

SOLICITATION, OFFER AND AWARD		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO-C9	PAGE OF PAGES 1 24
2. CONTRACT NUMBER	3. SOLICITATION NUMBER N00173-08-R-LS01	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED 12/27/2007	6. REQUISITION/PURCHASE NUMBER	
7. ISSUED BY Naval Research Laboratory Contracting Division 4555 Overlook Ave., SW Washington DC 20375-5326 ATTN: Code 3230.LS		CODE N00173	8. ADDRESS OFFER TO (If other than Item 7)		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 2 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in Bldg. 222, Rm. 115 until 12 NOON local time 1/28/08
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME Ms. Lisa A. Fleming	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS lisa.fleming@nrl.navy.mil
		AREA CODE 202	NUMBER 767-3739	EXT.

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OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT <small>(See Section I, Clause No. 52.232-8)</small>	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)
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14. ACKNOWLEDGMENT OF AMENDMENTS <small>(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):</small>	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <small>(Type or print)</small>	
15B. TELEPHONE NUMBER	AREA CODE	NUMBER	EXT.	17. SIGNATURE
15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.			<input type="checkbox"/>	18. OFFER DATE

AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)) <input type="checkbox"/> 41 U.S.C. 253(c) ()		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than Item 7)		25. PAYMENT WILL BE MADE BY	28. AWARD DATE
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA <i>(Signature of Contracting Officer)</i>	

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

**PART I - THE SCHEDULE
SECTION B
SUPPLIES OR SERVICES AND PRICES/COSTS**

B-1 SUPPLIES/SERVICES AND COSTS

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
0001	The Contractor shall provide research and development support in Accordance with Section C.	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423)	* NSP	* NSP	* NSP
TOTAL ESTIMATED COST PLUS FIXED FEE		\$	\$	\$

* *Not Separately Priced*

NOTICE TO OFFERORS: In addition to inserting the estimated cost and fixed fee for the base year above, the estimated cost and fixed fee for each optional extension of the term of the contract are to be inserted in Section H.

**SECTION C
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

C-1 STATEMENT OF WORK

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

C-2 REQUIREMENTS FOR ON-SITE CONTRACTORS

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 01 June 2007 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/13onsite.htm>

**SECTION D
PACKAGING AND MARKING**

D-1 PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**SECTION E
INSPECTION AND ACCEPTANCE**

E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE

FAR CLAUSE TITLE

52.246-9 - Inspection Of Research And Development (Short Form) (APR 1984)

DFARS CLAUSE TITLE

252.246-7000 - Material Inspection And Receiving Report (MAR 2003)

E-2 INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

**SECTION F
DELIVERIES OR PERFORMANCE**

F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE TITLE

52.242-15 - Stop-Work Order (AUG 1989) - Alternate I (APR 1984)

52.247-34 - F.O.B. Destination (NOV 1991)

F-2 PERIOD AND PLACE OF PERFORMANCE

(a) The term of this contract is from the date of contract award through twelve months thereafter, with three options, each extending the period of performance an additional twelve months, if exercised.

(b) The principal place of performance of this contract shall be at the contractor's facility.

**SECTION G
CONTRACT ADMINISTRATION DATA**

G-1 PROCURING OFFICE REPRESENTATIVE

In order to expedite administration of the contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Security Matters- Contracting Officer for Security, Code 1221, (202) 767-2240, DSN 297-2240, email security-group@nrl.navy.mil

Safety Matters- Head Safety Branch, Code 3540, (202) 767-2232, DSN 297-2232, email safety@nrl.navy.mil

Patent Matters-Associate Counsel (Intellectual Property), Code 1008.2, (202) 404-1552, DSN 297-1552, email patents@nrl.navy.mil

Release of Data-Public Affairs Officer, Code 1030 (202) 767-2541, DSN 297-2541, email publicaffairs@nrl.navy.mil

G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS

* is hereby designated the cognizant COR who will represent the Contracting Officer in the technical monitoring and administration of this contract. In accordance with Section E, the COR will accomplish inspection and acceptance of deliverables under this contract. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or the statement of work, a modification must be issued in writing and signed by the Contracting Officer. Unless terminated sooner, this appointment is effective for the period of performance of this contract including any options, if exercised. COR authority may not be redelegated. No change in COR assignment shall be made without written notice by the Contracting Officer, who will modify the contract to reflect the change of COR assignment.

(* To be completed at time of award)

G-3 TECHNICAL DIRECTION MEMORANDUM (TDM)

- (a) For the purposes of this clause, technical direction includes the following:
- (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
 - (2) Guidelines to the Contractor, which assist in interpretation of drawings, specifications or technical portions of, work description.
- (b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:
- (1) Assign additional work under the contract;
 - (2) Direct a change as defined in the contract clause entitled "Changes";

- (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
- (4) Change any of the terms, conditions or specifications of the contract
- (c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.
- (d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.
- (e) TDMs shall include, but not be limited to, the following information:
 - (1) Date of TDM,
 - (2) Contract Number,
 - (3) Reference to the relevant portion or item in the Statement of Work,
 - (4) The specific technical direction or clarification, and
 - (5) The signature of the COR.
- (f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.
- (g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

G-4 CONTRACTOR-ACQUIRED PROPERTY

(a) The contractor is authorized to acquire the following items of facilities, which are needed to accomplish this contract.

Items to be Acquired

Estimated Cost

*

*(*this provision will be included and completed at time of award, if applicable)*

- (b) This authorization does not constitute any consent required pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2). Advance notification or requests for consent pursuant to that clause shall be directed to the administrative contracting officer (ACO).
- (c) Pursuant to the contract clause entitled "Government Property" (FAR 52.245-1), title to the property shall vest in the Government.
- (d) Prior to acquisition of any item of Industrial Plant Equipment, the Contractor must comply with the requirements of Department of Defense Federal Acquisition Regulation Supplement (DFARS 245.302-1(b)(1)(A). (See DFARS 245.301 for definition of "Industrial Plant Equipment.")

G-5 SUBCONTRACTORS/CONSULTANTS

(a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).

(b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name	Estimated Cost
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(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)

G-6 INCREMENTAL FUNDING

Pursuant to the Limitation of Funds clause (FAR 52.232-22), the total amount allotted to this contract is \$* and it is estimated that this amount is sufficient for contract performance through * .

*(*this provision will be included and completed at time of award, if applicable)*

G-7 INFORMATIONAL SUBLINE ITEMS

It is anticipated that the research and development services performed under this contract will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

G-8 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

If there is more than one ACRN within a contract line item, the payment office will make payment using the ACRN(s) cited on the contractor's invoice.

G-9 PAYMENT AND VOUCHER INSTRUCTIONS

In accordance with the contract clause, *Electronic Submission of Payment Requests* (DFARS 252.232-7003), the contractor must submit requests for payment electronically in the Wide Area Workflow (WAWF). It may be accessed at its homepage <https://wawf.eb.mil/>. If the contractor has not registered with WAWF, instructions for doing so may be accessed at: <https://wawf.eb.mil/vreg.htm> . The designated Electronic Business (EB) point of contact in the Central Contractor Registration (CCR) is the person responsible for activating the company's CAGE code in WAWF by calling 1-866-618-5988.

The following information is applicable to vouchers submitted under this contract using WAWF:

Under "Create New Document" select "Cost Voucher". When you enter the contract number, some of the other fields in the document may fill out automatically.

Use the appropriate Item Number stated in Section B of the contract (e.g., 0001, 0002 or 0001AA, 0001AB, etc).

If the contract contains multiple accounting classification reference numbers (ACRNs), the ACRN(s) from which payment is to be made must be cited on the voucher. If more than one ACRN is cited, the voucher must indicate the amounts to be paid from each. Information may be obtained from the COR to assist the contractor in determining the appropriate ACRNs from which payment is to be made.

ROUTING TABLE DATA REQUIRED FOR SUBMISSION OF INVOICE TO WAWF	
Document Type	Cost Voucher
Contract Number	N00173-08-
Issued By DoDAAC	N00173
Admin By DoDAAC	
Pay DoDAAC	
LPO	N00173
Ship To DoDAAC	N00173 Extension
Service Acceptor	N00173 Extension
DCAA Auditor DoDAAC	
CAGE Code	

IMPORTANT: When submitting vouchers using WAWF, utilize the “**Send More Email Notifications**” function in WAWF. This additional notification is important to ensure the Government Acceptor is aware that the invoice documents have been submitted into the WAWF system.

Send More Email Notifications	
Acceptor email	@nrl.navy.mil

Pursuant to DFARS 242.803(b)(i)(c), if the cognizant Government auditor has notified the contractor of its authorization to do so, the contractor may submit vouchers under this contract direct to the payment office. Such authorization does not extend to the first and final vouchers.

For assistance with the WAWF system, you may contact the Navy WAWF Assistance Line : 1-800-559-WAWF(9293).

