Scheduler to reconcile any data discrepancies.

- Develops, maintains and analyzes cost performance reports, custom performance reports, NSF analysis reports, baseline change requests, master baseline log and variance analysis. Writes technical and management reports and prepares briefings.

This resource must have significant prior Microsoft Project and Microsoft Project Server experience and be able to converse with the system engineers, technical consultants, programmatic and engineering staff from all parties involved defining and scoping program tasks to meet desired delivery needs. The EV Analyst must be adept in earned value management techniques and metric calculations such as BCWS, BCWP, ACWP, ETC, EAC, BAC, SPI, CPI, CV, SV as well as project scheduling techniques including resource leveling, task analysis for appropriate progress demonstrative milestone development, aggregation of data sets supporting schedule generation and management, and quality checks and control of EV and schedule artifacts.

Qualifications:

The Earned Value Analyst shall have a minimum of five years of experience in application of ANSI/EIA 748 Earned Value Management Criteria and project management of large engineering or science project integration involving the design, construction and testing of large and complex devices. Any provided resource shall have a Bachelor's Degree in Engineering or Business from an accredited college or university. Knowledge of integrated master scheduling, critical path analysis, schedule risk assessment, resource forecasting and resource leveling is required. A high level of proficiency with Microsoft Project and other automated scheduling and EVM software tools that integrate and support EVM and proficiency with accounting systems used to track project costs such as Solomon is required.

The EV Analyst shall be fluent in concepts such as work breakdown structure, program scheduling, status and program reporting. Must be experienced with Microsoft Office tools, including MS Word, MS PowerPoint, and MS Excel and MS Access. Experienced with budgets, bid proposals, contract evaluation, basic accounting principles, and other budgetary and fiscal processes. Experienced in solving practical problems, communicating tasks and responsibilities to others, manage multiple tasks simultaneously and able to train other personnel on EVM. Demonstrated ability to make sound professional judgments and recommendations based on analysis and interpretation of data. Possesses strong leadership, excellent written and verbal communication skills, including knowledge of collaborative applications and tools. The candidate must have strong interpersonal skills, demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers and supervisors.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

C.4 MAJOR FUNCTIONAL AREA #3: SOFTWARE PLATFORM DEVELOPMENT AND OPERATIONAL SUPPORT

This functional area requires the development and implementation of a software solution/platform, commissioning, and system operations knowledge transfer that will meet and address major general objectives in matching end user interfaces, central database, applications, and tools in support of the cross-section of the OOI project systems engineering, project management, science and user communities, to provide for transition into a program management operations support system.

C.4.1 TASKS

C.4.1.1 Software Application Framework (SAF) Engineering and Operational Support

The Offeror shall support the SAF, including the installation and configuration of software platforms, in cooperation with COL's IT staff. Support includes the following areas:

- a. SAF Software Maintenance:** Fix minor bugs; enable continued integration efforts with/against SAF; and complete minor changes to system requirements and scope.
- b. SAF Data/Info Maintenance:** Update data and information; become knowledgeable on SAF; continue end-user training; perform testing; provide quality assurance; offer general support to users
- c. Disaster / Error Recovery:** Assist hardware maintenance personnel in validating data and databases during recovery
- d. Maintenance Management:** manage maintenance request processes and attributed resources

C.4.1.2 Applications Development

This task requires the continued development of two major applications within the SAF – 1) Budget Management Application, and 2) the Property Management Application. Both applications will be developed using the SAF platform. Both applications must have numerous integration points into existing applications developed on the SAF, including but not limited to the SAF Basis of Estimate, Change Control, Budget, Sensor Management, Risk Management and WBS subsystem. In developing these applications, the process shall include the following.

- a. Planning/Requirements**
 - Scope and Requirements
 - Core Unique business Requirements
 - Detailed Project Planning
 - Wireframes for Key User Experiences
 - Content and Image Library Assessment
 - Business Process Review
 - Legacy/Integration Planning/Interfaces

b. Design, Prototyping and Usability

- User Experience Design and Interfacing
- Architecture & Data Modeling

c. Engineering and Integration

- ECF Development
- Security and Administrative
- Site Navigation, Themes, and Display Templates
- Payment and Shipping Gateways
- Pricing, Security, and Notifications
- Legacy/Systems/3rd Party Integration

d. Quality Assurance and Testing

- Continuous Refinements and Fixes
- Documentation (Technical and End User)
- Baseline User/Process Training

e. Deployment and Operations Support

- Various Tasks working with IT for Best Practices and Infrastructure Prep
- Various Tasks for Content and Artifacts
- Operational Monitoring, Backup, and Recovery Procedures
- Deployment

C.4.1.3 Requirements Management Support, Dynamic Object Oriented Requirements System (DOORS) Maintenance and Help Desk

The Offeror shall perform database configuration, requirements review (format and content), edit, import, export, linking, attribute creation and editing, policy and procedure development, system administration, help desk application support, license management, for a DOORS database. This includes the following.

- Development, delivery, and maintenance of new and existing DOORS related Policies, Procedures, and Work Instructions that provide operational guidance to the OOI DOORS users, as required or directed by Ocean Leadership;
- Telephone-based assistance with the mechanics of DOORS operation to the DOORS users, as required or directed by Ocean Leadership during a window approximately between 9 AM ET and 3 PM PT. to be provided and installed on hardware platforms located at University of California, San Diego (UCSD) and will likely migrate to Washington DC.
- Install, maintain, backup, and recover the DOORS environment, as required or directed by Ocean Leadership, and provide a DVD of the backup/restore files monthly to Ocean Leadership.

- Create and maintain DOORS user accounts, group privileges, and custodian assignments, as required or directed by Ocean Leadership.
- Maintain consistency for core attributes, hierarchical structure, and naming conventions for modules in the DOORS environment, as required or directed by Ocean Leadership.
- Manage the Link Modules and linking conventions to maintain consistency across the DOORS environment, as required or directed by Ocean Leadership.
- Create, test, and deploy DXL scripts to improve the efficiency and maintain consistency across the DOORS environment, as directed by Ocean Leadership.

C.4.1.4 Data and Information Acquisition and Analysis

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI project staff to establish a working relationship and review existing documentation. Travel requests must be approved in writing (including email) by the OL COTR in advance of travel.

C.4.1.5 Program Reviews and Meetings

The Offeror shall participate in select OOI teleconferences, and/or attend other scheduled OOI Program meetings / reviews, as directed by OCEAN LEADERSHIP and directly related to the deliverables of this SOW.

C.4.1.6 Deliverables

The following list contains deliverables required under this functional area.

- Maintain Existing Systems (Construction and O&M operations support)
- SAF Support Systems and Data
- Alfresco Document Management System
- Change Control Application
- Maintain and Modify (O&M maintenance support):
- Risk Management
- Basis of Estimate Application
- Instrument Application
- Application Development (Construction/MREFC):
- Project Status Update Application
- Cobra Integration and Schedule Application Bridge
- Property Management Tracking
- Permit and Procurement Tracking
- Weekly progress reports to the OOI Program Director that document progress on assignments, issues needing OOI Program Director assistance and/or approval, next steps, upcoming project travel plans.
- Working file backups, DVD or DMS, 1 per month

C.4.2 SOFTWARE PLATFORM DEVELOPMENT & OPERATIONAL SUPPORT STAFFING

Software Platform Development and Operational Support Major Functional Area #3

		Base	Option 1	Option 2	Option 3
Position No.	Position Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.7	Application and Collaboration Tools, Database and Web Applications Administrator	100%	100%	100%	100%
P.8	Requirements Management Support, Dynamic Object Oriented Requirements System (DOORS) Maintenance and Help Desk Person	10-25%	10-25%	10-25%	10-25%

Position Description (Software Platform Development and Operational Support)

P.7 - Application and Collaboration Tools, Database and Web Applications Administrator: Perform core tasks of maintaining current OL OOI business processes, SAF tools, spreadsheets, databases, and/or any data source into a unified Web-enabled project control source, enabling general project and budgetary management utility, risk and opportunity management, change control and associated requirements under best-practice and industry approved standards.

Any provided resource must be able to map key business, accounting, financial and project management processes while integrating them with existing and future OOI IT environments; elicit user requirements, develop functionality and design documents, document final design; record all specific customizations that are require consideration during implementation; design, develop, implement and test required databases (including, but not limited to MS SQL, MySQL and Oracle) in platform independent environment necessary to support project control tools and utilities, and their Web-enabled counterparts; direct on-site development operations as lead analyst and developer, delivering technical solutions and data analysis on-time and on budget.

Any provided resource shall have solid experience and expertise with programming languages and software .NET 3.5, C#, AJAX, Microsoft Visual Studio 2010, SQL Server 2008 and MS Excel, both from a tactical standpoint (implementing code, equations and algorithms to elicit required data and/or information extraction) and analytical standpoint (implementing code, equations and algorithms to elicit required for analytical purposes). Solid experience and expertise to configure interfaces of any Web-enable project control tools, as well as importation/exportation of Web. Skills and experience in unit level testing of software/dataset tools, as well as reconciliation testing for data and analytical accuracy.

Qualifications:

Any provided resource must have a technical degree from an accredited college or university, a minimum of five years of experience in a related industry and related position, while showing the background, skills, and discipline necessary to execute on all above requirements and tasks. At least three years of software development experience with .NET 3.5, C#, AJAX, Microsoft Visual Studio 2010 and SQL Server 2008. Background in computer science, mathematics, operational analysis or any other related field is desired.

The base work location for this position is the Washington, DC OL office with no travel expected.

P.8 - Requirements Management Support, Dynamic Object Oriented Requirements System (DOORS) Maintenance and Help Desk Person: The DOORS Maintenance and Help Desk person provided by the Offeror shall have the capacity to provide, by individual OL request, a resource to perform database configuration, requirements review (format and content), edit, import, export, linking, attribute creation and editing, policy and procedure development, system administration, help desk application support, license management, for a DOORS database.

- Develop, deliver and maintain new and existing DOORS related Policies, Procedures, and Work Instructions that provide operational guidance to the OOI DOORS Users, as required or directed by Ocean Leadership. The Offeror shall facilitate a DOORS Working Group for the OOI DOORS User Class.
- Provide telephone-based assistance with the mechanics of DOORS operation to the DOORS users, as required or directed by Ocean Leadership during a window approximately between 9 AM EST and 5 PM EST. DOORS is provided and installed on hardware platforms located at University of California, San Diego (UCSD) and may migrate to a different hosting location in CONUS.
- Install, maintain, backup, and recover the DOORS environment, as required or directed by Ocean Leadership, and provide a DVD or DMS of the backup/restore files monthly to Ocean Leadership.

- Create and maintain DOORS user accounts, group privileges, and custodian assignments, as required or directed by Ocean Leadership.
- Maintain consistency for core attributes, hierarchical structure, and naming conventions for modules in the DOORS environment, as required or directed by Ocean Leadership.
- Manage the Link Modules and linking conventions to maintain consistency across the DOORS environment, as required or directed by Ocean Leadership.
- Create, test, and deploy DXL scripts to improve the efficiency and maintain consistency across the DOORS environment, as directed by Ocean Leadership.
- This LOE support is expected to average between 0.10 and 0.25 FTEs. Remote support desired.

Qualifications:

The DOORS Maintenance and Help Desk person shall have a minimum of three years of experience in a large size engineering project and directly developing, managing and maintaining DOORS. Any provided resource shall have at least an Associate's Degree in a technical field. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering DOORS products and services.

The base work location for this position is an Offeror's office. Remote support to OL desired with no travel or expenses.

C.5 MAJOR FUNCTIONAL AREA #4 - ENGINEERING SUPPORT

C.5.1 TASKS

C.5.1.1 Project Management

The Offeror shall monitor the award cost, schedule commitments, and technical requirements fulfillment, and act as the single point of contact to Ocean Leadership for all technical and contractual activities. In performing this task, the Offeror shall do the following:

- Ensure their activities are adequately staffed with personnel possessing the appropriate skills and experience for the respective tasks defined in this Statement of Work;
- Keep Ocean Leadership advised of its activities in support of this contract, keeping them informed of the current status, issues, barriers, risks, and any other item potentially impacting the OOI or Supplier's abilities to perform the work defined in this Statement of Work;

- Utilize processes and mechanisms, provided by Ocean Leadership for OOI, in particular where the Offeror is requested to provide assistance to Ocean Leadership in the construction and review of OOI deliverables;
- Coordinate and interact with other OOI Offerors, as required or directed by Ocean Leadership;
- Install, maintain, backup, and recover document and drawing files, as required or directed by Ocean Leadership; and
- Maintain consistency for naming conventions and other key parameters in the TDP development environment, as required or directed by Ocean Leadership and the OOI Senior Project Manager

C.5.1.2 Program Reviews and Meetings

The Offeror shall participate in weekly Systems Engineering Coordination Teleconferences, and/or attend other scheduled OOI Program meetings / reviews, as directed by Ocean Leadership and directly related to the deliverables of this SOW.

C.5.1.3 Data and Information Acquisition and Analysis

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI project staff to establish a working relationship and review existing documentation. Travel requests must be approved in writing (including email) by the OL COTR in advance of travel.

