

SOLICITATION, OFFER AND AWARD			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO	PAGE OF PAGES 1 91		
2. CONTRACT NO. N65236-03-D-5859		3. SOLICITATION NO. N65236-01-R-0851		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 25 Oct 2002		
7. ISSUED BY SPAWAR SYSTEMS CENTER CHARLESTON PO BOX 190022 A. CARTER 843-218-5932 CARTERA@ SPAWAR.NAVY.MIL NORTH CHARLESTON SC 29419-0022			CODE N65236	8. ADDRESS OFFER TO (If other than Item 7) See Item 7		CODE	TEL: FAX:	
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".								
SOLICITATION								
9. Sealed offers in original and <u>1</u> 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 <u>See Section L, Clause L-349</u> until <u>14 00</u> local time <u>29 Nov 2002</u> (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 ANGELA CARTER		B. TELEPHONE (Include area code) (NO COLLECT CALLS) 843-218-5932		C. E-MAIL ADDRESS angela.carter@navy.mil		
11. TABLE OF CONTENTS								
(X)	SEC.	DESCRIPTION		PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES				
X	A	SOLICITATION/ CONTRACT FORM		1	X	I	CONTRACT CLAUSES	80
X	B	SUPPLIES OR SERVICES AND PRICES/ COSTS		2	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS			
X	C	DESCRIPTION/ SPECS./ WORK STATEMENT		10	X	J	LIST OF ATTACHMENTS	91
X	D	PACKAGING AND MARKING		67	PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X	E	INSPECTION AND ACCEPTANCE		68	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS		
X	F	DELIVERIES OR PERFORMANCE		68				
X	G	CONTRACT ADMINISTRATION DATA		69	L	INSTRS., CONDS., AND NOTICES TO OFFERORS		
X	H	SPECIAL CONTRACT REQUIREMENTS		72	M	EVALUATION FACTORS FOR AWARD		
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 <u>150</u> 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 (See Section I, Clause No. 52.232-8)								
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):				AMENDMENT NO.	DATE	AMENDMENT NO.	DATE	
15A. NAME AND ADDRESS OF OFFEROR		CODE 5Z575	FACILITY		16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) GOVERNMENT REPRESENTATIVE			
		EAGAN, MCALLISTER ASSOCIATES INC 47332 EAGAN MCALLISTER LANE PO BOX 986 LEXINGTON PARK MD 20653						
15B. TELEPHONE NO (Include area code) 301-863-2192		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>			17. SIGNATURE		18. OFFER DATE	
AWARD (To be completed by Government)								
19. ACCEPTED AS TO ITEMS NUMBERED 0001 and 0002		20. AMOUNT \$9,651,725.41		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) 317		ITEM Section G		
24. ADMINISTERED BY (If other than Item 7) DCMA MARYLAND 217 EAST REDWOOD STREET SUITE 1800 BALTIMORE MD 21202-5299		CODE S2101A	25. PAYMENT WILL BE MADE BY DFAS-COLUMBUS CENTER P. O. BOX 182225 COLUMBUS OH 43218-2225		CODE HQ0338			
26. NAME OF CONTRACTING OFFICER (Type or print) ROBERT J. MEDDICK				27. UNITED STATES OF AMERICA (Signature of Contracting Officer)		28. AWARD DATE 8/7/2003		

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

The period of performance for the Base Year is **28 JULY 2003** through **27 JULY 2004**. See Clause F-303 for the option year information.

SECTION B Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0001	LOT I BASE YEAR - Engineering and CPFF - Technical Support Services.		

ESTIMATED COST _____ \$

FIXED FEE _____ \$

TOTAL ESTIMATED COST
PLUS FIXED FEE _____ \$9,651,725.41

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0002	LOT I - BASE YEAR - Contract Data In Accordance CPFF - with DD Form 1423, Exhibit A		NSP

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0003	LOT II - 1st OPTION YEAR - Engineering CPFF - and Technical Support Services.		

ESTIMATED COST _____ \$

FIXED FEE _____ \$

TOTAL ESTIMATED COST
PLUS FIXED FEE _____ \$9,761,873.90

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0004	LOT II - 1ST OPTION YEAR - Contract Data In CPFF - Accordance with DD Form 1423, Exhibit A.		

NSP

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0005	LOT III - 2ND OPTION YEAR - Engineering and CPFF - Technical Support Services.		