**SECTION H
SPECIAL CONTRACT REQUIREMENTS**

H-1 TYPE OF CONTRACT

This is a *

*(*To be completed at time of award)*

H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)

(a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance (sixty (60) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

Labor Category	First/M/Last Name
Senior Systems Engineer (1 person)	*
Senior Software Engineer (1 person)	*
Senior Engineer (1 person)	*

*(*To be completed at time of award)*

H-3 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 25,000 total hours of direct labor for the base year and 25,000 total hours of direct labor for each of the option years, if exercised. The level of effort includes subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of 2,083 hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior

to the expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{(\text{Required LOE Hours} - \text{Expended LOE Hours})}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is as follows:

<u>Labor Category</u>	<u>Hours/Year</u>
Senior Scientist	3,000
Senior Physicist	2,000
Physicist	2,000
Senior Systems Engineer	4,000
Senior Software Engineer	2,000
Software Engineer	2,000
Senior Engineer	2,000
Engineer	4,000
Junior Engineer	2,000
Consultants	2,000

H-4 ONR 5252.235-9714 - REPORT PREPARATION (JUL 2005)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-2005, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable pdf(s) at <http://www.niso.org/standards/index.html> . NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 ax: 301-206-9789.]

H-5 ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)

In accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), all EIT supplies and services provided under this contract must comply with the applicable accessibility standards issued by the Architectural and Transportation Barriers Compliance Board at 36 CFR part 1194 (see FAR Subpart 39.2). Electronic and information technology (EIT) is defined at FAR 2.101.

H-6 OPTION TO EXTEND THE TERM OF THE CONTRACT

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer giving written notice of renewal to the Contractor within the existing term of the contract. The Government may exercise its option to renew the contract a total of three (3) times and each such renewal shall extend the term of the contract by twelve (12) months. The Contractor agrees that performance under each such renewal shall be accomplished in accordance with all of the terms and conditions of this contract and at the estimated cost and fixed fee set forth below:

First Option

Estimated Cost: \$

Fixed Fee: \$

Estimated Cost Plus Fixed Fee: \$

Second Option

Estimated Cost: \$

Fixed Fee: \$

Estimated Cost Plus Fixed Fee: \$

Third Option

Estimated Cost: \$

Fixed Fee: \$

Estimated Cost Plus Fixed Fee: \$

H-7 ON-SITE USE OF GOVERNMENT PROPERTY

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

H-8 REPRESENTATIONS AND CERTIFICATIONS

The Contractor's ORCA Representations and Certifications valid from to are incorporated herein by reference.

The Contract Specific Representations and Certifications submitted by the contractor dated are hereby incorporated by reference.

H-9 PROTECTION OF HUMAN SUBJECTS

Any collection or analysis of data from human subjects must not commence until the contractor provides the following information per SECNAV 3900.39D 8.d. (1):

- (a) An appropriate DoD Navy Assurance or a Federalwide Assurance (FWA) with a DoD Navy addendum to the FWA, or an application for a DoD Navy Assurance.

- (b) Documentation of the Institutional Review Board's (IRBs) initial and continuing review and approval.
- (c) IRB-approved informed consent form, except when not required consistent with law and regulation.
- (d) IRB-approved research protocol.
- (e) Documentation that research ethics and human subject protections training has been completed by the contractor's principle investigators.

The contractor has responsibility for certain reporting requirements per SECNAV 3900.39D 8.d. (2).

PART II - CONTRACT CLAUSES
SECTION I
CONTRACT CLAUSES

I-1 FAR 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.acqnet.gov/far>

<http://heron.nrl.navy.mil/contracts/home.htm>

a. FEDERAL ACQUISITION REGULATION CLAUSES

FAR CLAUSE TITLE

52.202-1	-	Definitions (JUL 2004)
52.203-3	-	Gratuities (APR 1984)
52.203-5	-	Covenant Against Contingent Fees (APR 1984)
52.203-6	-	Restrictions On Subcontractor Sales To The Government (SEP 2006)
52.203-7	-	Anti-Kickback Procedures (JUL 1995)
52-203-8	-	Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
52.203-10	-	Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
52.203-12	-	Limitation On Payments To Influence Certain Federal Transactions (SEP 2007)
52.203-13	-	Contractor Code Of Business Ethics And Conduct (DEC 2007)
52.203-14	-	Display Of Hot-line Poster(s) (DEC 2007)
52.204-2	-	Security Requirements (AUG 1996)
52.204-4	-	Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
52.204-7	-	Central Contractor Registration (JUL 2006)
52.204-9	-	Personal Identity Verification Of Contractor Personnel (SEP 2007)
52.204-10	-	Reporting Subcontract Awards (SEPT 2007)
52.209-6	-	Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (SEP 2006)
52.211-15	-	Defense Priority And Allocation Requirements (SEP 1990)
52.215-2	-	Audit And Records-Negotiation (JUN 1999)
52.215-8	-	Order Of Precedence - Uniform Contract Format (OCT 1997)

- 52.215-10 - Price Reduction For Defective Cost Or Pricing Data (OCT 1997)
- 52.215-11 - Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
- 52.215-12 - Subcontractor Cost Or Pricing Data (OCT 1997)
- 52.215-13 - Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
- 52.215-14 - Integrity Of Unit Prices (OCT 1997)
- 52.215-15 - Pension Adjustments And Asset Reversions (OCT 2004)
- 52.215-17 - Waiver Of Facilities Capital Cost Of Money (OCT 1997)
(*will be included if the successful offeror does not propose facilities capital cost of money*)
- 52.215-18 - Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (JUL 2005)
- 52.215-19 - Notification Of Ownership Changes (OCT 1997)
- 52.215-21 - Requirements For Cost Or Pricing Data Or Information Other Than Cost Or Pricing Data -Modifications (OCT 1997) - Alternate III (OCT 1997)
- 52.216-7 - Allowable Cost And Payment (DEC 2002) (fill in 30th)
- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-6 - Notice Of Total Small-Business Set-Aside (JUN 2003)
- 52.219-8 - Utilization Of Small Business Concerns (MAY 2004)
- 52.219-14 - Limitations On Subcontracting (DEC 1996)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (JUN 2003)
- 52.222-19 - Child Labor – Cooperation With Authorities And Remedies (AUG 2007)
- 52.222-21 - Prohibition Of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (MAR 2007)
- 52.222-35 - Equal Opportunity For Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (SEP 2006)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (SEP 2006)
- 52.222-39 - Notification Of Employee Rights Concerning Payment Of Union Dues Or Fees (DEC 2004)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (AUG 2003)
- 52.223-6 - Drug-Free Workplace (MAY 2001)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.223-14 - Toxic Chemical Release Reporting (AUG 2003)
- 52.223-15 - Energy Efficiency In Energy-Consuming Products (DEC 2007)
- 52.225-13 - Restrictions On Certain Foreign Purchases (FEB 2006)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-10 - Filing Of Patent Application- Classified Subject Matter (APR 1984)
- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)
(*will be included if the successful offeror is a small business or a non-profit organization*)
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-17 - Interest (JUN 1996)

- 52.232-18 - Availability Of Funds (APR 1984)
- 52.232-20 - Limitation Of Cost (APR 1984) (*Applicable when the contract or task order is fully funded*)
- 52.232-22 - Limitation Of Funds (APR 1984) (*Applicable when the contract or task order is not fully funded*)
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (OCT 2003)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (OCT 2003)
- 52.233-1 - Disputes (JUL 2002) - Alternate I (DEC 1991)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.233-4 - Applicable Law For Breach Of Contract Claim (OCT 2004)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.237-3 - Continuity Of Services (JAN 1991)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (MAY 2001)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.243-6 - Change Order Accounting (APR 1984)
- 52.243-7 - Notification Of Changes (APR 1984) fill in 30
- 52.244-2 - Subcontracts (JUN 2007) - Alternate I (JUN 2007)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items (MAR 2007)
- 52.245-1 - Government Property (JUN 2007)
- 52.245-2 - Government Property Installation Operation Services (JUN 2007)
- 52.245-9 - Use And Charges (JUN 2007)
- 52.246-23 - Limitation Of Liability (FEB 1997)
- 52.246-24 - Limitation Of Liability - High-Value Items (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (FEB 2006)
- 52.247-63 - Preference For U. S. Flag Air Carriers (JUN 2003)
- 52.249-6 - Termination (Cost-Reimbursement) (MAY 2004)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984)(fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

DFARS CLAUSE TITLE

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (DEC 2004)
- 252.203-7002 - Display Of DoD Hotline Poster (DEC 1991)
- 252.204-7000 - Disclosure Of Information (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Alternate A Central Contractor Registration (SEP 2007)