C.5.1.4 Communication

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI System Engineer and the OOI Implementing Organizations (technology developers) (IO) Systems Engineers to establish a working relationship, and review existing design documentation.

C.5.1.5 Integrated Engineering Efforts

Under this task, the Contract shall integrate multiple contract engineering teams and foster the development of a Technical Data Package for the OOI software and hardware infrastructure project. The objective of this task is to lead the technical and management efforts of an integrated engineering effort, while examining the design to ensure all project requirements are addressed and satisfied by the design. This task also includes integrated project planning, the development of collaboration toolsets, project control, associated management and direct administrative support functions.

C.5.1.6 Systems Engineering and Technology Support

This task requires the Offeror to apply systems engineering processes and technology to large, complex engineering projects, and work with a variety of engineers in multiple locations under multiple contracts. The Offeror shall also perform a mix of engineering tasks, including requirements attribute development and linking, white paper development, technology surveys, drafting of technical findings and recommendations. Participating and supporting configuration management, risk management, design reviews, project planning and test development for an integrated system of systems.

C.5.1.7 Requirements and Test Engineering Support

The Offeror shall perform requirements development, management and verification activities from the system level down to the hardware/software level; supporting system architecture and system level designs. Specific tasks include definition of higher-level performance requirements and verification methods, subsequent analysis, decomposition, and derivation of functional requirements, allocation of requirements to physical and functional architectural elements, and tracking them through design, verification, integration, and operational validation.

C.5.1.8 Electrical and Network Engineering Support

The Offeror shall develop and analyze the integration of interfaces and control systems for a software and hardware system of systems. More specifically, this task includes:

- Development of N2 diagramming and Interface Control Documents for a complex system;
- Development of system engineering artifacts (e.g. specifications, Interface Control Documents, Use Cases, System Architecture Descriptions, Trade Studies, etc)
- Application of systems engineering tools for requirements management in an integrated team environment with other systems, software, and specialty engineers to develop solutions engineering standard processes and methods;
- Definition of higher-level performance requirements and verification method;
- Analysis, decomposition, and derivation of functional requirements;
- Allocation of requirements to physical and functional architectural elements, and tracking them through design, verification, integration, and operational validation.

C.5.1.9 General Engineering Support

The Offeror shall provide general support to the OOI Project Manager, Chief Systems Engineer, System Architects, and Project Scientists in their effort to elicit, analyze, publish, and manage OOI Science Questions, Science User Requirements, Operational Requirements, System Requirements, Interface Control Documents, Interface Agreements, Subsystem Requirements, and Element Requirements as required or directed by Ocean Leadership.

C.5.1.10 Documents and Standards Development

The Offeror shall review and catalogue existing drawing documents, create a unified drawing tree and refine the drawing numbering convention. The Offeror shall also define general CAD & drawing standards including a simple layering convention, block definitions, annotation schemes and title blocks. The goal will be to create a consistent theme (or “look”) for documents received from multiple sources, and provide an integrated tree and drawing metadata files

C.5.1.11 Drawing Development

Under the direction of the Senior Project Manager, the Offeror shall develop schematic drawings for the OOI system based on input from its technology developers. The drawings must be consistent with existing standards. The Offeror shall work with the Senior Project Manager and the technology developers to review documents, validating their content and design intent. The Offeror must also develop top level "assembly" drawings for the OOI System of Systems, the three Systems, and the main Sub-systems as identified on the requirements hierarchy and WBS (approximately 50 drawings/diagrams). The Offeror shall develop drawings using AutoCAD Map 3D 2009, which utilizes the AutoCAD 2007 drawing format.

C.5.1.12 Environmental Analysis Support

Under this task, the Offeror shall be responsible for coordination of science planning and environmental compliance for Ocean Observatories Initiative activities. This task shall include the following:

- Coordination of programmatic environmental compliance (i.e., the National Environmental Policy Act, NEPA) and tracking permits required for the implementation of the OOI.
- Coordination of the development of documentation to assist the National Science Foundation in meeting programmatic requirements for compliance with NEPA.
- Provide for tracking of other required environmental compliance documentation, permits, licenses, authorizations, and other regulatory documentation required to implement the OOI Network.
- Provide assistance to updating and maintaining the OOI Permit and Environmental Compliance List.
- Perform other OOI related permit application reviews, scientific instrument procurement reviews, and review and analyze OOI data and information products.

C.5.1.13 Deliverables

The Contractor shall provide the following.

- Plans, procedures, calculations, graphics, conventions, specifications, test plans, test reports, engineering analyses, schedules, engineering change requests, standards, documents and drawings developed under Section C.5 of this SOW, and as directed by OL
- Native and PDF digital copies of the documents and drawings uploaded to the OOI document management system (DMS)
- Document tracking metadata, as required by the DMS
- Weekly status updates to the Systems Engineer and Senior Project Manager
- Monthly working file backups, DVD, 1 per Month

C.5.3 ENGINEERING SUPPORT STAFFING

Two types of staffing support are required for this functional area – 1) Operations and Maintenance support; and, 2) Systems, Requirements and Integration Engineering support. Descriptions of the requirements for these positions are as follows.

Note: For the engineering support major functional area 4, position number P.19 for the Senior Test and Evaluation Engineer must be proposed in two ways, first as part of the entire functional area and second separately as its own single position assuming only it will be awarded and no other positions within the functional area will be awarded. For the second scenario no project management support is required above the requirements for just the specific P.19 position.

Operations and Maintenance Support Major Functional Area #4

		Base	Option 1	Option 2	Option 3
Position No.	Position Description	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.9	Operations and Maintenance Manager	100%	100%	100%	100%
P.10	Operations and Maintenance Engineer	100%	100%	100%	100%
P.11	Operations and Maintenance Specialist	100%	100%	100%	100%

Position Descriptions (Operations and Maintenance Support)

P.9 - O&M Manager: The Operations & Maintenance (O&M) Manager is responsible for providing leadership, direction and supervision to O&M staff including the O&M analysts and support staff, project engineers and technical staff, and Offerors. Coordinates and manages the development and approval of O&M plans, policies and procedures. Coordinates, integrates, and oversees the day-to-day O&M activities of the OOI, ensuring efficient network operations, environmental compliance to Federal and state regulations and ensuring that facilities are operated in a safe, reliable, manner consistent with O&M sub-award agreements, permits, and rules, regulations and written instructions. Coordinates and validates the annual O&M schedules and budgets for each Implementing Organization (IO) and works through the OOI scheduling process to align the transition to operations with the Construction schedule.

- Manages / develops scope of work, schedules, and budgets to support ongoing operations and maintenance of the observatory and implementing organizations.
- Establishes the management processes to ensure that the component parts of the observatory can interoperate as a complete, seamless system.
- Manages and coordinates development of documents, processes and procedures from the Implementing Organizations and incorporates them into the long term O&M Plan.

- Leads the development of standard operating procedures, systems maintenance schedules, and policies and procedures for program administration and governance. Chairs the Observatory Operations Team.
- Manages the OOI operations and maintenance performance and promotes performance optimization. This includes periodic testing, evaluations, and recommendations to the Implementing Organizations and the NSF for improvements in cost-effectiveness.
- Coordinates the corrective and preventative maintenance activities, refurbishments and replacements with the IO O&M staff. Ensures integrated asset tracking, material inventory, and spares levels are sufficient and optimized over the O&M life-cycle.
- Manages integrated Diminishing Manufacturing Sources, obsolescence, last time buys, and warranty agreements with suppliers.
- Coordinates and manages the development of the annual O&M budgets and annual O&M work plans. Coordinates and manages the integration and completion of all OOI monthly and annual reporting requirements including environmental, safety, budgeting, and O&M performance.
- Manages the O&M staff to promote efficient and cost-effective operations.
- Communicates effectively with OL and IO O&M staff, subawardees, vendors, and outside agencies.
- Promotes a safe working environment and ensures that all OOI personnel follow OOI and UNOLS safety procedures and policies. Works with the OOI Environmental Health and Safety Manager to ensure compliance with all required EH&S procedures and training activities.
- Maintains compliance with all OL policies, Standard Operating Procedures, and contractual requirements.
- Leads the effort to identify problem areas (e.g., reliability, maintainability, safety, and supportability) in OOI systems and equipment where there are repeat problems, inefficiencies, or unsafe areas. Once identified, prepares improvement suggestions with appropriate cost benefit analyses.
- Analyzes emerging trends and assesses the need for modifications or additions to infrastructure or resources. Establishes procedures for the resolution of scheduling or logistical conflicts, and for resolution of power and data allocation issues among system users. Establishes plans for both routine and unexpected scenarios.
- Supports NSF and other agency proposals to extend, expand, or interface the observatory with new or existing systems and instruments.

Qualifications:

The Operations & Maintenance Manager shall have a minimum 10 years of experience in operations / maintenance management of large engineering or science project integration with large and complex measuring devices, using systems engineering and or project management processes. Any provided resource shall have a Bachelor's Degree in Ocean Engineering, Electrical Engineering, Mechanical Engineering, Systems Engineering or related science or engineering field from an accredited college or university, Master's Degree preferred. Demonstrated experience in O&M processes and technologies, preferably with marine facilities and equipment. Experience with budgets, bid proposals, contract evaluation, basic accounting principles, and other O&M budgetary and fiscal processes. Proficient with integrated logistics, supportability and level of repair methods and analyses.

Experience in solving practical problems, communicating tasks and responsibilities, and training of other personnel. Demonstrated ability to make sound professional judgments and recommendations based on analysis and interpretation of data. Demonstrated success in project management. Possesses strong leadership, organizational and communication skills, including knowledge of collaborative applications and tools. Ability to manage and motivate subordinates. Possesses Project Management Professional (PMP) certification. Familiarity with scientific ocean observing activities and National Science Foundation program procedures.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.10 - O&M Engineer: The O&M Engineer provides engineering expertise and coordination to the construction process of OOI and ensures consideration of operations and maintenance requirements and impacts to O&M processes and budgets. The engineer is ultimately responsible for determining engineering impacts of future proposed changes to the integrity of the OOI post-commissioning. The engineer also facilitates integration of O&M engineering activities and becomes the design cognizant authority when the system is commissioned. Support the O&M Manager in planning, initiating, performing operation and maintenance activities for the OOI sensor arrays and other devices. The O&M Engineer shall provide technical guidance and support on an as-needed basis to Implementing Organizations (IOs) and OOI Working Groups for data management, common operations, field operations, and system refurbishment.

Qualifications:

The O&M Engineer shall have a minimum five years of experience in systems engineering and / or ocean related engineering. Any provided resource shall have a Bachelor's Degree in Ocean Engineering, Electrical Engineering, Mechanical Engineering, Systems Engineering, or related science or engineering field from an accredited college or university. Experience in modern systems engineering methods for requirements analysis, requirements management, and architecture definition. Experience with systems engineering process: functional and non-functional requirements, system interfaces, system design, implementation, integration, verification and validation, deployment, and system operation. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. Demonstrated success in delivering engineering products and project management. Excellent organizational and communication skills, including a user's knowledge of collaborative applications and tools. Excellent written and verbal skills. Proficient with reliability, maintainability, safety, and supportability analyses. Experience with Diminishing Manufacturing Sources, obsolescence, last time buys, and warranty agreements with suppliers. Experience with establishing asset management and inventory management requirements. Skills with asset management tracking, spares analyses, material

and inventory databases. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities; demonstrated ability to make independent judgment about appropriate course most effective for procedures and/or courses of action. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports. A familiarity with Ocean Engineering and/or Oceanographic activities. Experience with distributed infrastructure engineering projects. Experience with CAD tools. Experience with the DOORS requirements management tool. A familiarity with the scientific research and academic fields.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.11 - O&M Specialist: The O&M Specialist provides expertise and coordination to the construction process of OOI and ensures consideration of operations and maintenance requirements and impacts to O&M processes and budgets. The specialist supports the O&M Engineer in determining engineering impacts of future proposed changes to the integrity of the OOI post-commissioning. Supports the O&M Manager and O&M Engineer in planning, initiating, performing operation and maintenance activities for the OOI sensor arrays and other devices.