ESTIMATED COST	_____	\$
FIXED FEE	_____	\$
TOTAL ESTIMATED COST PLUS FIXED FEE		\$9,876,797.37

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0006	LOT III - 2ND OPTION YEAR - Contract Data In CPFF - Accordance with DD Form 1423, Exhibit A.		

NSP

ITEM NO	SUPPLIES/SERVICES	EST QUANTITY	UNIT
0007	LOT IV - 3rd OPTION YEAR - Engineering and CPFF - Technical Support Services.		

ESTIMATED COST	_____	\$
FIXED FEE	_____	\$
TOTAL ESTIMATED COST PLUS FIXED FEE		\$9,996,028.37

Total Estimated Direct Labor Hours	171,080	18,350	171,080	18,350	171,080	18,350	171,080	18,350	171,080	18,350
------------------------------------	---------	--------	---------	--------	---------	--------	---------	--------	---------	--------

The following other direct cost (ODC) items are estimated for each year:

ODC Item	Base Year	1 st Option Yr.	2 nd Option Yr.	3 rd Option Yr.	4 th Option Yr.
Travel	\$1,720,000.00	\$1,720,000.00	\$1,720,000.00	\$1,720,000.00	\$1,720,000.00
Material	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00	\$400,000.00
Equipment/Material Transportation	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00
Miscellaneous Subcontracting	\$175,000.00	\$175,000.00	\$175,000.00	\$175,000.00	\$175,000.00

B-314 MAXIMUM INDIRECT RATE CEILINGS

The Contractor and Subcontractor (if applicable) shall enter the maximum (ceiling) indirect rates in the form below, including overhead and G&A rates, which may be charged on any effort performed under this contract for indirect expenses. The capped rates provided in the proposal shall, for each contract period, be considered as the maximum reimbursable rate that can be used for each period. No upward adjustment of the stated indirect ceiling rates shall be allowed. (The cost element title shown on the chart below may be changed to reflect your estimating/accounting system entries.) The contractor shall invoice for the actual rate incurred or the capped rate shown below, whichever is less.

The indirect rate proposed below for Fringe ONLY may be subject to increases or decreases by the Contractor and Subcontractor (if applicable) in wages and fringe benefits to the extent that these increases or decreases are made to comply with the Service Contract Act, FAR 52.222-41, in accordance with the Fair Labor Standards Act FAR 52.222-44.

Cost Element	BASE	1 st Option	2 nd Option	3 rd Option	4 th Option
Fringe					
Overhead – On-site (Contractor’s Facility)					
Overhead- Gov’t site (SPAWAR Charleston)					
G&A					

***The Maximum Indirect Rate Ceilings proposed at the Prime and Subcontractor levels are herewith incorporated by reference.**

B-315 MAXIMUM LABOR RATE CEILINGS

The Contractor shall enter the straight time maximum (ceiling) direct labor rates proposed, in the form below which may be charged on any effort performed under this contract. The capped rates provided in the proposal shall, for each contract period, be considered as the maximum reimbursable rate that can be used for each period. No upward adjustment of the stated labor rates (I.E. ceiling) shall be allowed. The contractor shall invoice for the actual labor rate incurred or the capped labor rate shown below, whichever is less.

The chart below includes Professional Labor Categories and Service Contract Act (SCA) Covered Labor Categories. The caps on the wage determined labor categories covered by the SCA, may be subject to adjustments under the Fair Labor Standards Act, FAR 52.222-44, based on the incorporation of revised wage determinations at the time of option.

Labor Categories Straight Time Rt.	MAXIMUM RATES				
	BASE	1 st Option	2 nd Option	3 rd Option	4 th Option
Program Mgr.					
Lead Project Engineer					
Senior Computer Engineer					
Computer Engineer					
Senior Electronics Engineer					
Electronics/Electrical Engineer					
Mechanical Engineer					
Junior Engineer					
Senior Analyst					
Analyst					
Electronics Technician Supervisor					
Electronics Technician III					
Electronics Technician II					
Electronics Technician I					
Electronics Assembler					
Communications Trainer					
Senior Logistics Technician					
Logistics Technician					
Computer Data/Technical Library Specialist					
Supply Specialist					
Warehouse Specialist					
Laborer (Material Handling)					
Quality Assurance/Control Specialist					
Supervisory Drafter					
Drafter III					
Drafter I					
Computer Operator II					

Computer Operator I					
Technical Writer/Editor					

Subcontractor Capped Rates - The labor rates shown in the chart above shall apply to any proposed subcontractor rates, or the prime contractor shall propose an alternate capped rate for the subcontracted effort. The subcontracted effort shall be subject to the terms and conditions of this clause.