- 252.204-7005 - Oral Attestation Of Security Responsibilities (NOV 2001)
- 252.205-7000 - Provision Of Information To Cooperative Agreement Holders (DEC 1991)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (DEC 2006)
- 252.211-7003 - Item Identification And Valuation (JUN 2005) (*fill in none* in (c)(1)(ii) and (c)(1)(iii))
- 252.211-7006 - Radio Frequency Identification (FEB 2007)
- 252.211-7007 - Item Unique Identification of Government Property (SEP 2007) (*fill in none*)
- 252.215-7000 - Pricing Adjustments (DEC 1991)
- 252.215-7002 - Cost Estimating System Requirements (DEC 2006)
- 252.215-7004 - Excessive Pass-Through Charges (APR 2007)
- 252.222-7006 - Combating Trafficking In Persons (OCT 2006)
- 252.223-7004 - Drug-Free Work Force (SEP 1988)
- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 252.225-7001 - Buy American Act And Balance Of Payments Program (JUN 2005)
- 252.225-7002 - Qualifying Country Sources As Subcontractors (APR 2003)
- 252.225-7004 - Report Of Intended Performance Outside The United States And Canada- Submission After Award (MAY 2007)
- 252.225-7006 - Quarterly Reporting Of Actual Contract Performance Outside The United States (MAY 2007)
- 252.225-7012 - Preference For Certain Domestic Commodities (JAN 2007)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (MAR 2006) (*fill in : Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113*)
- 252.226-7001 - Utilization of Indian Organizations, Indian-Owned Economic Enterprises, And Native Hawaiian Small Business Concerns (SEP 2004)
- 252.227-7013 - Rights In Technical Data -- Noncommercial Items (NOV 1995)
- 252.227-7014 - Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
- 252.227-7016 - Rights In Bid Or Proposal Information (JUN 1995)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (SEP 1999)
- 252.227-7039 - Patents--Reporting Of Subject Inventions (APR 1990)
- 252.231-7000 - Supplemental Cost Principles (DEC 1991)
- 252.232-7003 - Electronic Submission Of Payment Requests (MAY 2006)
- 252.232-7010 - Levies On Contract Payments (DEC 2006)
- 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (NOV 2004)
- 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)
- 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DoD Contracts) (JAN 2007)
- 252.246-7001 - Warranty Of Data (DEC 1991)
- 252.246-7003 - Notification Of Potential Safety Issues (JAN 2007)

- 252.247-7023 - Transportation Of Supplies By Sea (MAY 2002)
- 252.247-7024 - Notification Of Transportation Of Supplies By Sea (MAR 2000)
(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)
- 252.251-7000 - Ordering From Government Supply Sources (NOV 2004)

I-2 FAR 52.219-28 - POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (JUNE 2007)

(a) Definitions. As used in this clause—

Long-term contract means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts—

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the exercise date specified in the contract for any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at

<http://www.sba.gov/services/contractingopportunities/sizestandardstopics/>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure they reflect current status. The Contractor shall notify the contracting office by e-mail, or otherwise in writing, that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it is, is not a small business concern under NAICS Code _____ assigned to contract number _____.

[Contractor to sign and date and insert authorized signer's name and title].

I-3 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) *Definitions.* "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –

- (1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or
- (2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

WARNING

Contains (or manufactured with, if applicable) _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

**The Contractor shall insert the name of the substance(s).*

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

SECTION J

LIST OF ATTACHMENTS

- J-1** Attachment (1) - Statement Of Work - 8 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 4 Pages.
- J-2** Attachment (2) - DD Form 254, Contract Security Classification Specification, Ser 066-07 Dated 08/23/2007, 2 Pages.
- J-3** Attachment (3) – Personnel Qualifications, 3 Pages.
- J-4** Attachment (4) – Accounting and Appropriation Data- 1 page. *

(To be included at time of award)*

PART IV - REPRESENTATIONS AND INSTRUCTIONS
SECTION - K
REPRESENTATIONS, CERTIFICATIONS
AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

K-1 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

In accordance with FAR 4.1201, prospective contractors must complete electronic annual representations and certifications via the Online Representations and Certifications Application (ORCA) at <http://orca.bpn.gov> in conjunction with required registration in the Central Contractor Registration (CCR) at <http://www.ccr.gov> database. The representations and certification must be updated as necessary, but at least annually, to ensure they are kept current, accurate and complete.

In addition, each offeror must complete the additional contract specific representations and certifications below:

K-2 FAR 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is see Section K-3 [*insert NAICS code*].

(2) The small business size standard is see Section K-3 [*insert size standard*].

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (c) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(i) Paragraph (c) applies.

(ii) Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the

business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR CLAUSE #	TITLE	DATE	CHANGE

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

K-3 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004)

The fill in information is as follows:

- (a) (1) The NAICS code for this acquisition is 541712.
- (2) The small business size standard is 500.

K-4 FAR 52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUNE 2000)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. DISCLOSURE STATEMENT—COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already

submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

(1) *Certificate of Concurrent Submission of Disclosure Statement.* The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____

Name and Address of Cognizant ACO or Federal Official Where Filed:

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

(2) *Certificate of Previously Submitted Disclosure Statement.* The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____

Name and Address of Cognizant ACO or Federal Official Where Filed:

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

(3) *Certificate of Monetary Exemption.* The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling \$50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) *Certificate of Interim Exemption.* The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost

accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under paragraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS—ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$50 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with paragraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

Yes No

(End of provision)

Alternate I (Apr 1996). As prescribed in 30.201-3(b), add the following paragraph (c)(5) to Part I of the basic provision:

(5) *Certificate of Disclosure Statement Due Date by Educational Institution.* If the offeror is an educational institution that, under the transition provisions of 48 CFR 9903.202-1(f), is or will be required to submit a Disclosure Statement after receipt of this award, the offeror hereby certifies that (check one and complete):

(i) A Disclosure Statement Filing Due Date of _____ has been established with the cognizant Federal agency.

(ii) The Disclosure Statement will be submitted within the 6-month period ending _____ months after receipt of this award.

Name and Address of Cognizant ACO or Federal Official Where Disclosure Statement is to be Filed:

K-5 FAR 52.230-7 PROPOSAL DISCLOSURE—COST ACCOUNTING PRACTICE CHANGES (APR 2005)

The offeror shall check “yes” below if the contract award will result in a required or unilateral change in cost accounting practice, including unilateral changes requested to be desirable changes.

Yes No

If the offeror checked “Yes” above, the offeror shall—

- (1) Prepare the price proposal in response to the solicitation using the changed practice for the period of performance for which the practice will be used; and
- (2) Submit a description of the changed cost accounting practice to the Contracting Officer and the Cognizant Federal Agency Official as pricing support for the proposal.

K-6 ORGANIZATIONAL CONFLICTS OF INTEREST REPRESENTATION

The offeror hereby represents that it has reviewed and understands the guidance, requirements, and restrictions in Federal Acquisition Regulation (FAR) Subpart 9.5 ("Organizational and Consultant Conflicts of Interest"). With respect to the guidance provided in FAR Subpart 9.5,

it is aware of no past, present, or currently planned interest (financial, contractual, organizational, or otherwise) or activity relating to the work required to be performed under the contract resulting from the Request for Proposals that would indicate any impingement upon its ability to render impartial, technically sound, and objective assistance or advice or result in the appearance that it may have an unfair competitive advantage.

it is aware of circumstances that may indicate an impingement upon its ability to render impartial, technically sound, and objective assistance or advice or result in the appearance that it may have an unfair competitive advantage. This representation applies to all affiliates of the offeror and its proposed consultants or subcontractors of any tier.

**SECTION L
INSTRUCTIONS CONDITIONS AND NOTICES
TO OFFERORS OR RESPONDENTS**

L-1 FAR 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.acqnet.gov/far>
<http://heron.nrl.navy.mil/contracts/home.htm>

FAR CLAUSE TITLE

52.215-1 - Instructions To Offerors- Competitive Acquisition (JAN 2004)
52.215-16 - Facilities Capital Cost Of Money (JUN 2003)
52.222-24 - Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
52.222-50 - Combating Trafficking In Persons (AUG 2007)
52.237-10 - Identification Of Uncompensated Overtime (OCT 1997)

DFAR CLAUSE TITLE

252.209-7001- Disclosure Of Ownership Or Control By The Government Of A Terrorist Country (OCT 2006)
252.211-7005 - Substitutions For Military Or Federal Specifications And Standards (NOV 2005)
252.215-7003 - Excessive Pass-Through Charges—Identification Of Subcontract Effort (APR 2007)
252.225-7003 -Report Of Intended Performance Outside The United States And Canada – Submission With Offer (DEC 2006)

L-2 INSTRUCTIONS FOR SUBMISSION OF PROPOSALS/OFFERS

All proposals shall be submitted in accordance with FAR 52.215-1- *Instructions to Offerors- Competitive Acquisition*. Proposals/offers submitted in paper media through the United States Postal Service (USPS) or delivery services shall be addressed:

Contracting Officer, ATTN: Code 3230.LS
RFP No. N00173-08-R-LS01 Closing Date: 1/28/08 Time: 4 PM
Naval Research Laboratory
4555 Overlook Avenue, S.W.
Washington, D.C. 20375

Proposals may be hand delivered to the Contracting Office, NRL, 4555 Overlook Avenue, S.W., Washington, D.C. 20375, Building 222, Room 115 between the hours of 8AM until 4PM, local time, excluding weekends and federal holidays. NRL is a controlled-access facility. Photo identification will be required. Report first to Building 72, Visitor Control for access to NRL. After receiving a Visitor Pass,

proceed directly to Building 222, Room 115, Contracting Office Receptionist to deliver the proposal. All offerors shall allow sufficient time for delivery of their proposal to the Contracting Office prior to the closing date and time announced in the solicitation. Directions and additional information about NRL is available at <http://www.nrl.navy.mil/content.php?P=PLANNINGVISIT>.