Qualifications:

The O&M Specialist shall have a minimum of three years of experience in systems engineering and / or ocean related engineering. Any provided resource shall have a Bachelor's Degree in Ocean Engineering, Electrical Engineering, Mechanical Engineering, Systems Engineering, or related science or engineering field from an accredited college or university. Proficient with integrated logistics, supportability and level of repair methods and analyses. Experience with Diminishing Manufacturing Sources, obsolescence, last time buys, and warranty agreements with suppliers. Experience in modern systems engineering methods for requirements analysis, requirements management, and architecture definition. Experience with systems engineering process: functional and non-functional requirements, system interfaces, system design, implementation, integration, verification and validation, deployment, and system operation. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. Demonstrated success in delivering engineering. Excellent organizational and communication skills, including a user's knowledge of collaborative applications and tools. Excellent written and verbal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to

projects and responsibilities; demonstrated ability to make independent judgment about appropriate course most effective for procedures and/or courses of action. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports. A familiarity with Ocean Engineering and/or Oceanographic activities. Experience with distributed infrastructure engineering projects. Experience with CAD tools. Experience with the DOORS requirements management tool. A familiarity with the scientific research and academic fields.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

Systems, Requirements and Integration Engineering Support Major Functional Area #4

		Base	Option 1	Option 2	Option 3
Position No.	Position Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.12	Senior Systems Engineer	100%	100%	100%	100%
P.13	Systems Engineer	100%	100%	100%	100%
P.14	Test and Evaluation Engineer(s)	100%	2 FTE @ 100%	2 FTE @ 100%	2 FTE @ 100%
P.15	Integration Engineer, Mechanical	100%	100%	100%	100%
P.16	Integration Engineer, Cyber Infrastructure	100%	100%	100%	100%
P.17	Project Engineer, Analysis/Modeling	100%	100%	100%	100%
P.18	Project Engineer, Requirements/Specifications	100%	100%	100%	100%
P.19	Senior Test and Evaluation Engineer	100%	100%	100%	100%
P.20	Environmental Analyst	100%	100%	100%	100%
P.21	Computer Aided Design (CAD) Tech.	10%	10%	10%	10%

Position Descriptions (Systems, Requirements, and Integration Engineering Support)

P.12 - Senior Systems Engineer (SSE): to serve as the integrator of multiple contract engineering teams and foster the development of a Technical Data Package for the OOI software and hardware infrastructure project. Working with the OOI Chief Systems Engineer, the principal objective of the SSE is to lead the technical and management efforts of an integrated engineering effort on a system of systems project, while interrogating the design to ensure all project requirements are addressed and satisfied by the design. This effort also includes integrated project planning, collaboration toolsets, project control, associated management and direct administrative support functions.

Support tasks within the overall services provided by SSE shall also include, but not be specifically limited to, the following: developing and maintaining design documents, systems engineering documents, concept of operations, and system architecture; developing and maintaining requirements and specifications testing procedures at all levels within the full system and components; developing and maintaining documents and procedures for system integration, testing, and evaluation to include Offeror testing activities, quality assurance, and test analyses and reporting; developing and maintaining system implementation and deployment strategies, activities, and procedures throughout the planned life cycle; providing technical planning, execution, and coordination support to IOs and OOI Working Groups; and coordinating with the OOI Senior Project Manager, OOI Chief Systems Engineer, and other PMO and IO staff for regular monitoring, reporting and reviewing program management activities and developing and implementing corrective actions.

The SSE shall have the proven ability to successfully apply systems engineering process and technology to large, complex engineering projects, and work with a matrix of Offeror engineers in multiple locations under multiple contracts. Functional responsibility: Perform and/or lead a variety of engineering tasks, including but not limited to requirements management, configuration management, change control reviews, risk management, design reviews, progressive elaboration project planning and acceptance and commissioning test development-performance in support of the integration of a system of systems.

Qualifications:

The SSE shall have a minimum 10 years of experience in large engineering project integration, using systems engineering processes. Any provided resource shall have a Bachelor's Degree in engineering or related science or technical field from an accredited college or university, Master's Degree preferred.

This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication

skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired. Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.13 - Systems Engineer: to serve as the support engineer for multiple engineering teams providing task based support of the development of a Technical Data Package for the OOI software and hardware project and project execution support tasks including general support for the engineering team. Principal objective is to provide task based technical analysis, design, and support products to the Chief Systems Engineer, Senior Systems Engineer and Project Manager, including direct administrative support functions.

The Systems Engineer shall have the proven ability to successfully apply systems engineering processes and technology to large, complex engineering projects, and work with a matrix of Offeror engineers in multiple locations under multiple contracts. Functional responsibility: Perform a variety of engineering tasks, including but not limited to requirements attribute development and linking, white paper development, technology surveys, drafting of technical findings and recommendations. Participating and supporting configuration management, risk management, design reviews, project planning and test development for an integrated system of systems.

- Develop and maintain required Systems Engineering policies, plans, processes and technical documentation.
- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Support the development of test-cases and test plans
- Perform technology solution research and evaluation and recommend design solutions
- Support technical evaluation teams during proposal phases

Support tasks within the overall services provided by SE shall also include, but not be specifically limited to, the following: developing and maintaining design documents, systems engineering documents, concept of operations, and system architecture; developing and maintaining requirements and specifications testing procedures at all levels within the

full system and components; developing and maintaining documents and procedures for system integration, testing, and evaluation to include Offeror testing activities, quality assurance, and test analyses and reporting; developing and maintaining system implementation and deployment strategies, activities, and procedures throughout the planned life cycle; providing technical planning, execution, and coordination support to IOs and OOI Working Groups; and coordinating with the OOI Senior Project Manager, OOI Senior Systems Engineer, and other PMO and IO staff for regular monitoring, reporting and reviewing program management activities and developing and implementing corrective actions.

Qualifications:

The Systems Engineer shall have a minimum of seven years of experience in a large size engineering project, using systems engineering processes. Any provided resource shall have a Bachelor's Degree in engineering or similar technical field from an accredited college or university. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired. Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.14 - Test and Evaluation Engineer: Systems engineer responsible for performing requirements development, management and verification activities from the system level down to the hardware/software level; supporting system architecture and system level designs. Specific tasks include definition of higher-level performance requirements and verification methods, subsequent analysis, decomposition, and derivation of functional requirements, allocation of requirements to physical and functional architectural elements, and tracking them through design, verification, integration, and operational validation. Duties will be performed at a high level without appreciable direction.

The Test and Evaluation Engineer shall have the proven ability to successfully apply systems engineering processes and technology to large, complex engineering projects, and

work with a matrix of Offeror engineers in multiple locations under multiple contracts. Functional responsibility: Perform a variety of engineering tasks, including requirements attribute development and linking, white paper development, test plan development, test procedure development, observation of and participation in test activities, drafting of technical findings and recommendations. Additional duties include participating and supporting configuration management, risk management, design reviews, project planning and test development and participation for an integrated system of systems.

- Develop test-related documentation
- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Perform technology solution research and evaluation and recommend design solutions
- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases
- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Test and Evaluation Engineer shall have a Bachelor's Degree in an engineering or related science or technical field from an accredited college or university, with a minimum of five years of related experience. This position requires directly applicable requirements verification and test plan development experience. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired.

Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states. Travel to coastal field locations and/or sea duty onboard ships may also be required. Sea duty conditions and

physical attributions: May work at least 8 hours per day and, at times in excess of 12 hours per day, 7 days per week. Sleep and work hours can deviate from those on land. May be expected to work on watch schedule (such as 8 hours on and 8 hours off or 12 hours on and 8 hours off) for all or part of a cruise or to work as hours are needed to accomplish the planned work. May need to travel during holidays and for long distances to and from foreign ports. May experience rudimentary living and working conditions, with shared and basic living quarters and laboratories. May experience bad or extreme weather conditions, including heavy seas, winter weather or hot, tropical weather. Work on deck may occur in both hot and cold conditions around the clock. Sea conditions will lead to active ship motion. Should be able to climb steep and vertical ladders and able to enter and exit compartments through hatches, doors, and sills. Should be able to carry heavy gear and participate in the loading and unloading of the ship as well as in the activities on deck and in the labs during the cruise. Shipboard environment may include: confined areas, shared sleeping quarters (berths) and bathroom facilities, small and basic berthing, fixed meal times and basic menus. Modest levels of heating, cooling, ventilation, and illumination, limited or no email and internet access and limited off-duty and recreational facilities (library, lounge, movies). May be exposed to potential allergens and irritants, including paint fumes. May experience constant and intermittent loud noises, and slippery and uneven surfaces. These conditions are subject to change.

P.15 - Integration Engineer, Mechanical: Serves as the mechanical engineering liaison between the OOI Senior Systems Engineer and the distributed teams designing OOI systems. Serve as the support engineer for multiple contract engineering teams providing task-based support of the development for the OOI sensor array designs. As a member of the OOI Systems Engineering and Integration Team, provide technical analysis, design, mechanical and systems engineering artifacts to the Senior Systems Engineer and the Senior Project Manager. Participate in the synthesis of engineering design and systems between Ocean Leadership and sub-awardees for the design, construction and operation of the system of systems that comprise the OOI.

- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements and that complies with systems engineering policies and best practices.
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Support the development of test-cases and test plans
- Perform technology solution research and evaluation and recommend design solutions
- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases

- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Integration Engineer, Mechanical shall have a Bachelor's Degree in mechanical engineering, ocean engineering, or related technical field from an accredited college or university, with a minimum of five years of related experience. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired. Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.16 - Integration Engineer, Cyber Infrastructure: Serves as the cyber infrastructure engineering liaison between the OOI Chief Systems Engineer and the distributed teams designing OOI systems. Serve as the support engineer for multiple contract engineering teams providing task-based support of the development for the OOI sensor array designs. As a member of the OOI Systems Engineering and Integration Team, provide technical analysis, design, mechanical and systems engineering artifacts to the Chief Systems Engineer and the Project Manager. Participate in the synthesis of engineering design and systems between Ocean Leadership and sub-awardees for the design, construction and operation of the system of systems that comprise the OOI.

- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements and compliance with systems engineering policies and best practices.
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Support the development of test-cases and test plans
- Perform technology solution research and evaluation and recommend design solutions
- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases

- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Integration Engineer, Cyber Infrastructure shall have a Bachelor's Degree in Electrical Engineering, Computer Science/Engineering or related science or technical field from an accredited college or university, with a minimum of five years of related experience with distributed information technology systems. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired. Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.17 - Project Engineer, Analysis and Modeling: Serves as a support engineer for multiple contract engineering teams providing task-based support of the development for the OOI software and hardware design, performs analysis and prepares models. As a member of the OOI Systems Engineering and Integration Team, provide technical analysis, design, and systems engineering artifacts to the Chief Systems Engineer and the Project Manager. Participate in the synthesis of engineering design and systems between OL and sub-awardees for the design, construction and operation of the system of systems that comprise the OOI.

- Develop and maintain system engineering artifacts such as Use Cases, Concept of Operations (CONOPS), System Architecture views/depictions, system-wide models (ex. models of power consumption, data volumes, and reliability), and applicable Engineering Change Requests
- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Support the development of test-cases and test plans
- Perform technology solution research and evaluation and recommend design solutions

- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases
- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Project Engineer, Analysis and Modeling shall have a Bachelor's Degree in a related science or engineering field from an accredited college or university with a minimum of five years of related experience. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired.

Experience/familiarity with the DOORS requirements management tool desired.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.18 - Project Engineer, Requirements and Specifications: Serves as a support engineer for multiple contract engineering teams providing task-based support of the development for the OOI software and hardware design, requirements documents and specifications. As a member of the OOI Systems Engineering and Integration Team, provide technical analysis, design, and systems engineering artifacts to the Chief Systems Engineer and the Project Manager. Participate in the synthesis of engineering design and systems between OL and sub-awardees for the design, construction and operation of the system of systems that comprise the OOI.

- Develop, maintain, and review specifications documents for various OOI subsystems in accordance with OOI requirements.
- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Support the development of test-cases and test plans
- Perform technology solution research and evaluation and recommend design solutions

- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases
- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Project Engineer, Requirements and Specifications shall have a Bachelor's Degree in Ocean Engineering, Electrical Engineering, Mechanical Engineering, Systems Engineering, or related science or engineering field from an accredited college or university with a minimum of five years of related experience. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired. The candidate must have proven hands-on experience with the DOORS requirements management tool.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.19 - Senior Test and Evaluation Engineer: Systems engineer responsible for performing requirements development, management and verification activities from the system level down to the hardware/software level; supporting system architecture and system level designs. Specific tasks include definition of higher-level performance requirements and verification methods, subsequent analysis, decomposition, and derivation of functional requirements, allocation of requirements to physical and functional architectural elements, and tracking them through design, verification, integration, and operational validation. Duties will be performed at a high level without appreciable direction. Candidate may function in a project leadership role in guiding work packages to successful completion.

The Senior Test and Evaluation Engineer shall have the proven ability to successfully apply systems engineering processes and technology to large, complex engineering projects, and work with a matrix of Offeror engineers in multiple locations under multiple contracts. Functional responsibility: Perform a variety of engineering tasks, including requirements attribute development and linking, white paper development, test plan development, test procedure development, observation of and participation in test activities, drafting of

technical findings and recommendations. Additional duties include participating and supporting configuration management, risk management, design reviews, project planning and test development and participation for an integrated system of systems.

- Lead the development of test-related documentation
- Represent the OOI Senior Systems Engineer at sub-system design reviews to ensure the design and development of a system that meets requirements
- Support the definition, development, and analysis of Interface Control Documents for the software and hardware involved in the OOI system of systems
- Perform technology solution research and evaluation and recommend design solutions
- Participate in the development of required Systems Engineering policies, plans, processes and technical documentation.
- Support technical evaluation teams during proposal phases
- Provide technical assistance to the Senior Systems Engineer, Senior Project Manager (SPM) and O&M Manager

Qualifications:

The Senior Test and Evaluation Engineer shall have a Bachelor's Degree in an engineering or related science or technical field from an accredited college or university, with a minimum of ten years of related experience. This position requires directly applicable requirements verification and test plan development experience. This position requires experience in modern systems engineering methods. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated success in delivering engineering products. A familiarity with Ocean Engineering and/or Oceanographic activities desired. A familiarity with the scientific research and academic fields desired. Experience with distributed infrastructure engineering projects desired.