B-309 VAR FEE DETERMINATION AND PAYMENT (INDEFINITE DELIVERY TYPE CONTRACT) VARIATION

(a) Types of Delivery or Task Orders.

Both level-of-effort and completion type orders may be issued under this contract. The Request for Quotation issued for each delivery or task order will set forth the type of order deemed appropriate by the Government. If the Contractor disagrees with the Government’s assessment, the Ordering Officer and the contractor shall attempt to resolve the matter through the negotiation process. Failing this, the matter will be referred to the Contracting Officer. If necessary, a final decision shall be made in accordance with the FAR 52.233-1 “Disputes” clause. The Contracting Officer’s determination will govern the type of order, pending an appeal pursuant to the “Disputes” clause. The contractor will use his best efforts to work on the order until the dispute is resolved.

(b) Fixed Fee Pool.

The fixed fee pool consists of the total fixed fee of the contract AND includes the total fee to be paid to the prime contractor and all subcontractors. **SUBCONTRACTOR FEE WILL NOT BE BILLED AS A SEPARATE DIRECT COST ON THE VOUCHER SUBMITTED BY THE CONTRACTOR TO THE GOVERNMENT, BUT WILL BE PAID TO THE SUBCONTRACTOR BY THE PRIME CONTRACTOR FROM THE FEE BILLED FROM THE FIXED FEE POOL.**

(c) Computation of Fee.

The percentage of the fee applicable to orders will be the same as the percentage of the fee established in the contract. However the total fee paid under the contract for a year of performance will not exceed the total fixed fee amount for the current year of performance.

(d) Fee on Modifications to Term Type (Level-of-Effort) Delivery or Task Orders.

If the hours for a particular delivery or task order are insufficient to complete performance under the order, the government may elect to increase the hours by written modification. This increase in cost associated with the increase in hours will be fee bearing at the same percentage of fee established in the basic contract. If the hours prove to be in excess of that necessary to complete performance under this order, the government shall decrease the hours by written modification. The fee associated with the decrease in hours will be reduced by the percentage of fee established in the basic contract.

Estimated cost will be increased/decreased as applicable.

(e) Fee on Modifications to Completion Type Delivery or Task Orders.

If the task(s) required under a particular delivery or task order cannot be completed within the negotiated estimated cost (an overrun situation), the government may elect to increase the estimated cost to complete the effort with no additional fee allocation.

If the task(s) required under the order is completed and the cost is less than that negotiated (underrun), the contractor shall be entitled to full payment of the fixed fee specified in the order. Excess costs shall be deobligated by modification to the delivery order prior to contract closeout.

(f) Modifications to the Basic Contract.

If the contracting officer determines, for any reason, to adjust the contract amount or the estimated total hours, such adjustments shall be made by contract modification. Any increase will be fee bearing, except cost overruns on completion type orders, at the percentage of fee established in the basic contract.

The estimated cost of the contract may be increased by written modification, if required, due to cost overruns. This increase in cost is not fee bearing and no additional hours will be added to the total estimated hours under the contract.

(g) Payment of Fee.

The Government shall pay fixed fee to the contractor on each delivery order at the percentage rate of fee established in the basic contract subject to the contract's "Fixed Fee" clause, provided that the total of all such payments shall not exceed eighty-five percent (85%) of the fixed fee specified under each applicable delivery order, unless waived. In accordance with the provisions of paragraphs (d) and (e) of this clause, any balance of fixed fee shall be paid to the contractor, or any overpayment of fixed fee shall be repaid by the contractor, at the time of final payment.

Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the FAR 52.232-20 "Limitation of Cost" or FAR 52.232-22 "Limitation of Funds" clauses, either of which is incorporated herein by reference, shall apply to all individual delivery or task orders issued under this contract.

(h) Closeout.

Delivery or task orders will be closed out on an individual basis, upon agreement of final indirect rates for the period of performance of the applicable delivery or task order. The contractor shall forward the final voucher directly to the cognizant DCAA for final audit. DCAA will forward the voucher and the final audit to the cognizant ACO (see block 6 of the basic contract), who will process it for final payment and submit it to the paying office.

(End of clause)

B-312 MINIMUM AND MAXIMUM QUANTITIES

As referred to in paragraph (b) of the "Indefinite Quantity" clause of this contract, the contract minimum quantity is a total of \$ **\$50,000.00** worth of orders at the contract unit price(s). The maximum quantity is the total estimated amount of the contract. The maximum quantity is not to be exceeded without prior approval of the Procuring Contracting Officer.