If facsimile proposals are authorized, contracting officers may request offeror(s) to provide the complete; original signed proposal at a later date.

L-3 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be a DX rated order; DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

L-4 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997) ALTERNATE II (OCT 1997)

(a) *Exceptions from cost or pricing data.* (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data.* If the offeror is not granted an exception from the

requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed in FAR 15.406-2.

(c) When the proposal is submitted, also submit one copy each to: (1) the Administrative Contracting Officer, and (2) the Contract Auditor.

L-5 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997) ALTERNATE III (OCT 1997)

(a) *Exceptions from cost or pricing data.* (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data.* If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed in FAR 15.406-2.

- (d) Submit the cost portion of the proposal via the following electronic media: *CD Rom containing an Excel version of the detailed cost proposal (breakdown) compatible with Microsoft Excel 2003. The CD Rom should also include a PDF version of the entire cost proposal, including all supporting documentation.*

L-6 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Cost Plus Fixed Fee term type contract resulting from this solicitation.

L-7 FAR 52.233-2 - SERVICE OF PROTEST (SEP 2006)

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office(GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L-8 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)

- (a) The terms used in this provision are defined in following clause or clauses contained in this solicitation—
- (1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
 - (2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.
- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.

- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions*	Basis for Assertion **	Asserted Rights Category ***	Name of Person Asserting Restrictions****
(List)*****	(List)	(List)	(List)

* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.

** Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

*** Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

**** Corporation, individual, or other person, as appropriate.

***** Enter "none" when all data or software will be submitted without restrictions.

Date _____
 Printed Name and Title _____

 Signature _____

(End of identification and assertion)

- (e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.
- (f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

L-9 DFARS 252.227-7028 - TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify - -

- (a) The contract number under which the data or software were produced;
- (b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and
- (c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

L-10 GOVERNMENT-FURNISHED PROPERTY

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

L-11 INQUIRIES CONCERNING THE RFP

Any questions concerning the RFP must be submitted in writing to the Contracting Officer representative at the contact location noted in blocks 7 and 10 of the Standard Form 33, *Solicitation, Offer and Award*. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

L-12 PROPOSAL ORGANIZATION

(1) Information for the technical/management proposal shall be placed in Volume I and be completely separate from the business proposal (Volume II).

(2) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

L-13 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 2 electronic (CD Rom, PDF Format) COPIES .

(1) The offeror must propose the labor categories in accordance with the Level of Effort Breakdown in Section H. If the offeror uses labor category terminology other than that used in Section H, the offer must provide a matrix clearly relating their proposed labor categories to those stated.

(3) The following information is required for evaluation of your technical/management proposal:

- a. **Qualifications of Project Personnel:** The offeror must provide convincing proof that it is has, or has the ability to obtain, personnel with relevant experience in the task areas described in the Statement of Work. These are highly specialized fields and personnel without actual experience in these areas are not acceptable. The Solicitation sets forth the desired qualifications. In particular, the proposal should indicate specific persons, their qualifications and experience in each task area of the Statement of Work, and the amount of effort each will be performing on the contract. It is essential for the offeror to demonstrate that it has or will have, prior to contract award, the necessary personnel with a final DoD granted personnel security clearance commensurate with the level of access required for performance of the resultant contract. The proposal should include each person's education level, experience (both general and project related), and software and hardware specific knowledge when appropriate. The proposal must show the availability of sufficient key project professional and technical personnel by the prime contractor as well as any proposed subcontractors and consultants.
- b. **Company Experience:** Proposals must provide a narrative description of company experience on projects with scientific and technical tasks similar to those required in the Statement of Work. This description should clearly show: (1) the relationship between the company's experience and the tasks required under the Statement of Work, (2) prior or current programs in the task areas, and (3) the project schedule, plans for each task, and approach to each particular scientific task. Prior experience should be identified by citing contracting agency, period of performance of the contract, and a summary of the nature of the work.
- c. **Management Capability:** Proposals should describe clearly how the program will be managed, including commitment and management philosophy, supporting organization, workforce management approach, management systems and internal procedures. Proposals should also describe how instructions will be communicated by the project manager, how corrections in procedures or individual performance will be implemented, how work performance against schedule will be measured, and how problem areas will be identified and communicated to the COR.
- d. **Facilities:** The proposal must provide a description of the facilities and equipment that they anticipate using in order to satisfy the contract requirements. The offeror should identify whether the equipment and facilities is government owned, corporately owned or the property of a team member. It is essential for the offeror to demonstrate that it will be capable of obtaining a SECRET facility clearance and SECRET storage capabilities.
- e. **Past Performance:**
 - Offerors shall submit the following information as part of their proposal. *(Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.)* List the last five (5) contracts or subcontracts completed by the offeror or predecessor companies during the past three (3) years for services similar in nature to this requirement. Include in the five (5) any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous

or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.

1. Name of contracting organization.
 2. Contract number
 3. Contract type
 4. Total contract value
 5. Description of the contract work
 6. Contracting officer and telephone number
 7. Contracting officer's representative, program manager, or similar official and telephone number
- Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.
 - Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

L-14 VOLUME II - BUSINESS PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 2 electronic COPIES (see paragraph (b) below for details).

(1) COST PROPOSAL

- (a) The offeror shall submit a business proposal that includes a cost proposal with supporting information for each cost element consistent with offeror's cost accounting system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate each cost element. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission. However, offerors are advised to use actual labor rates of proposed personnel as the basis for estimating labor costs when practicable.
- (b) It is requested that offerors provide one copy of their cost proposal on a CD Rom using software that is compatible with Microsoft Excel 2003. Any supporting documentation that an offeror wishes to submit as part of their cost proposal should be submitted in a PDF format.

(c) The following travel and material estimates are for evaluation purposes only. The government estimates the travel costs for this effort to be \$100,000 per year for years one and four and \$120,000 per year for years two and three. The government estimates the material costs to be \$150,000 per year for years one and four and \$200,000 per year for years two and three. All offers will be evaluated using the estimated amounts provided above plus applicable indirect costs.

SECTION M EVALUATION FACTORS FOR AWARD

M-1 EVALUATION

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. The technical considerations are more important than the cost factor. The closer the technical scores of the various proposals are to one another, the more important the cost considerations become. The Technical and Cost factors are each more important than the Small Business Participation factor.

M-2 EVALUATION FACTORS FOR AWARD

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. The following technical subfactors are listed in descending order of importance

M-2-1. TECHNICAL/MANAGEMENT

(1) QUALIFICATIONS of PROJECT PERSONNEL

The proposal will be evaluated on the offeror's demonstrated ability to provide personnel with: (1) the appropriate qualifications set forth in the Solicitation; (2) actual relevant experience in the task areas set forth in the Statement of Work; and (3) the ability to obtain the required security clearance prior to commencing work.

(2) COMPANY EXPERIENCE

The proposal will be evaluated on the offeror's demonstrated company experience in performing projects requiring scientific and technical effort which is closely similar or related to the technical and scientific efforts set forth in the Statement of Work.

(3) MANAGEMENT CAPABILITY

The proposal will be evaluated on the basis of the quality of the management plan. The evaluation will be based on the information provided pursuant to Section L and other sources if available.

(4) FACILITIES

The proposal will be evaluated on the basis of the physical facilities in the Washington DC area, the required facility clearance, and the availability of personnel with security clearances. The evaluation will be based on the information provided pursuant to Section L and other sources if available.

(5) PAST PERFORMANCE

Past performance will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Section L and other sources if available. The evaluation will take into account past performance information regarding predecessor companies, subcontractors that will perform major or critical aspects of the requirement, or the proposed project manager or key personnel responsible for major or critical aspects of the requirement. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iv).

M-2-2 COST TO THE GOVERNMENT

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon an evaluation of cost realism. Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical proposal as well as the proposed labor and indirect rates. It also includes evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

M-3 FAR 52.217-5 - EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

Technology Upgrades for InfraRed Countermeasures

Statement of Work

1.0 Background

The Naval Research Laboratory (NRL) Applied Optics Branch conducts a variety of research and development activities in optics supporting military aircraft and ship systems. Functions include both theoretical and experimental research, and the development of systems to solve tactical problems. Efforts comprise a broad technical scope including optical countermeasures systems, reconnaissance systems, tactical software for these systems, dual use (military/civil) photonics technology, infrared signatures, target detection algorithms, and system modeling.

2.0 Scope

The scope of the contract is to develop new technologies for InfraRed CounterMeasure (IRCM) systems that exploit the optical spectrum from infrared through ultraviolet to support Navy, tri-service and allied country requirements. The areas of technical investigation will be broad, but with emphasis on electro-optical and infrared (EO/IR) systems and techniques for countering missile threats to Naval aircraft. The specific objective of the program is to define a next generation system for protecting US Navy aircraft from infrared guided missile threats while upgrading and supporting critical components of current and candidate Naval IRCM systems during the transition to the new technology. Achieving this objective may involve investigations of phenomenology, the relevant technologies, and the means for implementing these technologies into countermeasure systems and the interoperability of these countermeasure systems with standard on-board Naval Aircraft Survivability Equipment (ASE). Integration with battlefield systems such as hostile fire indicators, laser warning receivers and cooperative countermeasure systems is required. The program will require both analytical and experimental efforts. The work will be performed at the contractor's site, at the Naval Research Laboratory (NRL), and at test sites in the US and in other countries as needed.