The candidate must have proven hands-on experience with the DOORS requirements management tool.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states. Travel to coastal field locations and/or sea duty onboard ships may also be required. Sea duty conditions and physical attributions: May work at least 8 hours per day and, at times in excess of 12 hours per day, 7 days per week. Sleep and work hours can deviate from those on land. May be expected to work on watch schedule (such as 8 hours on and 8 hours off or 12 hours on and

8 hours off) for all or part of a cruise or to work as hours are needed to accomplish the planned work. May need to travel during holidays and for long distances to and from foreign ports. May experience rudimentary living and working conditions, with shared and basic living quarters and laboratories. May experience bad or extreme weather conditions, including heavy seas, winter weather or hot, tropical weather. Work on deck may occur in both hot and cold conditions around the clock. Sea conditions will lead to active ship motion. Should be able to climb steep and vertical ladders and able to enter and exit compartments through hatches, doors, and sills. Should be able to carry heavy gear and participate in the loading and unloading of the ship as well as in the activities on deck and in the labs during the cruise. Shipboard environment may include: confined areas, shared sleeping quarters (berths) and bathroom facilities, small and basic berthing, fixed meal times and basic menus. Modest levels of heating, cooling, ventilation, and illumination, limited or no email and internet access and limited off-duty and recreational facilities (library, lounge, movies). May be exposed to potential allergens and irritants, including paint fumes. May experience constant and intermittent loud noises, and slippery and uneven surfaces. These conditions are subject to change.

P.20 - Environmental Analyst: Support the Program Director, Associate Program Director, Senior Project Manager and others in providing coordination of science planning and environmental compliance for Ocean Observatories Initiative activities. The Environmental Analyst (EA) will be responsible for coordination of programmatic environmental compliance (i.e., the National Environmental Policy Act, NEPA) and tracking permits required for the implementation of the OOI. Coordinate the development of documentation to assist the National Science Foundation in meeting programmatic requirements for compliance with NEPA. Provide for tracking of other required environmental compliance documentation, permits, licenses, authorizations, and other regulatory documentation required to implement the OOI Network. Provide assistance to updating and maintaining the OOI Permit and Environmental Compliance List. Perform other OOI related permit application reviews, scientific instrument procurement reviews, and review and analyze OOI data and information products. The EA will support NEPA micro-siting meetings and manage other environmental and science related meeting arrangements, including production of visual and informational materials, and on-site assistance.

Provide assistance to the development and implementation of strategies to promote support for and interest in the OOI to the wider scientific and education communities, governments, industry, and public through outreach efforts. Planning will be done in collaboration with the science community to define goals, organize effective agendas and discussions, and develop reports and recommendations. Perform planning and preparation for OOI science workshops. Represent OL OOI at scientific and ocean observing related conferences when directed by OL.

Assist the Program Director, Associate Program Director, Senior Project Manager in the planning and preparation of annual work plans, proposals, monthly project progress reports, and review presentations for OOI related to environmental and science outreach topics.

Qualifications:

The Environmental Analyst shall have a Bachelor's Degree in a relevant ocean and environmental science field from an accredited college or university and at least seven years of experience in academically focused scientific program administration or management, or equivalent science training and management experience with at least five years working directly on NEPA compliance requirements and permits. Master's Degree or further preferred. Demonstrated planning, decision-making, and problem-solving capabilities; ability to work independently to prioritize work and complete projects with general direction. Excellent writing, editorial, and communication skills. Agility with standard office software tools, email, Word, Excel, PowerPoint and Internet tools. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.21 - Computer Aided Design (CAD) Technician/Drafter: Offeror shall have the capacity to provide, by individual OL request, a resource to perform drafting, 3D solid-modeling and creating other files within the latest commercially available versions of software programs AutoCAD, Inventor, SolidWorks and Enterprise Architect. Transforms initial rough product designs using computer aided design (CAD) into working documents. Reviews engineering drawing and designs to ensure adherence to established drafting and geometric dimensioning and tolerancing specifications and standards. Familiar with a variety of the drafting field's concepts, practices, and procedures.

Qualifications:

The CAD Technician/Drafter shall have a minimum of three years of experience in a large size engineering project and directly creating and modifying CAD drawings, 3D models and other files in the latest commercially available versions of software programs AutoCAD, Inventor, SolidWorks and Enterprise Architect. Any provided resource shall have at least an Associate's Degree in a CAD/Drafting field. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities, ability to exercise independent judgment about appropriate course of action, and demonstrated

success in delivering AutoCAD, Inventor, SolidWorks and Enterprise Architect drawings, 3D models and other files and services.

The base work location for this position is an Offeror's office. Remote support to OL desired with no travel or expenses.

C.6 MAJOR FUNCTIONAL AREA #5 - SUPPLEMENTAL PROJECT MANAGEMENT SUPPORT

C.6.1 TASKS

C.6.1.1 Deputy Project Tasks

- Work with OL OOI Senior Project Manager (SPM) to develop strategies, procedures and processes to successfully manage the OOI project
- Advise and work with OL OOI SPM to develop strategies, procedures and processes to solicit, review, select and procure solutions that satisfy the needs and requirements of the OOI project, related to technical work to transform a set of requirements for scientific measurement and instruments into technical specifications and associated RFPs and management of related processes.
- Prepare Statement of Work documents and Evaluation Criteria for RFPs.
- Perform the duties of the overall OOI Risk Facilitator plotting foreseeable risks, and developing contingency plans.
- Monitor, assess and document Implementing Organization's technical performance to contract and project management criteria.
- Monitor acquisition control and disposition of property.
- Perform inspections and acceptance of goods and services.
- Review and recommend contract modification requests.
- Review and authorize payment of invoices.
- Review all deliverable documentation and exercise responsibility for its quality.
- Generate specific staffing plans and lead efforts to implement the mitigating actions and other corrective actions.
- Represent the project office at the Offerors and the Offerors at the project office.
- Participate in select OOI teleconferences, and/or attend other scheduled OOI project meetings / reviews, as directed by the OOI SPM and directly related to the deliverables of the SOW.
- Prepare weekly progress reports to the OOI SPM from each human resource filling each position number (due by 3 PM EST every Friday via email) that document progress on assignments, issues needing COTR assistance and/or approval, next steps, upcoming project travel plans.
- Provide working file backups, DVD or DMS, 1 per month to the OOI SPM.

C.6.1.2 Environmental Health and Safety Tasks

- Provides expert EH&S leadership and guidance in the acquisition of OOI hardware, software, telecommunication and data EH&S systems
- Develop and maintain the ISO 14001 and BS OHSAS 18001 Occupational Health and Safety policy, plans, procedures and technical documentation.
- The EH&S Manager will advise the Program Director of all EH&S activities in support of the OOI project keeping the Program Director informed of the current EH&S Program implementation status, and any issues, barriers and risks.
- Provide EH&S technical assistance to the Contracting Officer (CO), Senior Project Manager (PM) and Operations Manager. Perform EH&S technical evaluations,

process monitoring; plans, conducts audits and reports on safety processes; conducts safety defect metric collection, analysis and reporting; and coordinates safety process improvement activities.

- Review and assess safety elements during design of the OOI system. Ensure effectiveness of safety corrective actions.
- Perform EH&S technology solution research and evaluation; recommend technical solutions.
- Draft, prepare, review, and recommend technical and process documents and plans.
- Promote EH&S awareness during the development of the land and ocean based observatory system (hardware and software, telecommunication systems) as part of the OOI management team.
- Evaluate the EH&S systems of suppliers.
- Co-chair the monthly OOI EH&S Steering Committee.
- Prepare EH&S metrics for the OOI project.
- Review and evaluate Safety incident/hazard reports.
- Review IO EH&S technical documentation and has responsibility for its quality.
- Prepare monthly EH&S status report.
- Monitor, assess and document Implementing Organization's technical performance to EH&S requirements.
- Represent the OOI PMO as its EH&S expert in technical discussions at Offeror facilities.

C.6.1.3: Quality Assurance Tasks

- Provide expert QA leadership and guidance in the acquisition of OOI hardware, software, telecommunication and data QA/QC systems
- Act as QA expert in evaluation of the OOI Implementing Organizations (IO) QA systems, plans and procedures
- Lead the effort toward implementation of the ISO 9001 Quality Management System for OL on the OOI
- Develop and maintain ISO 9001 policy, plans, processes and technical documentation
- Provide the Quality Engineering function for the OOI program
- Provide expert QA guidance to OL staff
- Perform Quality process monitoring; plans, conduct and report on process audits; conduct defect metric collection, analysis and reporting; and coordinate process improvement activities
- Ensure effectiveness of corrective actions
- Assist the Test team during systems test and commissioning
- Review and assess architectural and engineering design of the system
- Perform technology solution research and evaluation; recommend technical solutions
- Review deliverable technical documentation for its quality
- Participate as a voting member of the integrated OOI Change Control Board
- Support Quality in the development of the land and ocean based observatory system (hardware and software, telecommunication systems) as part of the OOI management team

- Evaluate the Quality Management Systems of suppliers
- Represent the project office as its QA expert in technical discussions at Offeror facilities
- Prepare QA metrics for the OOI
- Perform technical evaluation of Quality systems
- Monitor, assess and document Implementing Organization's technical performance to quality requirements
- Provide technical assistance to the Contracting Officer (CO), Senior Project Manager (SPM) and O&M Manager
- Draft, prepare, review, and recommend technical and process documents and plans
- Review deliverable technical documentation and has responsibility for its quality
- Perform inspections and acceptance of goods and services
- Represent the project office at Offeror facilities
- Prepare monthly QA status reports

C.6.1.4 Data and Information Acquisition and Analysis

The Offeror shall meet in-person or by electronic means as appropriate, with the OOI project staff to establish a working relationship and review existing documentation. Travel requests must be approved in writing (including email) by the OCEAN LEADERSHIP COTR in advance of travel. The Offeror shall work with OCEAN LEADERSHIP to define required inputs for documentation development and utilization of digital communication tools (including email, the OOI Software Architecture Framework (SAF), Alfresco, Confluence, and OOI document management systems).

C.6.1.5 Participate in OOI Program Meetings and Reviews

The Offeror shall participate in select OOI teleconferences, and/or attend other scheduled OOI Program meetings/reviews, as directed by OCEAN LEADERSHIP COTR and directly related to the deliverables of this SOW.

C.6.1.6 Deliverables

The Contractor shall provide the following.

- OOI Risk Register overview report to OOI Senior Project Manager (SPM) once a month.
- OOI contingency budget burn down report and graphics to OOI SPM once a month.
- Run OOI system level Risk and Opportunity Review Board meetings once a month.
- OOI SOW and RFPs evaluation criteria to OOI SPM per specific to be defined deadlines.
- OOI ISO 14001 and BS OHSAS 18001 Occupational Health and Safety policy, plans, procedures and technical documentation.
- Prepare EH&S metrics for the OOI project monthly and report them to OOI Program Director and SPM.
- Review and evaluate Safety incident/hazard reports monthly.
- Audit reports for EH&S systems at suppliers.

- Run the monthly OOI EH&S Steering Committee meetings.
- Prepare monthly EH&S status report to OOI Program Director and SPM
- Implement ISO 9001 Quality Management System for OL on the OOI
- Plan, conduct and report on process audits and Quality Management Systems at OL, IOs and other suppliers and provide updates monthly to OOI Program Director and Senior Project Manager (SPM)
- Develop and maintain ISO 9001 policy, plans, processes and technical documentation
- Review and address corrective actions captured in JIRA and provide updates monthly to OOI Program Director and Senior Project Manager (SPM)
- Prepare monthly QA status reports with project quality metrics and deliver to OOI Program Director and Senior Project Manager (SPM)
- Perform inspections and acceptance of goods and services and submit results to OOI Program Director and Senior Project Manager (SPM)
- Participate weekly as a voting member of the integrated OOI Change Control Board
- Weekly progress reports to the OOI Program Director (due by 3 PM EST every Friday via email) that document progress on assignments, issues needing OOI Program Director assistance and/or approval, next steps, upcoming project travel plans.
- Working file backups, DVD or DMS, 1 per month to the OOI SPM

C.6.2 SUPPLEMENTAL PROJECT MANAGEMENT STAFFING

The Offeror shall provide the following staff resources at appropriate levels of capability, qualifications and experience to perform functions associated with the tasks contained in Section C.6. The staffing requirements of this functional area are as follows:

Supplemental Project Management Support Major Functional Area #5

		Base	Option 1	Option 2	Option 3
Position No.	Position Title	FTE % Estimate	FTE % Estimate	FTE % Estimate	FTE % Estimate
P.22	Deputy Project Manager	100%	100%	100%	100%
P.23	Environmental Health and Safety Manager	100%	100%	100%	100%
P.24	Quality Assurance Manager	100%	100%	100%	100%

Position Descriptions (Supplemental Project Management Support)

P.22, Deputy Project Manager: Deputy Project Manager: Serves as the Deputy to the Consortium for Ocean Leadership (OL) Senior Project Manager and is responsible for meeting Ocean Observatories Initiative (OOI) project and contractual commitments including the financial, quality, technology, and schedule performance of assigned projects(s) within contractual boundaries, OOI PMO expectations, and established standards, using the approved business model and management tools. Works with SPM to manage the development and implementation of the OOI system design. Assists that system wide requirements are developed and that the design produced meets those requirements. Assists in establishing the management processes to ensure that the component parts of the observatory can interoperate as a complete, seamless system. Working with the Project Director and Senior Project Manager as assigned, performs the duties of Risk Facilitator plotting foreseeable risks, and developing contingency plans. Serves as Contracting Officer's Technical Representative (COTR) as backup to Senior Project Manager and on assigned contracts. COTR Duties may include:

- Preparing Statement of Work documents and Evaluation Criteria for RFPs.
- Leading the technical evaluation team during the proposal phase.
- Leading technical negotiation for award.
- Monitoring, assessing and documenting Implementing Organization's technical performance to contract and project management criteria.
- Providing technical assistance to the Contracting Officer (CO).
- Monitoring acquisition control and disposition of property.
- Performing inspections and acceptance of goods and services.
- Reviewing and recommending contract modification requests.
- Reviewing and authorizing payment of invoices.
- Reviewing all deliverable documentation and exercising responsibility for its quality.
- Representing the project office at the Offeror and the Offeror at the project office.