Accounting Data for Minimum Guarantee:	
ACR:AA 97X4930-NH3S 000 77777 0 065236 2F 000000 B3190C011AAN	\$50,000.00
JOB Order # APTRSP3D04	DOC # N00039-03-WXHE587

SECTION C Descriptions and Specifications

This contract shall be performed in accordance with the following Statement Of Work:

1. GENERAL.

The Communication Systems Department is tasked by the Space and Naval Warfare Systems Command (SPAWAR), the Coast Guard, and the Military Sealift Command (MSC) to provide functions relative to assigned tasking for various C⁴ISR requirements, programs, and projects, as tasked by multiple Department of Defense (DOD) and other Agencies, during critical periods from system conception through system operation. As a full spectrum solution provider to the DOD community, it is necessary to provide for evolutionary integration of numerous new and existing shore-based and mobile C⁴ISR systems supporting multiple warfighting, manpower, and logistics missions for Navy, Joint coalition and allied forces commanders at all levels. Some of the present programs of the Communication Systems Department are as follows: Navy Modular Automated Communications System II (NAVMACS II); Navy Modular Automated Communications System II/Single Messaging Solution (NAVMACS II/SMS); Automated Digital Network System (ADNS); Shipboard LAN; Global Command and Control System - Maritime (GCCS-M); Naval Tactical Command Support System (NTCSS); Defense Message System (DMS); Navy Order Wire/Multi Circuit Patch Panel (NOW/MCPP); Officer In Tactical Command Information Exchange Subsystem (OTCIXS); Tactical Data Information Exchange Subsystem (TADIXS); Common User Digital Information Exchange Subsystem II (CUDIXS II); Fleet Message Exchange/Directory User Service Center (FMX/DUSC); Fleet Broadcast; High Speed Fleet Broadcast (HSFB); IT-21 Block Upgrades; Fleet Broadcast Keying System (FBKS); MARCEMP; NOVA; Personal Computer Message Terminal/Multi-Level Mail System (PCMT/MMS); Message Dissemination Terminal (MDT) Shore; Demand Assigned Multiple Access (DAMA); Digital Modular Radio (DMR); Marine Corp Van; NECC; and the MIUW Van.

- 1.1. **Purpose.** This contract is to provide the Communication Systems Department with the necessary engineering and technical support services required to augment Communication Systems Department program/project managers and engineers in development, test and evaluation, and life cycle support of communications related systems, subsystems and equipment.
 - 1.2. **Scope.** The contractor will provide engineering and technical support services to the Communication Systems Department, on various C⁴ISR requirements, programs and/or projects including the systems listed in paragraph 1 above. The C⁴ISR programs are communications, command and control systems and equipment, consisting of hardware and software elements in various stages of development. Supporting the systems in paragraph 1 will require applying recognized scientific and technical procedures to system engineering, software engineering, security engineering, test and evaluation, installation maintenance and site support, configuration management, quality assurance, logistics, material control, training, and program management functions.
 - 1.3. **Background.** SPAWAR, the Coast Guard, and MSC, have designated SPAWAR Systems Center, Charleston as the primary activity for providing C⁴ISR systems support.
- 2.0 **APPLICABLE DOCUMENTS.**
- 2.1 **Specification and Standards.** The Specifications and Standards listed in this Statement of Work (SOW) are supplied for a purpose of Guidance ONLY. Specifications, standards, and handbooks listed below shall be the latest revision in effect at the time of contract award.

SPECIFICATIONS**TITLE**

MIL-S-901	Shock Tests H.I. (High-Impact) Shipboard Machinery, Equipment, and Systems, Requirements For
MIL-D-23140	Drawing, Installation Control, For Electronic Equipment
MIL-DTL-24784	Manual, Technical, Equipment and Systems Content, Requirements for
MIL-P-24534	Planned Maintenance System; Development of Maintenance Requirement Cards, Maintenance Index Pages, and Associated Documentation

STANDARDS

ASME Y14.100	Engineering Drawing Practices
MIL-STD-167	Mechanical Vibrations of Shipboard Equipment
MIL-STD-961 (1)	Contents of the Data Item Description (DID)
IEEE/EIA 12207	Software Life Cycle Processes
MIL-STD-1399	Input/Output Interfaces Standard Digital Data, Navy Systems