The classified portion of the work will be at the Secret level. The tasks include investigations into countermeasure techniques, assessment of devices used in countermeasures systems, and assessment of countermeasures systems performance. Factors such as reliability, maintainability, and cost will be assessed. Development of algorithms and software for target detection, clutter rejection, control software and data collection and analysis for these IRCM and

related systems will be required. Also, field testing of components and systems, field and laboratory measurements of target and background properties, and system performance modeling will also be required.

3.0 Tasks

3.1 Technology Assessment

3.1.1 Literature Review

The contractor shall conduct a review of the literature on countermeasure techniques, devices used in countermeasures systems, and countermeasures systems performance. The contractor shall examine systems and components at levels of development from Technology Readiness Level (TRL) 5 and higher (TRL Levels defined in Addendum). Factors such as reliability, maintainability, and cost shall also be examined in addition to performance capabilities. Information on algorithms and software for such tasks as target detection, clutter rejection, target tracking and control software for system functions shall also be reviewed. The available literature on field testing of components and systems, field and laboratory measurements of target and background properties, and system performance modeling shall be reviewed. This review shall be conducted for sources up to the Secret level of classification.

3.1.2 Countermeasure System Assessment

Based on the review of the literature, the contractor shall perform the following assessments.

3.1.2.1 Performance Limitations

The contractor shall identify the performance characteristics of the systems and components and provide a tabulation of those characteristics important for development of a next generation system. The contractor shall provide an assessment of the likelihood of how much the TRL would be improved from the programs planned or in progress.

3.1.2.2 Technology Needs

The contractor shall identify those technology areas that are not being addressed and provide an assessment of the impact on the eventual system if no work is done to improve those technologies.

3.1.2.3 Technology Development Plan

The contractor shall develop recommendations for technology development programs. The contractor shall identify goals for these programs that would yield technologies that would provide satisfactory performance levels.

3.1.3 Alternative technologies

The contractor shall examine alternatives to EO/IR systems that could be used to counter the threats. The contractor shall provide brief discussions of these alternatives, including their probable performance strengths and weaknesses as well as maturity levels.

3.2 Measurement Requirements

Based on the review of the literature, the contractor shall perform the following assessments.

3.2.1 Signature and Background Data Requirements

The contractor shall identify typical operating profiles for classes of Navy aircraft, such as the P-3C, C-130J and CH-46E, and the environmental conditions they are likely to encounter. The contractor shall then determine if there are any significant gaps or omissions in the signature and background data bases that would result in substantial uncertainties in the effectiveness of countermeasure systems. The contractor shall then develop a set of measurement requirements in a prioritized form that would fill the data gaps or omissions so that countermeasure performance can be fully assessed.

3.2.2 System and Component Measurement Requirements

The contractor shall identify IRCM system or component characteristics that are not well defined or inadequately measured such that the projections of system performance are not well quantified. The contractor shall then define a set of laboratory and field measurement requirements in a prioritized form that would provide adequate precision to the data so that more reliable projections of countermeasure performance can be made.

3.3 Measurement Program

3.3.1 Test Planning

The contractor shall develop test plans, identify special facilities and equipment required, identify test range requirements if needed, provide coordination with

other Government agencies, and identify any unique licensing requirements needed to support the tests. The contractor shall coordinate with other test participants and support organizations on any safety issues that must be addressed and for any training needed or special permits that must be obtained. The contractor shall develop a schedule of tasks that must be accomplished to allow the testing program to proceed without delays due to neglect of any requirements needed to allow the testing to proceed.

3.3.2 Instrumentation Support

The contractor shall develop control software for Windows and DOS based systems and integrate hardware to interface data communications and display equipment with measurement instrumentation. The contractor shall provide interfaces to users to enable remote control of Windows and DOS based systems via data link of the measurement instrumentation. The contractor shall also modify software and hardware and alter test instrumentation as necessary to meet on-site test requirements. The contractor will develop software to integrate GPS and IRIG timing with measurement instrumentation and to time-tag all relevant data.

3.3.3 Test Preparation and Conduct

The contractor shall support the measurement of infrared (IR), visible, and ultraviolet (UV) signatures of aircraft, missiles, flares, small arms, and other signatures relevant to the modeling of anti-aircraft missiles, and missile countermeasures (CM) including microwave/millimeter wave systems and integrated or interoperable battlefield technologies. The contractor shall also support the measurements of non-threat backgrounds to fulfill any identified data needs. The contractor shall plan tests, store and assemble the required instrumentation, calibrate and align the instruments, provide for shipment to the appropriate sites, assemble, test and calibrate the instruments, and support the field tests. The contractor will test and verify the networking capabilities, GPS and IRIG time-tagging functions and remote control functions of data acquisition computers prior to shipment to test sites. The measurements shall include spatial, spectral, and temporal data. The contractor shall be responsible for the on-site maintenance of the instrumentation used for the measurements, and for data security and transmittal. The contractor will conduct measurements at the White Sands Missile Range (WSMR), Tonopah Test Range (TTR), Naval Air Warfare Center-Weapons Division (NAWC/WD/CL) China Lake, Patuxent Naval Air Station, at the Naval Research Laboratory (NRL), and at other domestic and foreign sites as directed.

The contractor shall support necessary laboratory tests by participating in the laboratory setup process, and assisting in the measurements, data reduction and analysis.

The contractor shall modify, and integrate test hardware into test aircraft such as the P-3C, C-130J and the F/A18E/F. Integration shall include training of Government personnel to install, check out, and operate the equipment. The contractor shall also participate in flight tests. The contractor shall design and implement detector test systems and profiles, including missile warning stimulators (e.g. Baringa and Mallina), to determine developmental IR/EO/UV detector sensitivity, degradation with use, and overall reliability. The contractor shall integrate, calibrate, and maintain test instrumentation, develop test plans and associated documentation, perform tests and write test reports.

3.3.4 Data Reduction and Analysis

The contractor shall develop requirements to assess missile warning system performance, and on-board/off-board IRCM cooperative systems concept effectiveness, and to evaluate candidate Navy systems designs. The contractor shall identify equipment and facility requirements, and data requirements. The contractor shall design, assemble, implement and maintain data reduction and analysis equipment, software and tools.

3.3.5 Data Analysis

The contractor shall reduce, and analyze data gathered during the tests, prepare and organize data for input into models, and prepare reports on the tests. The contractor shall also write and present papers to professional measurement symposia. The contractor shall analyze data collected during tests of candidate common and cooperative missile countermeasures systems and estimate the life-cycle costs to evaluate the cost effectiveness of the systems. The evaluation shall include the ability of the systems to meet published operational requirements for candidate naval platforms and to meet other performance objectives.

3.4 Readiness Level Assessment

The contractor shall prepare a readiness level assessment using the NAVAIR standards. The contractor shall assemble the necessary data and reports required to support an independent review of the readiness level assessment.

3.4.1 Technology Roadmap

The contractor shall assess current and emerging technologies and concepts, which have application to this program development, and evaluate their potential for improving the approaches developed. The contractor shall evaluate these technologies and provide an estimate of the readiness level.

3.4.2 Test Recommendations

The contractor shall recommend and prepare related test and measurement plans required to implement the technical demonstrations needed to transition the systems concepts to the next stage of development.

3.5 Countermeasure System Definition

3.5.1 Capabilities Analysis

3.5.1.1 Modeling and Simulation

The contractor shall design optical models and shall program simulations, which shall run on contractor and NRL workstations, to test cooperative countermeasures designs. The models shall include atmospheric effects, sensor optics, and sensor spatial and temporal responses. The contractor shall develop models with MatLab, and shall optimize other computer code as directed. The contractor shall operate DISAMS, LOWTRAN, MODTRAN and other software simulations and hardware-in-the-loop simulators used at NRL. The contractor shall also operate contractor-developed simulations at its facilities. The contractor shall identify aircraft, ASE systems, countermeasures systems, and threat scenarios that need to be simulated. Using simulation results with other data, the contractor shall develop cooperative countermeasures systems performance requirements.

3.5.1.2 Capabilities Document

The contractor shall review existing capabilities documents, interface control documents, interface design documents, specifications and other requirements documentation that may exist and evaluate their adequacy for supporting development programs for IRCM systems. The contractor shall recommend any modifications that may be desirable in view of new threats, platforms, interfaces, functionalities and missions.

3.5.2 System Design

Based on the measurement results, simulation results, readiness levels, and capabilities required, the contractor shall develop candidate cooperative countermeasures systems architectures for military aircraft, including the F/A-18. They will be capable of designing and instrumenting ancillary test equipment, such as aircraft support pods. They will be achievable architectures that reflect the use of currently available or near-term feasible technologies.