Reviews the OOI and Offeror's project performance as indicated by the earned value indicators, sets milestones and tracks adherence to the Integrated Master Program Schedule, monitors contingency spending, reviews and provides suggestions on the management structure, processes and procedures used throughout the project and performs root cause analysis and proposes mitigating actions to recover from any performance deviations and incorporates the actions into future plans. Generates specific staffing plans and leads efforts to implement the mitigating actions and other corrective actions. Develops customer and program enhancing partnerships with internal Ocean Leadership functional organizations; such as contracts, finance, procurement, manufacturing, quality control, logistics, and administrative. Focuses, evaluates, and motivates the Offeror's OOI program team, enabling them to achieve desired results. Participates in system level risk and opportunity assessment processes. Develops status reports and performs other general project management duties for the OOI PMO and Offeror's Project Manager.

Qualifications:

The Deputy Project Manager shall have a minimum 10 years of experience in large engineering or science project integration, using systems engineering and project management processes including significant experience in risk and opportunity management. Any provided resource shall have a Bachelor's Degree in engineering or related science or technical field or business field from an accredited college or university, Master's Degree preferred. This position requires experience in project management (especially schedule and budget management), modern systems engineering methods for requirements analysis, requirements management, and architecture definition. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. Demonstrated success in delivering engineering products and project management. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities; demonstrated ability to make independent judgment about appropriate course most effective for procedures and/or courses of action. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.23, Environmental Health and Safety Manager: Environmental Health and Safety Manager: Provides support to the Environmental Health and Safety (EH&S) Manager for the Consortium for Ocean Leadership on the Ocean Observatories Initiative (OOI) project. The EH&S Manager will provide expert EH&S oversight, leadership and guidance in the construction and deployment of OOI hardware, software and telecommunication systems for the OOI Program Management Office and over the OOI Integrating Organizations (University of Washington, Woods Hole Oceanographic Institution and University of California, San Diego) and will evaluate their EH&S systems to policies, plans and procedures. The EH&S Manager will report directly to the Project Director of the OOI. He/she will lead OL and the OOI project toward ISO 14001 Environmental Management System and BS OHSAS 18001 Occupational Health and Safety System registration.

- Develops and maintains the ISO 14001 and BS OHSAS 18001 Occupational Health and Safety policy, plans, procedures and technical documentation.
- The EH&S Manager will advise the Program Director of all EH&S activities in support of the OOI project keeping the Program Director informed of the current EH&S Program implementation status, and any issues, barriers and risks.

- Provides EH&S technical assistance to the Contracting Officer (CO), Project Manager (PM) and Operations Manager. Performs EH&S technical evaluations, process monitoring; plans, conducts audits and reports on safety processes; conducts safety defect metric collection, analysis and reporting; and coordinates safety process improvement activities.
- Reviews and assesses safety elements during design of the OOI system. Ensures effectiveness of safety corrective actions.
- Performs EH&S technology solution research and evaluation; recommends technical solutions.
- Drafts, prepares, reviews, and recommends technical and process documents and plans.
- Promotes EH&S awareness during the development of the land and ocean based observatory system (hardware and software, telecommunication systems) as part of the OOI management team. Evaluates the EH&S systems of suppliers.
- Co-chairs the monthly OOI EH&S Steering Committee.
- Prepares EH&S metrics for the OOI.
- Reviews and evaluates Safety incident/hazard reports.
- Reviews IO EH&S technical documentation and has responsibility for its quality.
- Prepares monthly EH&S status reports.
- Monitors, assesses and documents Implementing Organization's technical performance to EH&S requirements.
- Represents the OOI PMO as its EH&S expert in technical discussions at Offeror facilities.

Qualifications:

The Environmental Health and Safety Manager shall have a minimum 10 years of direct experience in EH&S systems management, Direct experience with ISO 14001 Environmental Management System and BS OHSAS 18001 Occupational Health and Safety System implementation and registration experience in large engineering or science project integration, systems engineering and or project management processes. Any provided resource shall have a Bachelor's Degree in a relevant engineering or related science or technical field or business field (e.g., EH&S, Environmental or Physical Sciences, Systems Engineering, Engineering, Mathematics, Computer Science, Project Management, etc.) from an accredited college or university, Master's Degree preferred. This position requires experience in modern systems engineering methods for requirements analysis, requirements management, and architecture definition. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects,

and work with a matrix of subcontract engineers in multiple locations under multiple contracts. Demonstrated success in delivering engineering products and project management. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities; demonstrated ability to make independent judgment about appropriate course most effective for procedures and/or courses of action. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports. Further desired qualifications include American Society of Safety Engineers Certificate in Safety Management, Executive Program in Safety Management, familiarity with scientific ocean observing activities and National Science Foundation program procedures, familiarity with the scientific research and academic fields.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

P.24, Quality Assurance Manager: Quality Assurance Manager: Provides support to the Quality Assurance (QA) Manager for the Consortium for Ocean Leadership (OL) on the Ocean Observatories Initiative (OOI) project. The QA Manager will provide expert QA oversight of the OOI Program Management Office and of the OOI Implementing Organizations (University of Washington, Woods Hole Oceanographic Institution and University of California, San Diego) and will evaluate their quality systems policies, plans and procedures. The QA Manager will report directly to OL QA Manager and the President of OL. The QA Manager will advise the OL President of all QA activities in support of the OOI project keeping the President informed of the current QA Program implementation status, and any issues, barriers and risks.

- Provides expert QA leadership and guidance in the acquisition of OOI hardware, software, telecommunication and data QA/QC systems
- Acts as QA expert in evaluation of the OOI Implementing Organizations (IO) QA systems, plans and procedures
- Leads the effort toward implementation of the ISO 9001 Quality Management System for OL on the OOI
- Develops and maintains ISO 9001 policy, plans, processes and technical documentation
- Provides the Quality Engineering function for the OOI program
- Provides expert QA guidance to OL staff

- Performs Quality process monitoring; plans, conducts and reports on process audits; conducts defect metric collection, analysis and reporting; and coordinates process improvement activities
- Ensures effectiveness of corrective actions
- Assists the Test team during systems test and commissioning
- Reviews and assesses architectural and engineering design of the system
- Performs technology solution research and evaluation; recommends technical solutions
- Reviews deliverable technical documentation for its quality
- Is a voting member of the integrated OOI Change Control Board
- Supports Quality in the development of the land and ocean based observatory system (hardware and software, telecommunication systems) as part of the OOI management team
- Evaluates the Quality Management Systems of suppliers
- Represents the project office as its QA expert in technical discussions at Offeror facilities
- Prepares QA metrics for the OOI
- Performs technical evaluation of Quality systems
- Monitors, assesses and documents Implementing Organization's technical performance to quality requirements
- Provides technical assistance to the Contracting Officer (CO), Senior Project Manager (SPM) and O&M Manager
- Drafts, prepares, reviews, and recommends technical and process documents and plans
- Reviews deliverable technical documentation and has responsibility for its quality
- Performs inspections and acceptance of goods and services
- Represents the project office at Offeror facilities
- Prepares monthly QA status reports

Qualifications:

The Quality Assurance Manager shall have a minimum of 10 years of direct experience in quality assurance systems and software engineering processes. Direct experience with ISO 9001 implementation. Any provided resource shall have a Bachelor's Degree in engineering or related science or technical field or business field from an accredited college or university, Master's Degree preferred. Experience as a manager of Quality/Organization Excellence certification. Quality Auditor and/or Quality Engineer certifications. Software Quality Engineer certification. Experience with CMMI Level III or higher. Six Sigma certification desired. This position requires knowledge of systems engineering process: functional and non-functional requirements, system interfaces, system design, implementation, integration, verification and validation, deployment, and system operation. Proven ability to successfully apply engineering processes and technology to large, complex engineering projects, and work with a matrix of subcontract engineers in multiple locations under multiple contracts. Demonstrated success in delivering engineering products and project management. The candidate must have excellent written and verbal communication skills and strong interpersonal skills. Experience and skills in Microsoft Office and general business software support systems. Ability to exercise discretion and judgment, exhibit a proactive approach to projects and responsibilities; demonstrated ability to make independent judgment about appropriate course most effective for procedures and/or courses of action. Demonstrated understanding of corporate protocol: ability to work successfully within a hierarchy, understand and adhere to a corporate vision, maintain corporate confidentiality, and maintain good relations with peers, supervisors, and any direct reports.

The base work location for this position is the Washington, DC OL office with some travel to work locations in California, Massachusetts and Washington states.

SECTION D – PACKAGING AND MARKING

Document and file deliverables shall be provided in conformance with the OOI Configuration Management Plan, document number 1000-00000 Version 2-88, or as updated through the change control process and contract modification.

Unless otherwise specified, all items shall be packaged and packed in accordance with best commercial practices.

(End of Section D)

SECTION E – INSPECTION AND ACCEPTANCE

Evaluation and acceptance of services delivered under this Subaward(s) shall be performed by the OCEAN LEADERSHIP Contracting Officer Technical Representative in Section G.3 or such other person as may be designated elsewhere in this contract or in writing by the OCEAN LEADERSHIP Director of Contracts & Grants.

(End of Section E)

SECTION F - DELIVERIES OR PERFORMANCE

F.1 PERIOD OF PERFORMANCE

The estimated Period of Performance (POP) for the major functional areas and tasks outlined in Section C shall be from on/about 7/1/2011 through 8/31/12 for the Base Period; 9/1/12 through 8/31/13 for Option Period 1; 9/1/13 through 8/31/14 for Option Period 2; and 9/1/14 through 12/31/2015 for Option Period 3.

F.2 REPORTING REQUIREMENTS

Subrecipient shall deliver the reports outlined under Section C, Deliverables.

F.3 PUBLIC ACCESS TO DELIVERABLE REPORTS

Deliverables and/or reports are intended, at OCEAN LEADERSHIP's discretion, to be made publicly available.

(End of Section F)

SECTION G - SUBAWARD ADMINISTRATION DATA

G.1 INVOICE AND PAYMENT INFORMATION

Invoices shall be submitted electronically to accountspayable@oceanleadership.org on a monthly basis within 7-10 days following month end.

The following minimum items shall be included on the invoice:

- Subaward number and Subrecipient's name, address, and phone number
- A financial statement identifying the labor categories, quantity of hours worked, and billing rate in accordance with approved Functional Labor Category's fixed hourly rate as listed in Section B, including period to date, year to date and contract to date information.
- Invoices shall include a signed summary sheet identifying the billing period, billing date, Subaward number, invoice amount and invoice number for proper tracking purposes.
- Other Direct Costs (as applicable) with supporting documents.

The following information is required on each invoice:

- a) Name of Subrecipient
- b) Invoice Date
- c) The period of performance covered by invoicing
- d) A unique invoice number
- e) Tax payer Identification Number
- f) Phone number and complete mailing address of the Subrecipient
- g) Amount payable indicating budgeted amount, dates and hours worked and tasks performed and cumulative amount billed
- h) Copies of receipts to third party vendors over \$75 if applicable and previously authorized
- i) Total of hours worked during the billing period.
- j) An expanded section on tasks performed, can be provided as a second page.
- k) Line item indicating travel funds allocated and expended, even if none used during the billing period.

From time to time OCEAN LEADERSHIP may require additional supporting documentation from the Subrecipient to assist in its transaction analysis. Refer to NSF FATC Article 12 for reimbursement of allowable costs.

Upon completion of the required work, the Subrecipient shall submit a completion invoice. This completion invoice shall be submitted promptly upon completion of the work, but no later than six months from the Subrecipient's completion date.