HANDBOOKS

MIL-HDBK-217	Reliability Prediction of Electronic Equipment
MIL-HDBK-470	Designing and Developing Maintainable Products and Systems, Volume I and Volume II
MIL-HDBK-472	Maintainability Prediction
MIL-HDBK-29612	Military Training Programs Other Publications

INSTRUCTIONS

DoDI 500.2-R	Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition Programs
--------------	---

- 2.2 Availability of Documents.** Military Specifications may be obtained from the US Naval Publications and Forms Center. Commercial documents may be obtained from the organization issuing those documents.
- 2.3 Precedence of Documents.** When the requirements of the contract, this SOW or applicable subsidiary specification are in conflict, the following precedence shall apply.
- 2.3.1 Contract.** The contract shall have precedence over any specification.
- 2.3.2 Statement of Work.** This SOW shall have precedence over all specifications referenced therein. Any deviation from this SOW or from referenced specifications, where applicable, shall be specifically approved in writing by the contracting officer.
- 2.3.3 Referenced Specifications.** Any referenced specification shall have precedence over any subsidiary specifications referenced therein. All referenced specifications shall apply to the extent specified.

3.0 TECHNICAL REQUIREMENTS.

3.1 General. The contractor shall provide engineering and technical support in the following: system engineering, software engineering, security engineering, test and evaluation, installation maintenance and site support, configuration management, quality assurance, logistics, material control, training, and program management. Successful performance of this support will require knowledge of and experience with the following areas, systems, subsystems program and architectures including:

- a. Navy Modular Automated Communications System II (NAVMACS II) (AN/SYQ-7A/B(V))
- b. Navy Modular Automated Communications System II/Single Messaging Solution (NAVMACS II/SMS) (AN/SYQ-26(V) and AN/SYQ-28(V))
- c. Common User Digital Information Exchange Subsystem II (CUDIXS II)
- d. Defense Message System (DMS)
- e. NOVA
- f. Personal Computer Message Terminal (PCMT)
- g. Manual Relay Center Modernization Program (MARCEMP)
- h. Multi-Level Mail System (MMS)
- i. Message Dissemination Terminal (MDT)
- j. Fleet Message Exchange/Directory User Service Center (FMX/DUSC)
- k. Navy Order Wire (NOW)
- l. Fleet Broadcast Keying System (FBKS)
- m. Tactical Data Information Exchange Subsystem (TADIXS)
- n. Officer In Tactical Command Information Exchange Subsystem (OTCIXS) (ON-143 V6/14)
- o. Global Command and Control System - Maritime (GCCS-M)
- p. Naval Tactical Command Support System (NTCSS)
- q. Automated Digital Network System (ADNS)
- r. Integrated Shipboard Network System (ISNS)
- s. Tactical Integrated Digital System (TIDS)
- t. Ultra High Frequency Satellite Communications (UHF SATCOM)
- u. Fleet Broadcast (AN/SSR1)
- v. High Speed Fleet Broadcast (HSFB)
- w. Demand Assigned Multiple Access (DAMA)
- x. AN/WSC-3 (V)
- y. LST - 5D
- z. PSC - 5
- aa. Digital Modular Radio (DMR)
- bb. Super High Frequency Satellite Communications (SHF SATCOM)
- cc. Automated Digital Messaging System (ADMS)
- dd. Extremely High Frequency Satellite Communications (EHF SATCOM)
- ee. NECC (AN/USC-38(v) 1,2,3)
- ff. KG - 84A
- gg. KG - 84C
- hh. KIV-7
- ii. KWR - 46
- jj. KY - 58
- kk. USC - 43
- ll. KGV - 11
- mm. STU-III
- nn. STE

3.2 Task A: Systems Engineering Support.

Scope. The contractor shall provide system engineering support to Communication Systems Department, SPAWAR Systems Center Charleston in the support of various C⁴ISR requirements, programs and projects listed in paragraph

3.1. This will require scientific analytical and engineering efforts to transform operational needs into unique system performance parameters to improve system capabilities. Efforts include the items listed in the below subparagraphs.

3.2.1. Engineering Analysis. The contractor shall provide an engineering analysis which will assess the needs of the war-fighter. The analysis may be required on existing or new systems. Platform, system, or mission needs information may come from virtually any source including program sponsor, problem reports, feedback reports, logistics failure summaries, or IV&V testing. The steps of this analysis are outlined below. Note that the steps include a needs assessment, requirements analysis, feasibility analysis, systems requirements document, design/development analysis, technical analysis, market research and evaluation, engineering, and impact assessments.