3.5.2.1 Threat Detection System

The contractor shall evaluate the design of missile warning systems, including design improvements to current Navy MAWS such as the AAR-47 or candidate systems. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with other on-board defensive electronic countermeasures and expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of missile detection sensors, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.

3.5.2.2 Threat Countermeasure System

3.5.2.2.1 Jammer Evaluation

The contractor shall evaluate the design of IRCM systems, including design improvements to current Navy jammers such as Agile Eye and the ALQ-157. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with MAWS and expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of radiators, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.

3.5.2.2.2 Expendables Evaluation

The contractor shall evaluate the design of countermeasures expendables. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with on-board MAWS and jammer systems, and other expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of radiators, antennas, optics and systems concepts to identify expendable architectures to meet future requirements.

3.5.2.2.3 Cooperative Countermeasures Analysis

The contractor shall analyze simulation results, and test data collected for tri-service on-board and off-board IRCM systems and MAWS to provide independent assessments of IRCM effectiveness, and to develop new cooperative techniques models for flares, expendable IR/EO/UV sources, and on-board IRCM systems.

3.5.3 Development Program Plan

The contractor shall develop a program plan, including technical planning and coordination, engineering investigations, program scheduling, tracking and analysis for on-board and off-board IR/EO/RF countermeasures systems in support of a System Development, and Demonstration program and a transition to a Production program. The contractor shall identify common and cooperative design requirements among multiple platforms, identify critical requirement differences and recommend component, assembly, sub-system, and interface designs to meet performance requirements, and to minimize design cost, weight, and power requirements. The contractor shall also assess software modularity for reuse and identify multi-system applicability.

Addendum:

TRL 9: Actual system “mission proven” through successful mission operations

TRL 8: Actual system completed and “mission qualified” through test and demonstration in an operational environment

TRL 7: System prototype demonstration in high-fidelity environment (parallel or shadow mode operation)

TRL 6: System/subsystem prototype demonstration in a relevant end-to-end environment

TRL 5: Module and/or subsystem validation in relevant environment

TRL 4: Module and/or subsystem validation in laboratory environment

TRL 3: Analytical and experimental critical function and/or characteristic proof-of-concept

TRL 2: Technology concept and/or application formulated

TRL 1: Basic principles observed and reported

CONTRACT DATA REQUIREMENTS LIST
(2 Data Items)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. ALL	B. EXHIBIT A	C. CATEGORY: TDP _____ TM _____ OTHER _____
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D. SYSTEM/ITEM	E. CONTRACT/PR NO. N00173-08-R-LS01	F. CONTRACTOR
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1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM Technical Report	3. SUBTITLE Task/Sub-task
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4. AUTHORITY (Data Acquisition Document No.) N/A	5. CONTRACT REFERENCE SOW Task 3.1	6. REQUIRING OFFICE NRL, COR
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7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY AS REQ	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES		
					Draft	Final	
						Reg	Repro

16. REMARKS For Task 3.1, the contractor shall provide a comprehensive report on the results of the literature review and system assessment. The contractor shall provide technical reports in contractor format detailing any studies or analyses conducted in support of the literature review and countermeasure system assessment.	NRL Code 5660						
15. TOTAL → 0 2 0							

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

1. DATA ITEM NO. A002	2. TITLE OF DATA ITEM Technical Report	3. SUBTITLE Task/Sub-task
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4. AUTHORITY (Data Acquisition Document No.) N/A	5. CONTRACT REFERENCE SOW Task 3.2	6. REQUIRING OFFICE NRL, COR
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7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY AS REQ	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES		
					Draft	Final	
						Reg	Repro

16. REMARKS For Task 3.2, the contractor shall provide a comprehensive report that documents the measurement requirements. The contractor shall provide written analyses identifying test requirements and test evaluation criteria.	NRL Code 5660						
15. TOTAL → 0 2 0							

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
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CONTRACT DATA REQUIREMENTS LIST
(2 Data Items)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. ALL	B. EXHIBIT A	C. CATEGORY: TDP _____ TM _____ OTHER _____
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D. SYSTEM/ITEM	E. CONTRACT/PR NO. N00173-08-R-LS01	F. CONTRACTOR
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1. DATA ITEM NO. A007	2. TITLE OF DATA ITEM Final Technical Report	3. SUBTITLE Task/Sub-task
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4. AUTHORITY (Data Acquisition Document No.) N/A	5. CONTRACT REFERENCE SOW	6. REQUIRING OFFICE NRL, COR
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7. DD 250 REQ N/A	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY AS REQ	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION		
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES	
					Draft	Final
					Reg	Repro

16. REMARKS The final report shall be an executive summary of the program. The detailed description of program accomplishments shall be contained in each task report, and shall be identified by reference in the final report.	15. TOTAL → 0 2 0
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17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
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4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
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7. DO 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION	14. DISTRIBUTION		
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES	
					Draft	Final
					Reg	Repro

16. REMARKS	15. TOTAL → 0 0 0
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17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
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DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				1. CLEARANCE AND SAFEGUARDING a. FACILITY CLEARANCE REQUIRED <p style="text-align: center;">SECRET</p> b. LEVEL OF SAFEGUARDING REQUIRED <p style="text-align: center;">SECRET</p>		
2. THIS SPECIFICATION IS FOR: <i>(X and complete as applicable)</i>			3. THIS SPECIFICATION IS: <i>(X and complete as applicable)</i>			
	a. PRIME CONTRACT NUMBER	<input checked="" type="checkbox"/>	a. ORIGINAL <i>(Complete date in all cases)</i>	DATE (YYYYMMDD) 2007/08/23		
	b. SUBCONTRACT NUMBER		b. REVISED <i>(Supersedes all previous specs)</i>	REVISION NO.	DATE (YYYYMMDD)	
<input checked="" type="checkbox"/>	c. SOLICITATION OR OTHER NUMBER 56-9408-07	DUE DATE (YYYYMMDD)	c. FINAL <i>(Complete Item 5 in all cases)</i>		DATE (YYYYMMDD)	
4. IS THIS A FOLLOW-ON CONTRACT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under <u>N00173-00-C-2033</u> <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.						
5. IS THIS A FINAL DD FORM 254? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the classified material is authorized for the period of _____.						
6. CONTRACTOR <i>(Include Commercial and Government Entity (CAGE) Code)</i>						
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>			
FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD			N/A			
7. SUBCONTRACTOR						
a. NAME, ADDRESS, AND ZIP CODE		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>			
N/A			N/A			
B. ACTUAL PERFORMANCE						
a. LOCATION		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>			
N/A			N/A			
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT						
10. CONTRACTOR WILL REQUIRE ACCESS TO:						
	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY			<input checked="" type="checkbox"/>
b. RESTRICTED DATA		<input checked="" type="checkbox"/>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY			<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		<input checked="" type="checkbox"/>	
d. FORMERLY RESTRICTED DATA		<input checked="" type="checkbox"/>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE			<input checked="" type="checkbox"/>
e. INTELLIGENCE INFORMATION			e. PERFORM SERVICES ONLY			<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)		<input checked="" type="checkbox"/>	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES			<input checked="" type="checkbox"/>
(2) Non-SCI	<input checked="" type="checkbox"/>		g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER			<input checked="" type="checkbox"/>
f. SPECIAL ACCESS INFORMATION		<input checked="" type="checkbox"/>	h. REQUIRE A COMSEC ACCOUNT			<input checked="" type="checkbox"/>
g. NATO INFORMATION		<input checked="" type="checkbox"/>	i. HAVE TEMPEST REQUIREMENTS			<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION		<input checked="" type="checkbox"/>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS			<input checked="" type="checkbox"/>
i. LIMITED DISSEMINATION INFORMATION		<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE			<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION		<input checked="" type="checkbox"/>	l. OTHER <i>(Specify)</i>			
k. OTHER <i>(Specify)</i>						

12. **PUBLIC RELEASE.** Any information (*classified or unclassified*) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release Direct Through (*Specify*)

COMMANDING OFFICER, NAVAL RESEARCH LABORATORY, WASHINGTON, DC 20375-5320, CODE 5660

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)* for review.
 *In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. **SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (*Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.*)

Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a SECRET facility clearance, and personnel available with final DoD granted personnel security clearances commensurate with level of access required for performance of contract.

14. **ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. Yes No
 (*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.*)

15. **INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. Yes No
 (*If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.*)

16. **CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL VICKI CICALA	b. TITLE CONTRACTING OFFICER, SECURITY	c. TELEPHONE (<i>Include Area Code</i>) (202) 767-2240/2576
---	--	---

d. ADDRESS (*Include Zip Code*)
**NAVAL RESEARCH LABORATORY
 4555 OVERLOOK AVE. SW
 WASHINGTON, DC 20375-5320**

e. SIGNATURE


17. **REQUIRED DISTRIBUTION**

<input checked="" type="checkbox"/>	a. CONTRACTOR
<input type="checkbox"/>	b. SUBCONTRACTOR
<input checked="" type="checkbox"/>	c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR
<input type="checkbox"/>	d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION
<input type="checkbox"/>	e. ADMINISTRATIVE CONTRACTING OFFICER
<input checked="" type="checkbox"/>	f. OTHERS AS NECESSARY 1226.2, 5602, 5660

PERSONNEL QUALIFICATIONS

Note: A Bachelor or Master of Engineering degree is considered the same as a Bachelor or Master of Science in Engineering degree.