G.2 CONTRACTING AUTHORITY

The following individuals are the only personnel authorized to contractually bind the parties of this Award or change any terms and conditions:

FOR OCEAN LEADERSHIP:

Jeanine Hubler, CFCM
Director of Contracts and Grants
Consortium for OCEAN LEADERSHIP

jhubler@oceanleadership.org

Yan Xing
Chief Financial Officer
Consortium for OCEAN LEADERSHIP

yxing@oceanleadership.org

FOR SUBAWARDEE:

TO BE DETERMINED AT AWARD

G.3 OCEAN LEADERSHIP CONTRACTING OFFICER TECHNICAL REPRESENTATIVE (COTR)

The following individual(s) is authorized to guide Subaward performance within the Statement of Work and provide programmatic approval for the deliverables under this Subaward:

Anthony Ferlaino
OOI Program Manager

aferlaino@oceanleadership.org
202-787-1638

Greg Settle
OOI Deputy Project Manager

gsettle@oceanleadership.org
202-787-1602

The Contracting Officer Technical Representative is responsible for administering the performance of work under this Subaward. **IN NO EVENT**, however, will any understanding, agreement, modification, change order, or other matter deviating from the terms of this Subaward be effective or binding upon the Parties unless formalized by Subaward modification executed by the OCEAN LEADERSHIP's Contracting Authority in G.2. The COTR may give technical direction to the Subrecipient that fills in details, requires pursuit of certain lines of inquiry, or otherwise serves to facilitate the Subrecipient's compliance with this award.

To be valid, technical direction by the COTR:

- must be consistent with the general scope of work set forth in this Subaward;
- may not constitute new assignment of work nor change the expressed terms, conditions or specifications of this Subaward; and
- shall not constitute a basis for any increase in the Subaward estimated cost, or extension to the Subaward delivery schedule or period of performance.

In the event any OCEAN LEADERSHIP technical direction is interpreted by Subrecipient to fall outside the scope of Section C, Subrecipient shall not implement such direction, but shall notify OCEAN LEADERSHIP's Director of Contracts and Grants in writing of such interpretation. Such notice shall:

- include the reasons upon which Subrecipient bases its belief that the technical direction falls outside the scope of the contract;
- include Subrecipient's best estimate as to the revision needed to the current estimated cost, performance time, delivery schedules or any other provision that would result from implementing the COTR's direction.

If, after reviewing the information presented, OCEAN LEADERSHIP considers that such direction is technical direction authorized by this clause, Subrecipient will be directed to proceed with the implementation of such technical direction.

In the event a determination is made that it is necessary to avoid a delay in performance of the Subaward, OCEAN LEADERSHIP's Director of Contracts & Grants may direct Subrecipient to proceed with the implementation of the technical direction pending receipt of the above information to be submitted by Subrecipient.

(End of Section G)

SECTION H - SPECIAL SUBAWARD REQUIREMENTS

H.1 INDEMNIFICATION

The Subrecipient shall indemnify, defend and hold harmless OL and its members, directors, officers and employees, to the fullest extent permitted by law, against all claims and expenses for loss or damage to any property or injury to or death of any person arising out of or resulting from performance of the Work, including but not limited to attorney's fees.

H.2 LIABILITY INSURANCE

For the period of performance of the Subaward specified in Section F.1 and any extension thereof, the Subrecipient shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdictions in which the Subrecipient is performing any part of the Work such insurance, in form and amount acceptable to Ocean Leadership, as will protect the Subrecipient and Ocean Leadership as additional insured from claims set forth below which may arise out of or result from the performance of the Work under the Subaward and for which the Subrecipient may be legally liable, whether such performance be by the Subrecipient or by a Lower Tier Awardee or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Subrecipient's employees;
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Subrecipient's employees;
4. Claims for damages insured by usual personal injury liability coverage;
5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. Claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance or use of a motor vehicle or watercraft;
7. Claims for bodily injury or property damage arising out of completed operations; and
8. Claims involving contractual liability applicable to the Contractor's obligations under Section H.1, INDEMNIFICATION.

Certificates of insurance acceptable to Ocean Leadership shall be filed with Ocean Leadership upon request. These certificates and the insurance policies required by this Section H.2.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to Ocean Leadership.

Notwithstanding the foregoing, if and to the extent the Subrecipient is required by law to self insure for any of the risks identified herein, the Subrecipient shall provide Ocean Leadership's Director of Contracts & Grants with information sufficient to demonstrate coverage and resources satisfactory to Ocean Leadership.

H.3 LIMITED USE OF DATA AND INFORMATION

Performance of this Subaward may require the Subrecipient to access data and information proprietary to a government agency or government Offeror and/or such a nature that its dissemination or use, other than in performance of this Subaward, would be adverse to the interest of the government and/or others.

Subrecipient's personnel shall not divulge or release data or information developed or obtained in performance of this Subaward, until made public by OCEAN LEADERSHIP or the government, except to authorized personnel or upon written approval by the OCEAN LEADERSHIP Technical Representative. The Subrecipient shall not use, disclose or reproduce proprietary data that bears a restrictive legend, other than as required in the performance of this Subaward. Nothing herein shall preclude the use of any data independently acquired by the Subrecipient without such limitations or prohibit an agreement at no cost to OCEAN LEADERSHIP between the Subrecipient and the data owner which provides for greater rights to the Subrecipient.

H.4 CLEARANCE AND CONSTRAINTS

Notwithstanding any other provision of this Subaward, at any point in the conduct of this project where OCEAN LEADERSHIP approval is required, OCEAN LEADERSHIP will endeavor to notify the Subrecipient within ten (10) working days of receipt of a Subrecipient's request as to its approval or disapproval. Failure of OCEAN LEADERSHIP to respond within the ten (10) working day period shall **NOT** constitute approval.

H.5 SUBAWARD MONITORING

In monitoring the Subrecipient's performance, OCEAN LEADERSHIP is primarily interested in progress toward successful completion of each task along with the financial status of the Subaward. During the course of performance of the resulting Subaward, OCEAN LEADERSHIP (and authorized government representatives) shall have the right, at all reasonable times, to make site visits to inspect or review the progress of work or the management control systems of the Subrecipient or its lower-tier Subawardees. The Subrecipient shall provide and shall require its lower-tier Subawardees to provide all reasonable facilities and assistance for the safety and convenience of the representatives in the performance of their duties. Such access shall include the right to inspect the Subrecipient's financial accounts or records that pertain to this Subaward.

H.6 KEY PERSONNEL

The position(s) listed below are considered essential to the work being performed hereunder. Prior to removing, replacing, or diverting the individuals in these positions, Subrecipient shall notify

OCEAN LEADERSHIP's Director of Contracts and Grants reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact of such substitution upon the successful performance of this Subaward. No diversion shall be made by Subrecipient without the written notification and consultation with OCEAN LEADERSHIP. Positions may be added to this clause during performance of the Subaward by mutual agreement of both parties.

Key Personnel Position

Name

To be completed at Award

H.7 TRAVEL COSTS

Any travel undertaken under this Subaward is subject to the Contracting Officer's Technical Representative's prior written approval. Travel must be carried out in accordance with NSF FATC, Article 10, and/or applicable cost principles.

H.8 GOVERNING LAW

This Subaward shall be construed in accordance with, and governed by, the laws of the District of Columbia, without reference to its conflicts of law principles, as may be supplemented by the federal common law with regard to the meaning and effect of terms common to federal prime and subcontracts, cooperative agreements, and other grant or assistance vehicles.

H.9 ARBITRATION

Any dispute, controversy or claim arising out of or relating to this Subaward or breach thereof which cannot be amicably settled between the parties shall be finally settled by arbitration at the election of either party in accordance with the Rules of the American Arbitration Association by one or more arbitrators appointed in accordance with the said rules. The arbitration shall take place in the District of Columbia. The resulting Subaward shall be final and binding on the parties, shall be in lieu of any other remedy, and judgment upon the Subaward rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

H.10 SUSPENSION OR TERMINATION

This Subaward may be suspended or terminated in whole or in part by Ocean Leadership in any of the following circumstances:

1. When the Subrecipient has materially failed to comply with the terms and conditions of this Subaward;
2. When Ocean Leadership has other reasonable cause;
3. When the Subaward is incrementally funded and Ocean Leadership does not receive the remainder of the funding from NSF;
4. When Ocean Leadership and the Subrecipient by mutual agreement determine it to be in the best interest of the program.

Any suspension or termination action taken by Ocean Leadership must be issued in writing by the Ocean Leadership Director of Contracts & Grants. In the event of termination as a result of material failure, such termination will be taken only after the Subrecipient has been informed by Ocean Leadership of a deficiency on its part and Ocean Leadership has given Subrecipient an opportunity to correct the deficiency.

No costs incurred during a suspension period or after the effective date of a termination will be allowable, except those costs which, in the opinion of Ocean Leadership, the Subrecipient could not reasonably avoid or eliminate or which were otherwise authorized by the suspension or termination notice, provided such costs would otherwise have been allowable under the terms of the Subaward and appropriate cost principles.

H.11 SUBRECIPIENT RESPONSIBILITIES AND COMPLIANCE WITH FEDERAL REQUIREMENTS

The Subrecipient has full responsibility for the conduct of the project or activities supported under this Subaward and for adherence to the award conditions. The requirements of this Subaward are contained in the NSF FATC unless otherwise specified in the Subaward. Certain applicable Federal administrative standards are incorporated by reference. The applicable requirements are contained in 2 CFR Part 215, Uniform Administrative Requirements for Grants and Cooperative Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations. NSF has determined that 2 CFR 215 standards also will be applied to commercial organizations, including small businesses.

H.12 CHANGE – OVER AND PHASE-OUT

- A. The Subrecipient recognizes that this Subaward may be terminated, in whole or in part, and that it may be replaced by a successor Subrecipient. Should NSF choose to terminate Ocean Leadership's Cooperative Agreement, either in whole or in part, the Subrecipient's termination costs shall be estimated in accordance with this Subaward and the cost principles set forth at 2 CFR Part 230, including Appendix B, Paragraph 48, "Termination costs applicable to sponsored agreements".
- B. The Subrecipient agrees to use its best efforts to effect an orderly and efficient transition from the Subrecipient to any successor awardee.

H.13 PROVISIONS REGARDING USE OF DATA AND INFORMATION

H.13.1 Limitations on Use

Performance of this Subaward may require the Subrecipient to access data and information proprietary to a government agency or government contractor and/or data of such a nature that its dissemination or use, other than in performance of this Subaward, would be adverse to the interest of the government and/or others.

The parties shall not use, disclose or reproduce proprietary data that bears a restrictive legend, other than as required in the performance of this Subaward. This obligation shall not apply to information which (a) was in the receiving party's possession prior to receipt of the disclosed information; (b) is

or becomes a matter of public knowledge through no fault of the receiving party; (c) is received from a third party without a duty of confidentiality; (d) is independently developed by the receiving party; (e) is disclosed under operation of law, provided that the disclosing party is provided reasonable notice and opportunity to contest the need for such disclosure, or to seek a protective order therefore.

The Subrecipient shall provide Ocean Leadership's COTR with a copy of each publication based on or developed under this subaward, clearly labeled with the subaward number, and other appropriate identifying information, promptly after publication. The Subrecipient agrees to abide by NSF's guidelines related to publications as outlined in the NSF FATC (Article 20, Publications), including acknowledgment of NSF support.

Nothing herein shall preclude the use of any data independently acquired by the Subrecipient without such limitations or prohibit an agreement at no cost to Ocean Leadership between the Subrecipient and the data owner which provides for greater rights to the Subrecipient.

H.13.2 Rights in Data Necessary for the Procurement, Operation and Management of the OOI

- a. Notwithstanding CA-FATC Article 19, Copywritable Material, or any other clause of this Subaward, the Subrecipient grants to the National Science Foundation in perpetuity the right to use and reproduce data first produced under this award without charge or additional expense (except for whatever reasonable costs are incurred by the Awardee to reproduce the data) as necessary for the construction and operation and management of the OOI. This includes the right to make such data available to any party interested in competing for any subsequent award to operate and manage the OOI, and any awardees the National Science Foundation selects as the result of these competitions.
- b. The types and kinds of data deemed necessary for the construction and operation and management of the OOI includes, but is not limited to:
 - i. Maintenance guides and histories
 - ii. Operating manuals and similar plans
 - iii. User manuals and similar documents
 - iv. Facility and instrument drawings (including design, shop and as-built drawings), designs and specifications
 - v. Schematics
 - vi. Warranty data
 - vii. Schedules
 - viii. Software
 - ix. Inventories
 - x. Document indexes
 - xi. Subawards, subcontracts, and vendor agreements (these items will be assessed for the presence of any proprietary data prior to their release to a third party)
 - xii. Operations reports
- c. Rights acquired by the National Science Foundation under this clause do not include rights to any data first produced solely for scientific research purposes.
- d. Licenses to use data not first produced under this award shall provide for assignment by the Subrecipient to any successor awardee operating and managing the OOI.

- e. The Subrecipient shall ensure that the requirements of this clause flow down to all Subrecipients, subOfferors, and vendors at all tiers.