3.2.1.1 Needs Assessment. The contractor shall provide services to evaluate the needs of the serviceman in a particular theater of C⁴ISR. The following evaluations are required for the needs assessment:

- a. Functionality - the existing or new system or component shall be evaluated as to its ability to meet basic or enhanced functional needs.
- b. Operability - the existing or new system or component shall be evaluated as to its ability to provide the simplest and most effective hardware and software interfaces for use by operators and administrators.
- c. Maintainability - the existing system or component shall be evaluated as to its ability to meet basic and/or enhanced maintenance and troubleshooting requirements.
- d. Documentation - the existing system or component documentation shall be evaluated as required to insure that user guidance is accurate, clear, concise, and properly written for a wide general audience.

Once the evaluation steps above are complete, a full and complete analysis shall be made for the elements evaluated in the above process.

The analysis shall give a historical frame of reference to help understand the existing system, and why change is necessary. The analysis shall include all pertinent technical considerations to validate the stated need. The analysis shall fully consider inputs of system users, administrators, maintainers, the ISEA, the SSA, or the system sponsor. The analysis shall be providing full documentation in report form, including recommendations and conclusions, of the needs assessment. The report shall be prepared and provided to the technical point of contact (POC) who established the contract task order in accordance with (IAW) CDRL A001.

3.2.1.2 Requirements Analysis. The contractor shall include examination of existing new requirements for existing or new systems. Requirement analyses shall be conducted as outlined below. They are intended to determine and study boundary conditions by which a particular system will be judged. In some cases, the validity of stated requirements and their applicability to a given system or component needs to be analyzed. The requirement analysis can only be performed successfully if the contractor is knowledgeable of the equipment, systems, procedures, architecture, and concepts of the systems and components listed in paragraph 3.1. The requirement analysis shall include the following elements:

- a. Identification - research to identify applicable requirements given in the mission and deployment of the given system or component.
- b. Adequacy - study of the applicability of existing requirements to current needs.
- c. Development - development of new requirements to model and describe new or modified systems.
- d. Documentation - development of requirements analysis reports IAW CDRL A001 to document the research and conclusions.

3.2.1.3 Feasibility Analysis. The contractor shall include the performance of technical studies and analyses to ascertain the cost and feasibility of implementing C⁴ISR systems engineering concepts. Additionally, these analyses shall include evaluating engineering based on the following elements:

- a. Technical Feasibility - analysis to determine if a solution may reasonably be implemented given the current level of technical and technological capability.
- b. Interoperability - analysis to determine if a solution can reasonably interface with all applicable C⁴ISR and communications systems.
- c. Schedule adherence - analysis to determine if a proposed solution can be implemented within the needed time frame.
- d. Manpower Availability - analysis to determine if sufficient manpower, currently available throughout the industrial/military community, is sufficient to implement the proposed solution.
- e. Logistic Supportability - analysis to determine if a proposed solution can be logistically supported over its given life span.
- f. Cost - analysis of the expected cost of the system or component from design to implementation.

Any written documentation of this analyses shall be in accordance with CDRL A001.

3.2.1.4 Design/Development Analysis. The contractor shall include technical design and software analyses in support of the development of various C⁴ISR requirements, programs or projects. These analyses shall consist of, but are not limited to:

- a. A technical record outlining the historical development of the system design.
- b. Development and evolution of virtual system representations for design/development analysis at varying levels of fidelity. Development and analysis of procedures and strategies to test virtual system representations to include formal DoD Verification, Validation, and Accreditation (VV&A) procedures.
- c. Design and fabrication of test aids for use in test and evaluation of systems or equipment. This may include existing (commercial or Government) test tools or software which is appropriate for use, or may be re-configured to accomplish the specified purpose.
- d. Definition of design inadequacies and alternatives.
- e. Design improvement alternative(s). (The analysis shall address trade-off and shall provide a recommended approach).
- f. System capabilities to meet design goals in an operational environment. This shall include identification of high-risk and of low-performance areas, definition of alternate design methods, and recommendation of design modifications.
- g. System capability to operate interactively with both existing and forthcoming systems. The contractor shall identify risks, alternatives, and modification recommendations.

Any written documentation of this analyses shall be in accordance with CDRL A001.