A. Senior Scientist: Individuals should have at least 15 years experience with optical sensor systems. Individuals must be recognized in the field of lens and lens coating materials, particularly for ultraviolet optics. Individuals must have demonstrated experience testing optical materials, analyzing test data and reporting results. Individuals should possess a PhD in a physical science or material engineering. A MS in a physical science or material engineering plus an additional 5 years of related experience may be substituted for the PhD.

B. Senior Physicist: Individuals should have at least 15 years experience in research and development of electronic and optical systems, including 6 years with IR and UV missile attack warning systems (MAWS) including UV and IR systems calibration, setup, and test. Specifically, individuals must have experience with the measurements of tactical missile signatures via remote data acquisition, and with digital image processing, to include writing computer programs and scripts for data reduction. Individuals are responsible for the design of remotely operated data acquisition systems for the collection of IR and UV signatures of backgrounds, flares, aircraft and dynamic and static firings of rocket motors. Individuals must be able to design, and implement at remote live fire ranges, optical, wireless and wired computer networks using TCP/IP and IPX protocols for remote control/networking of computers under MS-DOS and Windows. Individuals must also have experience with GPS and IRIG time and frequency processing and event time capture. Experience with computer hardware and software for precise time tagging and time capture of data files is required. Individuals should have a BS in Physics.

C. Physicist: Individuals should have at least 3 years experience in research and development of electronic systems, including three years with IR system setup, test, measurement, and data acquisition, reduction and analysis. Specifically, individuals must have experience with the design of computer algorithms to extract IR signature data, missile warning systems, missile signatures, and IR flare signatures. Individuals must have experience preparing and organizing data for input into models. Individuals must also have recent experience field -testing EO/IR systems for aircraft self defense, including test planning, instrumentation setup, test and calibration in the field and at NRL or other Government laboratory, test execution, data reduction, analysis, and report writing. Individuals should have a BS in Physics, or 5 additional years of experience.

D. Senior Systems Engineer: Individuals should have at least 10 years experience with Navy electronic warfare (EW) and infrared countermeasures (IRCM) systems, including 5 years recent experience in the research and development of directed infrared countermeasures (DIRCM) and/or other infrared and electro-optical systems and their integration with Navy aircraft EW systems. Individuals must have experience in the integration of EW systems into aircraft, common and cooperative design requirements, expendable countermeasures systems design, cooperative techniques and in simulation modeling of countermeasures systems. Individuals should have a MS in Systems Engineering or Systems Management. A BS in science or engineering plus an additional 3 years of EW related experience may be substituted for the MS.

E. Senior Software Engineer: Individuals should have at least 10 years of software development experience related to real time/near real time processing for tactical aircraft systems. This should include at least 5 years of recent experience developing embedded software in C for DIRCM and other Navy missile attack warning and infrared countermeasures systems. Experience should also include the development of software for communications interfaces between data communications and display equipment and instrumentation; programming of optical, missile, and off-board countermeasures models and simulations; running simulations such as DISAMS; and programming in MATLAB. Individuals must have demonstrated experience in identifying and integrating commercial off the shelf technology (COTS) at TRL 5 and higher into IRCM systems. Individuals should have a MS degree in electrical engineering or physics, or a BS degree in electrical engineering, or physics and 5 additional years experience.

F. Software Engineer: Individuals should have at least 5 years of software development experience related to the development of complex systems, and at least 3 years recent experience in object oriented requirements software. Individuals must be proficient in microcomputer-based data management system programming language and have a demonstrated understanding of top-level application program interface for object oriented Computer Aided Software Engineering (CASE) tools. Individuals must have experience in UNIX/LINUX, Windows NT, Windows integration, and with relational and object oriented databases. Individuals should have a BS degree in Engineering, Physics, Computer Science or Mathematics or 5 additional years experience.

G. Senior Engineer: Individuals should have at least 10 years of experience with the design and development of avionics systems. They must have recent experience in the analysis of embedded software design of missile warning and IRCM systems. Individuals must have recent experience in field-testing of EO/IR systems for aircraft self defense, including test planning, test system and instrumentation setup, test and calibration in the field and at NRL or other

Government laboratories, test execution, data reduction, analysis, and report writing. Individuals must have demonstrated experience in identifying and integrating commercial off the shelf technology (COTS) at TRL 5 and higher into IRCM systems. Individuals should have a BS in Physics, or Electrical or Mechanical Engineering. An additional 5 years of electronics design experience may be substituted for a BS.

H. Engineer: Individuals should have at least 5 years experience in the development, calibration, and employment of measurement systems. Individuals must have 2 years of recent experience in field-testing of EO/IR systems for aircraft self defense, including test planning, test execution, data reduction, analysis, and report writing. Individuals should have a BS in Physics or Electrical Engineering. An MS in Physics or Engineering may be substituted for 3 years of experience.

I. Junior Engineer: Individuals should have a BS in Physics or Electrical Engineering. Individuals must have recent experience in instrumenting computers for data acquisition, including test planning, test execution, data reduction, analysis, and report writing. Individuals will be required to assist in the development, calibration, and employment of measurement systems for use in field testing EO/IR systems for aircraft self defense. An additional 5 years of related experience may be substituted for the BS.

Note: "Should" means that the stated qualification is strongly desired but not mandatory. The degree to which proposed personnel satisfy such qualifications will influence scoring. "Must" indicates a mandatory requirement; failure to satisfy such a requirement will render the entire proposal unacceptable.

Technology Upgrades for InfraRed Countermeasures

Statement of Work

1.0 Background

The Naval Research Laboratory (NRL) Applied Optics Branch conducts a variety of research and development activities in optics supporting military aircraft and ship systems. Functions include both theoretical and experimental research, and the development of systems to solve tactical problems. Efforts comprise a broad technical scope including optical countermeasures systems, reconnaissance systems, tactical software for these systems, dual use (military/civil) photonics technology, infrared signatures, target detection algorithms, and system modeling.

2.0 Scope

The scope of the contract is to develop new technologies for InfraRed CounterMeasure (IRCM) systems that exploit the optical spectrum from infrared through ultraviolet to support Navy, tri-service and allied country requirements. The areas of technical investigation will be broad, but with emphasis on electro-optical and infrared (EO/IR) systems and techniques for countering missile threats to Naval aircraft. The specific objective of the program is to define a next generation system for protecting US Navy aircraft from infrared guided missile threats while upgrading and supporting critical components of current and candidate Naval IRCM systems during the transition to the new technology. Achieving this objective may involve investigations of phenomenology, the relevant technologies, and the means for implementing these technologies into countermeasure systems and the interoperability of these countermeasure systems with standard on-board Naval Aircraft Survivability Equipment (ASE). Integration with battlefield systems such as hostile fire indicators, laser warning receivers and cooperative countermeasure systems is required. The program will require both analytical and experimental efforts. The work will be performed at the contractor's site, at the Naval Research Laboratory (NRL), and at test sites in the US and in other countries as needed.

The classified portion of the work will be at the Secret level. The tasks include investigations into countermeasure techniques, assessment of devices used in countermeasures systems, and assessment of countermeasures systems performance. Factors such as reliability, maintainability, and cost will be assessed. Development of algorithms and software for target detection, clutter rejection, control software and data collection and analysis for these IRCM and

related systems will be required. Also, field testing of components and systems, field and laboratory measurements of target and background properties, and system performance modeling will also be required.

3.0 Tasks

3.1 Technology Assessment

3.1.1 Literature Review

The contractor shall conduct a review of the literature on countermeasure techniques, devices used in countermeasures systems, and countermeasures systems performance. The contractor shall examine systems and components at levels of development from Technology Readiness Level (TRL) 5 and higher (TRL Levels defined in Addendum). Factors such as reliability, maintainability, and cost shall also be examined in addition to performance capabilities. Information on algorithms and software for such tasks as target detection, clutter rejection, target tracking and control software for system functions shall also be reviewed. The available literature on field testing of components and systems, field and laboratory measurements of target and background properties, and system performance modeling shall be reviewed. This review shall be conducted for sources up to the Secret level of classification.

3.1.2 Countermeasure System Assessment

Based on the review of the literature, the contractor shall perform the following assessments.

3.1.2.1 Performance Limitations

The contractor shall identify the performance characteristics of the systems and components and provide a tabulation of those characteristics important for development of a next generation system. The contractor shall provide an assessment of the likelihood of how much the TRL would be improved from the programs planned or in progress.

3.1.2.2 Technology Needs

The contractor shall identify those technology areas that are not being addressed and provide an assessment of the impact on the eventual system if no work is done to improve those technologies.

3.1.2.3 Technology Development Plan

The contractor shall develop recommendations for technology development programs. The contractor shall identify goals for these programs that would yield technologies that would provide satisfactory performance levels.