H.14 - ACKNOWLEDGEMENT OF NSF SUPPORT

- A. In addition to the provisions of the NSF CA-FATC article titled Publications, sponsorship of the NSF in the OOI project shall be set forth on any signs identifying the OOI Project locations. The National Science Foundation emblem and name shall be prominently displayed on OOI Project facilities and equipment. The emblem and name shall be one inch or larger in size than those of any non-NSF support source.
- B. Advance notification of any public relations activities related to the OOI shall be provided to the Ocean Leadership COTR. NSF has reserved the right to review and/or co-issue any press releases issued by the Subrecipient and sub-awardees. The Subrecipient and sub-awardees shall provide advance notification of any press or Congressional events or public relations activities related to the OOI to the Ocean Leadership COTR.

H.15 - OTHER NSF ACTIVITIES

- A. Ocean Leadership must be notified at least 100 calendar days prior to all Subrecipient or Lower Tier Awardee activities requiring any agreements, permits, licenses, authorizations, or the like with other federal, state or local agencies or entities.
- B. 42 USC Chapter 16 requires that NSF obtain the approval of the Secretary of State prior to entering into agreements with or making commitments to organizations or individuals of foreign countries. As a result, Ocean Leadership must have 130 calendar days advance notice of, and where appropriate, participate in the planning and coordination of all Subrecipient, Lower Tier Awardee, and OOI Project activities which are supported in whole or in part by funds from this Subaward involving joint programs with foreign organizations or individuals other than the parties to the OOI Project Subaward.

H.16 - AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

- A. This effort is funded under the American Recovery and Reinvestment Act of 2009 (ARRA) and is subject to the Terms and Conditions dated May 2009 available on the NSF website at http://www.nsf.gov/pubs/policydocs/arra/arratc_509.pdf.
- B. In addition to the Federal administrative standards identified in the NSF CA-FATC Article 1 and NSF's American Recovery and Reinvestment Act of 2009 Terms and Conditions (dated May 2009), the requirements set forth at 2 CFR Part 176, "Award Terms for Assistance Agreements That Include Funds under the American Recovery and Reinvestment Act of 2009, Public Law 111-5," Subpart B (2 CFR §176.60 through 2 CFR §176.170) concerning Buy American Requirements under ARRA Section 1605 are being applied as a matter of policy to this subsection only.
- C. The parties acknowledge that the American Reinvestment and Recovery Act requires that certain agreements funded under that Act are required to contain Davis Bacon Act

(DBA) wage determinations for hourly laborers and mechanics performing construction work, in accordance with the rules and procedures of the Department of Labor.

- D. It is anticipated that given the nature of this project – design, fabrication, integration, and installation – any construction-related work will be only incidental to the main work of this Subaward. Subrecipient nevertheless agrees that it will, for any Subaward for construction work that is substantial and segregable from the main work of this project, apply DBA requirements to that Subaward, and will at that time submit relevant data to Ocean Leadership and request an appropriate wage determination. See, 48 C.F.R. 22.402, Applicability. For purposes of this clause and all matters relating to DBA requirements, DBA-related terms shall have the meanings assigned to them by the Department of Labor.
- E. Ocean Leadership may amend this Subaward at a future date to revise or set forth additional ARRA requirements as imposed to Ocean Leadership by the NSF.

Note: In accordance with Article 2 of the NSF’s American Recovery and Reinvestment Act of 2009, Subrecipient is required to maintain current registrations in the Central Offeror Registration (www.ccr.gov) at all times during which they have active federal awards funded with Recovery Act Funds.

Subrecipient is required to complete Attachment A, ARRA Reporting Guidance and submit this report to Yi Yin at yyin@oceanleadership.org no later than 8 calendar days after each calendar quarter in which Subrecipient receives funding in whole or in part funded by the Recovery Act.

H.17 NOTICE TO GOVERNMENT OF LABOR DISPUTES

If the Subrecipient has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this of this Subaward, the Subrecipient shall immediately give notice, including all relevant information, to the Ocean Leadership Director of Contracts & Grants. Subrecipient agrees to insert the substance of this clause in any Lower Tier Award to which a labor dispute may delay the timely performance of this Subaward.

H.18 OTHER

Subrecipient shall: (i) make all agreements, contracts, or other commitments, regardless of value, in its own name and shall not bind or purport to bind the Government, NSF and/or Ocean Leadership; (ii) agree to administer/monitor all such agreements, contracts, or other commitments it enters into and supports with NSF funds in accordance with the applicable federal cost principles and the applicable federal administrative requirements; (iii) remain responsible for maintaining the necessary documentation on all such agreements, contracts or other commitments and making it available to Ocean Leadership upon request; and (iv) include such activities in the annual report, annual performance report and final project reports that are submitted to Ocean Leadership.

All contractual arrangements shall contain appropriate provisions consistent with the applicable NSF Financial and Administrative Terms and Conditions (CA-FATC) including NSF Supplemental Financial/Administrative Terms and Conditions – Large Facilities and any special conditions included in this Subaward.

Upon expiration or termination of this Subaward, Ocean Leadership at the direction of NSF may identify this Subaward for assignment to one or more successor constructors or operators of the OOI. The Subrecipient shall take all necessary action to accomplish the assignment(s).

Subrecipient shall give the Ocean Leadership Director of Contracts & Grants immediate notice in writing of any action or suit filed , or any claim made against Subrecipient by any person which in the opinion of Subrecipient may result in litigation related in any way to this Subaward.

(End of Section H)

SECTION I - CONTRACT CLAUSES

I.1 NATIONAL SCIENCE FOUNDATION (NSF) COOPERATIVE AGREEMENT FLOW-DOWN TERMS AND CONDITIONS

This effort is funded under a cooperative agreement between Ocean Leadership and the National Science Foundation. Ocean Leadership is responsible for complying with the conditions below and ensuring that Offeror also complies with them.

The following NSF Terms and Conditions shall apply to this Contract:

Articles: 5, 6, 9, 10, 12, 17, 20, 21, 23, 24, 26, 27, 29, 30, 31, 36, 38, 39, 42, 43, 44, 45, 46 and 47 of the NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA FATC) 10/1/10 or as updated over the life of this Contract, which can be found at: http://www.nsf.gov/pubs/gc1/cafatc_oct10.pdf

The CA FATC listed above is incorporated herein and are made a part of this Contract, except that the clauses shall be appropriately interpreted to reflect the identities of the instant parties, i.e. substitute:

“Director of Contracts and Grants” for “Grants Officer” or “Grants and Agreements Officer”;

“OCEAN LEADERSHIP Director of OOI” for “Principal Investigator” or “Project Director”

“Prime Offeror” or “OCEAN LEADERSHIP” for “Government” or “NSF”;

“SubOfferor”, “Offeror”, “Subgrantee”, or “Offeror” for “Offeror”, “Awardee”, “Grantee”, or “Recipient”;

“Subcontract”, “Contract”, or “Subgrant” for “Contract”, “Award”, or “Grantee”;

“Director, OOI” for “NSF Deputy Director”

(End of Section I)

SECTION J – LIST OF ATTACHMENTS

J.1 LISTING OF ATTACHMENTS

These documents are attached and are made a part of this solicitation:

Attachment J-1: Bidder Conflict of Interest Disclosure Form

Attachment J-2: Self-Rating Matrix

Attachment J-3: Past Performance (Table L-1)

Attachment J-4: Price per Major Functional Area and Position Number (Table L-2)

Attachment J-5: Locality Price per Major Functional Area and Position Number (Table L-3)

Attachment J-6: Certificate of Current Cost and Pricing Data Form

(End of Section J)

SECTION K – REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

K.1 OFFEROR REPRESENTATIONS AND CERTIFICATIONS

The offeror certifies that (i) all Representations and Certifications contained in the solicitation and offer are complete, current, and accurate as required, (ii) the offeror is aware that Subaward of any Subaward shall be considered to have incorporated the applicable Representations and Certifications by reference.

K.2 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions

“Common parent,” as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

“Taxpayer Identification Number (TIN),” as used in this provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors are required to submit the information required in paragraphs (d) through (f) of this provision in order to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, and 6041A, and 6050M and implementing regulations issued by the IRS. If the resulting contract is subject to reporting requirements described in FAR 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror’s relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror’s TIN.

(d) *Taxpayer Identification Number (TIN)*

☐ TIN: _____.

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.

☐ Offeror is an agency or instrumentality of a foreign government.

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) *Type of organization*

☐ Sole proprietorship

☐ Partnership

☐ Corporate Entity (not tax-exempt)

☐ Corporate Entity (tax-exempt)

☐ Government Entity (Federal, State or local)

☐ Foreign Government

☐ International Organization per 26 CFR 1.6049-4

☐ Other

(f) *Common Parent*

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent:

Name: _____

TIN: _____

K. 3 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that –

(i) The Offeror and/or any of its Principals –

(A) Are ☐, Are not ☐ presently debarred, suspended, proposed for debarment, or declared ineligible for the Subaward of contracts by any Federal agency.

(B) Have ☐ Have not ☐, within a 3-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or Subaward; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ☐, Are not ☐ presently indicted for, or otherwise criminally or civilly charged by a government entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐, has not ☐, within a 3-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) “Principals,” for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under section 1001, title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract Subaward, the offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of a Subaward under this solicitation. However, the certification will be considered in connection with a determination of the offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the offeror non-responsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making Subaward. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K.4 OTHER CERTIFICATIONS

(a) Certification for Authorized Organizational Representative

By signing and submitting this contract, the individual applicant or the authorized official of the applicant institution is; (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF terms and conditions to the extent that such terms and conditions are applicable to the tasks that the Offeror is responsible for performing under this agreement. Further, the applicant is hereby providing certifications regarding Federal debt status, debarment and suspension, drug-free workplace, terrorism financing, and lobbying activities (see below).

In addition, if the applicant institution employs more than fifty persons, the authorized official of the applicant institution is certifying that the institution has implemented a written and enforced conflict of interest policy; that to the best of his/her knowledge, all financial disclosures required by the conflict of interest policy have been made; and that all identified conflicts of interest will have been satisfactorily managed, reduced or eliminated prior to the institution's expenditure of any funds under the Subaward, in accordance with the institution's conflict of interest policy. Conflicts that cannot be satisfactorily managed, reduced or eliminated must be disclosed to Grantee.

(b) The Offeror certifies that it will provide a drug-free workplace by:

- i. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Offeror's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- ii. Establishing a drug-free awareness program to inform employees about—
 - (1) The dangers of drug abuse in the workplace;
 - (2) The Offeror's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance programs, and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
- iii. Making it a requirement that each employee to be engaged in the performance of the Subaward be given a copy of the statement required by paragraph (a);
- iv. Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the Subaward, the employee will—
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after each conviction;
- v. Notifying OCEAN LEADERSHIP within ten days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction;
- vi. Taking one of the following actions, within 30 days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted—
 - (1) Taking appropriate personnel action against such an employee, up to and including termination; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- vii. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (i), (ii), (iii), (iv), (v) and (vi).

(c) Executive Order on Terrorism Financing

The Offeror is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Offeror to ensure compliance with these Executive Orders and laws.

(d) Certification Regarding Lobbying

This certification is required for an award of a Federal contract, grant or cooperative agreement exceeding \$100,000 and for an award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.

The undersigned certifies, to the best of his or her knowledge and belief, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all Subawards at all tiers including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements and that all Subawardees shall certify and disclose accordingly.

Name of Authorized Representative

Signature and date

(End of Section K)

SECTION L – INSTRUCTIONS FOR PROPOSAL

L.1 PROPOSAL PREPARATION INSTRUCTIONS

- A. Ocean Leadership is not obligated to make an award or reimburse any of the cost incurred by the Offerors in the preparation and submission of proposals in response to this RFP.
- B. Offerors should examine the entire solicitation. Failure to do so shall be at Offeror's own risk. Proposals shall be submitted per instructions as detailed in this section.
- C. Offerors must ensure that proposals are complete and that all required information, especially all required documents (ex. Resumes) and all entries in the Tables (provided in the proposal) are completed. Failure to do so may result in the proposal being determined to be non-compliant and excluded from further evaluation in the competitive review process. If an Offeror has any questions about the information required, then the Offeror should use the Questions and Answers process described in Section A.3 to ensure that all required information will be provided in the proposal.
- D. All communications between Offerors and Ocean Leadership regarding this procurement shall be through the Ocean Leadership's designated Point of Contact (POC):

Jeanine Hubler, Director Contracts and Grants
Consortium for Ocean Leadership, Inc.
1201 New York Ave, NW, Suite 400
Washington, DC 20005
email: jhubler@oceanleadership.org

This solicitation does not commit Ocean Leadership to pay any cost incurred in the preparation or submission of the Offeror's proposal or in making necessary studies or designs for the preparation thereof. Neither this solicitation nor the submission of any proposal creates any Contract or obligation on the part of Ocean Leadership. Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the Offeror, should be included in proposals only when such information is necessary to convey an understanding of the proposed project. Such information must be clearly marked in the proposal and be appropriately labeled with a legend such as, "The following is (proprietary or confidential) information that (name of proposing organization) requests not be released to persons outside Ocean Leadership or NSF, except for purposes of review and evaluation."