3.2.1.5 Technical Analysis. The contractor shall provide technical analysis and support services as needed during the system development or maintenance cycle. The contractor shall conduct in-depth analyses of proposed system enhancements, hardware and software trouble reports, associated system modification, hardware and software change requests, and changes to relate interface systems for potential impact on various C⁴ISR requirements, programs and projects and associated interface systems, subsystems, equipment, and software. Efforts shall include:

- a. Review and evaluate trouble reports and change requests for system, equipment and associated documentation and provide recommendations relative to feasibility and potential impact.
- b. Perform Impact assessments which analyze technical problems, or modifications, and their impact on various C⁴ISR requirements, programs or systems.
- c. Review and analyze current and future system operational and functional requirements.
- d. Evaluate existing systems and equipment relative to the capability to support these requirements and identify shortfalls.
- e. Evaluate system operability, reliability, and maintainability in the intended operational environment.
- f. Evaluate system interoperability with other C⁴ISR systems or associated interface systems, equipment, and software.
- g. Evaluate the maintenance support philosophy and requirements.

- h. Draft and update preliminary System Level Design and Development Specifications
- i. Develop alternative engineering solution to these requirements taking into account technical, hardware, software, firmware, operational requirements, and constraints. As a result of research and analysis, the contractor shall rank the order of proposed alternative solutions, with complete justification.

Any written documentation of this analyses shall be in accordance with CDRL A001.

3.2.1.6 Market Research and Evaluation. The contractor shall conduct a market search and perform an evaluation of commercial and/or military products (hardware or software) for use within the support of various C⁴ISR requirements, programs and projects or associated interface programs. The contractor shall prepare a technical report in accordance with CDRL A001. The report shall accomplish the following:

- a. Identification - identify existing commercial and military products that accomplish the desired function, or may be made to accomplish the function, with additional work.
- b. Analysis - provide analysis of each candidate's abilities to meet system requirements.
- c. Comparison - provide comparative analysis of each candidate and weigh systems pro's and con's.
- d. Documentation - identify and define the product's salient technical and physical features, possible operational applications within C⁴ISR systems, existing hardware/software or system impacts, estimated implementation costs, similar products available from other sources, and the recommended use of the product and/or alternative approaches.

3.2.1.7 Engineering. The contractor shall provide engineering studies as required for development or modification of the systems. These engineering studies and/or analyses shall include, but not be limited to, the following categories:

- a. Electronic - development or modification of electronic circuits, for the express purpose of meeting a design requirement.
- b. Electrical - development or modification of electrical power systems for the express purpose of meeting design requirements.
- c. Optical - development of circuits or components which utilize optical devices for the purpose of meeting design requirements.
- d. Ergonomic - development of fixtures, mounts, and brackets that provide for ergonomic integrity of the system.
- e. Safety - development of circuits, fixtures, covers, brackets, or any component or part that enhances the safety of the system.
- f. Mechanical - development of mechanical devices which are critical to operation, maintenance, or implementation of the system as required to meet design requirements.

Any written documentation of this analyses shall be in accordance with CDRL A001.

3.2.2. Technical Specification Development. The contractor shall review, analyze, prepare and revise SPAWAR Systems Center Charleston specifications and technical standards. Also update hardware, software and system requirement specifications, and/or provide a review report to the government in the accordance with CDRL A001 as defined by the task/delivery order. Additionally, develop and update technical standards for installation, maintenance, and certification of fleet communication systems.

3.2.3 Hardware Design Development and Integration. The contractor shall provide hardware engineering and technical support in the design, development, fabrication, assembly, integration, and test and evaluation of system, hardware and components for C⁴ISR and related interface systems applications.

3.2.4 System Design Reviews. The contractor shall provide technical comments and recommendations to C⁴ISR Division program and project manager at Program Design Reviews, Status Reviews, Management Reviews and adhoc Program Technical Meetings such as:

- a. Preliminary Design Review (PDR)
- b. System Requirements Review (SRR)
- c. Critical Design Review (CDR)
- d. Test Readiness Reviews (TRR)
- e. Technical Meetings
- f. Program/Project Status Review Meetings

3.2.5 Design Development Engineering. The contractor shall include technical design and engineering functions necessary to transfer a systems operational and/or functional need into a system enhancement through design modification or new design of the systems hardware and/or software.