3.1.3 Alternative technologies

The contractor shall examine alternatives to EO/IR systems that could be used to counter the threats. The contractor shall provide brief discussions of these alternatives, including their probable performance strengths and weaknesses as well as maturity levels.

3.2 Measurement Requirements

Based on the review of the literature, the contractor shall perform the following assessments.

3.2.1 Signature and Background Data Requirements

The contractor shall identify typical operating profiles for classes of Navy aircraft, such as the P-3C, C-130J and CH-46E, and the environmental conditions they are likely to encounter. The contractor shall then determine if there are any significant gaps or omissions in the signature and background data bases that would result in substantial uncertainties in the effectiveness of countermeasure systems. The contractor shall then develop a set of measurement requirements in a prioritized form that would fill the data gaps or omissions so that countermeasure performance can be fully assessed.

3.2.2 System and Component Measurement Requirements

The contractor shall identify IRCM system or component characteristics that are not well defined or inadequately measured such that the projections of system performance are not well quantified. The contractor shall then define a set of laboratory and field measurement requirements in a prioritized form that would provide adequate precision to the data so that more reliable projections of countermeasure performance can be made.

3.3 Measurement Program

3.3.1 Test Planning

The contractor shall develop test plans, identify special facilities and equipment required, identify test range requirements if needed, provide coordination with

other Government agencies, and identify any unique licensing requirements needed to support the tests. The contractor shall coordinate with other test participants and support organizations on any safety issues that must be addressed and for any training needed or special permits that must be obtained. The contractor shall develop a schedule of tasks that must be accomplished to allow the testing program to proceed without delays due to neglect of any requirements needed to allow the testing to proceed.

3.3.2 Instrumentation Support

The contractor shall develop control software for Windows and DOS based systems and integrate hardware to interface data communications and display equipment with measurement instrumentation. The contractor shall provide interfaces to users to enable remote control of Windows and DOS based systems via data link of the measurement instrumentation. The contractor shall also modify software and hardware and alter test instrumentation as necessary to meet on-site test requirements. The contractor will develop software to integrate GPS and IRIG timing with measurement instrumentation and to time-tag all relevant data.

3.3.3 Test Preparation and Conduct

The contractor shall support the measurement of infrared (IR), visible, and ultraviolet (UV) signatures of aircraft, missiles, flares, small arms, and other signatures relevant to the modeling of anti-aircraft missiles, and missile countermeasures (CM) including microwave/millimeter wave systems and integrated or interoperable battlefield technologies. The contractor shall also support the measurements of non-threat backgrounds to fulfill any identified data needs. The contractor shall plan tests, store and assemble the required instrumentation, calibrate and align the instruments, provide for shipment to the appropriate sites, assemble, test and calibrate the instruments, and support the field tests. The contractor will test and verify the networking capabilities, GPS and IRIG time-tagging functions and remote control functions of data acquisition computers prior to shipment to test sites. The measurements shall include spatial, spectral, and temporal data. The contractor shall be responsible for the on-site maintenance of the instrumentation used for the measurements, and for data security and transmittal. The contractor will conduct measurements at the White Sands Missile Range (WSMR), Tonopah Test Range (TTR), Naval Air Warfare Center-Weapons Division (NAWC/WD/CL) China Lake, Patuxent Naval Air Station, at the Naval Research Laboratory (NRL), and at other domestic and foreign sites as directed.

The contractor shall support necessary laboratory tests by participating in the laboratory setup process, and assisting in the measurements, data reduction and analysis.

The contractor shall modify, and integrate test hardware into test aircraft such as the P-3C, C-130J and the F/A18E/F. Integration shall include training of Government personnel to install, check out, and operate the equipment. The contractor shall also participate in flight tests. The contractor shall design and implement detector test systems and profiles, including missile warning stimulators (e.g. Baringa and Mallina), to determine developmental IR/EO/UV detector sensitivity, degradation with use, and overall reliability. The contractor shall integrate, calibrate, and maintain test instrumentation, develop test plans and associated documentation, perform tests and write test reports.

3.3.4 Data Reduction and Analysis

The contractor shall develop requirements to assess missile warning system performance, and on-board/off-board IRCM cooperative systems concept effectiveness, and to evaluate candidate Navy systems designs. The contractor shall identify equipment and facility requirements, and data requirements. The contractor shall design, assemble, implement and maintain data reduction and analysis equipment, software and tools.

3.3.5 Data Analysis

The contractor shall reduce, and analyze data gathered during the tests, prepare and organize data for input into models, and prepare reports on the tests. The contractor shall also write and present papers to professional measurement symposia. The contractor shall analyze data collected during tests of candidate common and cooperative missile countermeasures systems and estimate the life-cycle costs to evaluate the cost effectiveness of the systems. The evaluation shall include the ability of the systems to meet published operational requirements for candidate naval platforms and to meet other performance objectives.

3.4 Readiness Level Assessment

The contractor shall prepare a readiness level assessment using the NAVAIR standards. The contractor shall assemble the necessary data and reports required to support an independent review of the readiness level assessment.

3.4.1 Technology Roadmap

The contractor shall assess current and emerging technologies and concepts, which have application to this program development, and evaluate their potential for improving the approaches developed. The contractor shall evaluate these technologies and provide an estimate of the readiness level.

3.4.2 Test Recommendations

The contractor shall recommend and prepare related test and measurement plans required to implement the technical demonstrations needed to transition the systems concepts to the next stage of development.

3.5 Countermeasure System Definition

3.5.1 Capabilities Analysis

3.5.1.1 Modeling and Simulation

The contractor shall design optical models and shall program simulations, which shall run on contractor and NRL workstations, to test cooperative countermeasures designs. The models shall include atmospheric effects, sensor optics, and sensor spatial and temporal responses. The contractor shall develop models with MatLab, and shall optimize other computer code as directed. The contractor shall operate DISAMS, LOWTRAN, MODTRAN and other software simulations and hardware-in-the-loop simulators used at NRL. The contractor shall also operate contractor-developed simulations at its facilities. The contractor shall identify aircraft, ASE systems, countermeasures systems, and threat scenarios that need to be simulated. Using simulation results with other data, the contractor shall develop cooperative countermeasures systems performance requirements.

3.5.1.2 Capabilities Document

The contractor shall review existing capabilities documents, interface control documents, interface design documents, specifications and other requirements documentation that may exist and evaluate their adequacy for supporting development programs for IRCM systems. The contractor shall recommend any modifications that may be desirable in view of new threats, platforms, interfaces, functionalities and missions.

3.5.2 System Design

Based on the measurement results, simulation results, readiness levels, and capabilities required, the contractor shall develop candidate cooperative countermeasures systems architectures for military aircraft, including the F/A-18. They will be capable of designing and instrumenting ancillary test equipment, such as aircraft support pods. They will be achievable architectures that reflect the use of currently available or near-term feasible technologies.

3.5.2.1 Threat Detection System

The contractor shall evaluate the design of missile warning systems, including design improvements to current Navy MAWS such as the AAR-47 or candidate systems. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with other on-board defensive electronic countermeasures and expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of missile detection sensors, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.

3.5.2.2 Threat Countermeasure System

3.5.2.2.1 Jammer Evaluation

The contractor shall evaluate the design of IRCM systems, including design improvements to current Navy jammers such as Agile Eye and the ALQ-157. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with MAWS and expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of radiators, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.

3.5.2.2.2 Expendables Evaluation

The contractor shall evaluate the design of countermeasures expendables. The contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with on-board MAWS and jammer systems, and other expendable CM systems. The contractor shall provide scientific and engineering analyses and evaluation of radiators, antennas, optics and systems concepts to identify expendable architectures to meet future requirements.

3.5.2.2.3 Cooperative Countermeasures Analysis

The contractor shall analyze simulation results, and test data collected for tri-service on-board and off-board IRCM systems and MAWS to provide independent assessments of IRCM effectiveness, and to develop new cooperative techniques models for flares, expendable IR/EO/UV sources, and on-board IRCM systems.

3.5.3 Development Program Plan

The contractor shall develop a program plan, including technical planning and coordination, engineering investigations, program scheduling, tracking and analysis for on-board and off-board IR/EO/RF countermeasures systems in support of a System Development, and Demonstration program and a transition to a Production program. The contractor shall identify common and cooperative design requirements among multiple platforms, identify critical requirement differences and recommend component, assembly, sub-system, and interface designs to meet performance requirements, and to minimize design cost, weight, and power requirements. The contractor shall also assess software modularity for reuse and identify multi-system applicability.

Addendum:

TRL 9: Actual system “mission proven” through successful mission operations

TRL 8: Actual system completed and “mission qualified” through test and demonstration in an operational environment

TRL 7: System prototype demonstration in high-fidelity environment (parallel or shadow mode operation)

TRL 6: System/subsystem prototype demonstration in a relevant end-to-end environment

TRL 5: Module and/or subsystem validation in relevant environment

TRL 4: Module and/or subsystem validation in laboratory environment

TRL 3: Analytical and experimental critical function and/or characteristic proof-of-concept

TRL 2: Technology concept and/or application formulated

TRL 1: Basic principles observed and reported