L.2 GENERAL

Quotes must include the full name and address of Offeror's firm and the name, mailing address, and telephone number of the person OCEAN LEADERSHIP should contact regarding the quote.

Quotes must confirm that the Offeror will comply with all provisions in this RFP. Quotes must be signed by a company officer empowered to bind the company. An Offeror's failure to include

these items in the proposal may cause the proposal to be determined to be non-responsive and the proposal may be rejected.

Note: Should an Offeror to this RFP not be in a position to quote for all labor categories and resources defined in Section C, the quote will NOT be accepted.

The Proposal shall be submitted in three (3) separate volumes:

Volume I – TECHNICAL & MANAGEMENT APPROACH

Volume II – PAST PERFORMANCE & ABILITY TO PROVIDE RESOURCES

Volume III – COST AND PAST PERFORMANCE

The proposal shall clearly state and reflect how the Offeror plans to comply with the performance and requirements identified in Section C, the Statement of Work. The proposal volumes, including any supporting documentation, should be clear, concise, and focused on responding to the requirements.

None of the non-cost proposal volumes shall include or identify any part of the proposed cost/price information. However, they shall contain resource information as called for by the instructions set forth in this RFP. The overall level of effort and support proposed must be consistent with the technical solution stated in the proposal. The proposal must fully document and substantiate a cross mapping of the cost approach as it relates to the non-cost/price volumes.

Offerors are advised that Ocean Leadership will evaluate proposals in accordance with the evaluation criteria set forth in Section M of this solicitation.

The Offeror shall email to RFP1412-00000@oceanleadership.org a signed PDF proposal by 4:00 PM EDT on June 10, 2011 and mail 1 signed original and 2 copies in hard copy within 7 days of the proposal due date. If there are any discrepancies between the proposal hardcopies and the e-mailed proposal, the hardcopy will govern. Non-PDF electronic submissions must be compatible with Microsoft Office.

Each Volume with its copies is to be packaged together and separated from the other volume. They should be clearly marked to identify contents. Cost or pricing data shall **NOT** be included in Volume I. Hard copy proposal text shall be printed on 8-1/2" x 11" paper in 10 point font and all pages shall be three-hole punched and inserted in ring binders only. .

Each volume shall be written on a stand-alone basis. Cross-referencing within a volume is permitted where its use would conserve space without impairing clarity. Information required for each volume, which is not found in its designated volume, will be reviewed as omitted from the quote and will affect the evaluation results.

L.3 TECHNICAL & MANAGEMENT APPROACH – (VOLUME I)

Offerors must provide comprehensive narrative statements that illustrate the support they can offer. At a minimum, the Offeror should provide the following:

- Management Plan for responding to the requests and services required;
- Experience and Qualifications of the offered resources; and
- Resource Matrix

1. Management Plan

Offerors must provide comprehensive narrative statements that set out the management plan they intend to follow to respond to requests for services including the ability to provide additional resources and emergency response. Identify the personnel and their availability to begin work immediately upon award. Offerors shall also address the need for any subawarding/subcontracting and clearly identify which labor categories or activities are being subcontracted. Describe how Offeror intends to ensure effective customer support to the major functional areas and tasks outlined in Section C.

2. Experience and Qualifications

Offerors shall provide resumes for the positions needed to support each functional area upon which the Offeror intends to bid. The Offeror must also identify key personnel. The resumes shall be in MS Word format, using Arial size 11 font or greater with sufficient detail to allow assessment of the proposed individual(s) ability to accomplish the tasks contained in the major functional area and position solicitation requirements. The resume shall include the major functional area number, number of the position that the individual is proposed to fill, the individual's name, current company name, current position title, education information, reverse chronological work history by company, position titles, start and end dates for each position held following completion of undergraduate college/university, professional certifications, additional training courses completed and other relevant information. Each resume shall be no longer than three pages in length.

The Offeror shall also complete and submit a self-rating matrix electronic file for all functional areas and position numbers proposed by the Offeror for each period of performance. The self-rating matrix MS Excel based file will be provided by Ocean Leadership (See Attachment J-2).

3. Resource Matrix

As part of the volume, the Offeror shall provide a resource matrix for the proposed resource staffing of the project, including person months by category by calendar month, resource type title and resource type position description. The resource type position description must include attributes of the position such as level of experience, education, and skill set appropriate to the position type and rate. This information will be used in the evaluation of the reasonableness of

the rate associated with each category, and the qualifications of the candidates appropriate to the positions.

a. Exemplar Resource Matrix

The table below is the customer estimate of the resources anticipated under the scope and tasking of this SOW.

Resource Category / FTEs	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Requirements Analyst / Technician	1	1	1	1	1				
Specification Analyst / Technician	1	2	2	2	1	1	1		
Procurement Documents Writer	1	2	2	1	1	1	1	1	1
Procurement Process Manager	1	1	1	1	1	0.5	0.5	0.5	0.5
	4	6	6	5	4	2.5	2.5	1.5	1.5

Upon review and evaluation of this volume, OCEAN LEADERSHIP may require additional supporting information from the Offeror in order to clarify the quote.

Offerors should note that technical statements which merely offer to conduct a program in accordance with the requirements of Section C - Scope of Work, (for example, parroting back the Statement of Work) will be considered non-responsive to this solicitation and will not be considered further.

NOTE: Do not insert any pricing in this section. Pricing of labor will be provided in the Cost Volume.

L.4 PAST PERFORMANCE & ABILITY TO PROVIDE RESOURCES WHEN NEEDED (VOLUME 2)

L.4.1 PAST PERFORMANCE

The Offeror shall provide information on past performance of the company in other similar support awards/contracts to this solicitation and with the requirements defined within this RFP. If the Offeror has no similar past performance or experience that satisfies the requirements of this RFP, the Offeror shall include a statement to this effect.

Complete Table L-1 and include it in the past performance section of Volume 2 of your proposal. The following paragraph provides detailed instructions for filling out this table. (A Microsoft Word version of Table L-1 may be found in Attachment J-3.) These documents shall be provided in MS Word electronic copy only, shall be in Arial size 11 font.

The Offeror shall submit past performance information on awards/contracts that the Offeror considers most relevant to demonstrate the ability to perform the proposed effort. The Offeror shall identify at least three but no more than five contracts under which it has delivered similar requirements to this RFP within the past 7 years, or is presently delivering, and identify which of those awards/contracts are the most similar to this solicitation. The Offeror shall provide a brief description of each contract and its dollar value. The Offeror shall provide the names and telephone numbers of the customer's technical and contractual points-of-contact for each award/contract. If the Offeror does not have at least three such contracts, it shall provide the above information for as

many contracts as it does have. Table L-1 must be used for providing past performance information. Please provide one copy per contract.

Table L-1
Past Performance Table
(one Table must be completed for each contract or award)

Company Name Address and Phone Number	
Contract Number and Type	
Contract Date and Period of Performance	
Brief description of contract work and comparability to the proposed effort. . It is not sufficient to state that it is comparable in magnitude and scope. Rationale must be provided to demonstrate that it is comparable.	
Contract Value in \$	
Discuss any major technical problems and how they were overcome. List any major deviations or waivers to technical requirements that were granted by the customer.	
Discuss whether delivery was on time and, if not, why; adherence to program schedules; incentive performance (e.g., schedule and technical) history, if applicable.	
Cost/price management history; cost overruns and under runs, and cost incentive history, if applicable.	
Technical Point of Contact (name, phone number, e-mail)	
Contractual Point of Contact (name, phone number, e-mail)	
List any contracts terminated (partial or	

complete) within the past 5 years and basis for termination (convenience or default). Include the contract number, name, address, and telephone number of the terminating officer. Include contracts that were “descoped” by the customer because of performance or cost problems.	
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The Offeror is advised to verify all contact information for all respondents and their willingness/ability to respond to inquiries by Ocean Leadership regarding the contract and the Offeror/Team-member’s performance on the contract.

In addition to including copies of Table L-1 in the Past Performance Volume of a proposal, the Offeror shall provide descriptive text that highlights the relevance of past efforts to the current acquisition as well as any problems encountered during these efforts and their resolution. The description of each project is limited to two pages. At least one project example should be submitted that demonstrates the Offeror’s ability to meet aggressive design, testing and production schedules.

L.4.2 ABILITY TO PROVIDE RESOURCES AT TIME OF AWARD

In this section of Volume 2, the Offeror shall identify the name of the city and state in which each proposed resource lives and works and explain how that individual will be able to report to work at the office of the Consortium for Ocean Leadership (COL) located in Washington, DC, Monday through Friday 8:30 AM to 5 PM throughout the base and option periods of the contract without additional cost or fees to COL. This information shall be captured in MS Word format, using Arial size 11 font or greater with sufficient detail to allow assessment of the proposed individual’s ability to work at the office of the COL in Washington, DC. Please specify if the individuals proposed must relocate to the Washington, DC area for the base and option periods of this contract. If any proposed individual(s) cannot live locally and work daily at the COL Washington, DC office without additional cost to COL, then the Offeror must clearly state that fact all proposed positions associated with each major functional area.

L.5 COST PROPOSAL (VOLUME 3)

L.5.1 Narratives supporting pricing data shall be succinct, and shall not attempt to duplicate or supplement text that properly belongs in the Technical Volume.

L.5.2 All vendor management costs for recruiting, travel and timesheet processing, and like administrative costs must be incorporated into the fee structure. These costs will not be permitted to be billed separately or contract hours expended.

L.5.3 Provide a spreadsheet that incorporates, for both the base period and any proposed option periods, your proposed labor categories and fully loaded hourly labor rates for each base period and any proposed options.

L.5.4 The cost quote must identify an itemized list of all direct and indirect costs associated with the performance of this award, including, but not limited to, fixed hourly rates for the various labor categories and direct expenses.

As part of the quotation any proposed services, software or tools must be identified separately from labor.

L.5.5 Travel time to and from the OL Washington, DC office, hereby named locality travel, is not eligible for charge to OL during the base or any option period. For positions with full time engineering estimates of 100 percent in Section C of this RFP, that value is equivalent to at least 40 hours of work per week, eight hours per day Monday through Friday (breaks and lunch time not included). Business meeting travel directed by the OL COTR shall be reimbursed at an actual cost basis per receipts provided by the Offeror's staff resource that was approved for the business travel and thus do not need to be included in the Offeror's proposal.

L.5.6 The Offeror shall provide all relevant cost assumptions and information, which form the basis of its proposal.

All costs shall be time and material based on a per hour rate, organized per the major functional area and position number naming convention in Section C and reported in MS Word using Arial size 11 font and per Table L-2. (A Microsoft Word version of Table L-2 is provided in Attachment J-4.) The Offeror's proposed costs may vary between the base period and the option periods, but must be valid for entire period of performance.

Table L-2
Price per Major Functional Area and Position Number

	Base	Option 1	Option 2	Option 3
Major Functional Area X				
P(#), Title	\$A / hour	\$B / hour	\$C / hour	\$D / hour

If the Offeror cannot provide individuals that can live and work locally at no additional charge to OL, the Offeror must include separate locality travel cost/price estimates for the base period and option periods, as shown on Table L-3 below. (A Microsoft Word version of Table L-3 is provided in Attachment J-5.) Prices shall be at actual cost values, organized per the major functional area and position number naming convention in Section C and reported in MS Word using Arial size 11

font. If a Table L-3 is not included for any major functional area and position number, then that major functional area and position number will not be eligible for locality travel cost payment during the period of performance for the contract.

Table L-3
Locality Price per Major Functional Area and Position Number

	Base	Option 1	Option 2	Option 3
Major Functional Area X				
P(#), Title	\$E	\$F	\$G	\$H

L.5.7 Certificate of Current Cost and Pricing Data

The Offeror shall complete the Certificate of Current Cost and Pricing Data Form (Attachment J-6) and include it as part of this Cost Proposal.

(End of Section L)

SECTION M – EVALUATION FACTORS FOR AWARD

M.1 GENERAL

Offerors shall provide their best and complete proposal upon initial submission. The Ocean Leadership Director of Contracts and Grants will make award(s) without discussions with Offerors but reserves the right to hold discussions if deemed necessary.

Offerors may choose to propose one or any combination of the major functional area. Each proposed functional area will be evaluated separately, but should there be technical or cost advantages associated with awarding multiple major functional areas to one Offeror, those advantages will be considered if defined by the Offeror.

M.2 EVALUATION AND BASIS FOR AWARD

An award (or awards) will be made to the responsible Offeror(s) per functional area(s) whose proposal represents the best overall value to Ocean Leadership. OL may issue one or multiple awards, but reserves the right to make separate single awards for each functional area or an overall award for all functional areas to one Offeror. In determining the best overall value, proposals will be assessed against all evaluation factors described below. The evaluation factors are as follows and are listed in decreasing order of importance:

The following is a summary of evaluation factors which will be used in the evaluation of Offeror quotes:

- | | |
|--|-----|
| 1. Experience and Qualifications of Proposed Personnel | 60% |
| 2. Cost | 20% |
| 3. Past Performance | 20% |

OCEAN LEADERSHIP reserves the right to issue an award without discussion but may enter into discussions on the technical and/or cost volume if it is in OCEAN Leadership's best interest to do so.