This includes all engineering activities relative to the design, development, fabrication, and integration of hardware and software configuration items being developed by the Communication Systems Department, as specified by the task/delivery order, with respect to new systems under development or existing systems undergoing modification. These include efforts relative to any tasked C⁴ISR system and associated interface. The contractor shall also analyze emergent new technology system/equipment designs for potential application. Efforts shall include:

- a. Review of requirement documents and specifications to ascertain design goals and objectives established during system concept formulation.
- b. Evaluation of the system capability to meet the design goals and objectives in an operational environment.
- c. Evaluation of the systems interpretability capabilities with current and future system, subsystems, equipment and software.
- d. Analysis of design specifications to identify area requiring improvement.
- e. Performing laboratory tests on various C⁴ISR requirements, systems, or associated interface system equipment and software.
- f. Design, develop, fabricate, and test hardware and/or software configuration items including: coding, debugging, unit testing and integration of software patches, modules and programs.
- g. Review of hardware and software development efforts and documentation performed by contractors under other government contracts.
- h. Providing technical and engineering expertise to the government program/project technical representatives at design reviews, conferences, and technical meetings.

Any written documentation of this analyses shall be in accordance with CDRL A001.

3.2.6 Data Reviews. The contractor shall review all technical, logistic, program, and other data delivered under this prime contract when development of various C⁴ISR requirements, programs or systems and associated interface system necessitates an equipment contractor. Evaluate equipment contract deliverables relative to the equipment contractual requirements both as to format and technical substance. Provide a report of this evaluation IAW CDRL A001, including a list of deficiencies and recommendations to designated Government personnel. The contractor shall also review equipment contractor deliverables for overall program effectiveness.

3.2.7 Prototype Development. The contractor shall develop hardware prototypes such as circuit boards, chassis, electronic devices, fixtures, racks, brackets, slides, cables, connectors, or any device required in the specific task/delivery order. The Prototype development will be fully documented and all documentation shall include engineering drawings and schematics (CDRL_A002), reports (CDRL A001), operational and maintenance instructions (CDRL A003), administration manuals, and data related to parts (CDRL A004).

3.2.8 Testing. The contractor shall perform, or assist in performance of, testing required to validate the engineering design, or engineering change to an existing design in accordance with NAVSEA specifications. Testing may be accomplished at any point in the design cycle, as needed to validate development efforts. Additionally, testing may be accomplished to verify the occurrence of failures or degradation of system components. Testing may include, but is not limited to, the following:

- (1) Shock (Examples of shock testing may be found in MIL-S-901)
- (2) Vibration (Examples of vibration testing may be found in MIL-STD-167)
- (3) Temperature
- (4) Humidity
- (5) Electromagnetic Susceptibility
- (6) Power
- (7) Noise
- (8) Materials and processes
- (9) TEMPEST
- (10) Explosive Atmosphere
- (11) Ships Motion & Attitude
- (12) Operational Testing

Testing shall be conducted and reported in accordance with CDRL's A005 (Test Plans) and A006 (Test Reports).

3.2.9 Engineering Drawings. The contractor shall generate, or support the generation of detailed Engineering Drawings. Examples of standard engineering drawing format and content may be found in ASME Y14.100 and MIL-D-23140. These drawings may contain system level information such as in Installation Control Drawings (ICD's), or more detailed component level information. Drawings generated will be in conformance with standards referenced herein, or alternate standards, as provided by the Government sponsor. Drawings generated will be in a format compatible with, or convertible to, AutoCAD 2000. Drawings generated on behalf of the Government shall become the property of the government activity for which the service was provided.

3.2.10 Deliverable Products. Any products generated during any work of Task A shall become the property of the government activity for which the service was provided. The contractor shall develop, provide, and/or review the following supporting documents, as defined by the task/delivery order, SOW and CDRL Items as indicated.

	<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a.	Technical Reports	A001
b.	Engineering Drawings	A002
c.	Operational and Maintenance Instructions	A003
d.	Parts Data List	A004
e.	Test Plans	A005
f.	Test Reports	A006

3.3 Task B: Software Engineering.

Scope. The contractor shall analyze, design, develop, test, evaluate, verify, validate, and deliver software related to secure and non-secure tactical, non-tactical, simulation, embedded computer systems, and networks. The programming languages and operating systems that must be addressed in this effort shall include but are not limited to SCO, UNIX, C, C++, Windows NT, Windows 2000, LINUX, and VX Works.

3.3.1 Software Design, Development and Integration. The contractor shall have demonstrated expertise in multiple different languages including but not limited to the following software languages: C, C++, Windows NT, Windows 2000, Linux and VMS. The contractor shall provide software engineering and technical support in the design, development, integration, and test and evaluation of various existing and future C⁴ISR systems and associated interface systems, subsystems, equipment, and software using the guidelines of IEEE/EIA 12207 and J-STD-016. The contractor shall have experience in operating in a real-time environment on real-time operating systems.

3.3.2. IT System Analysis. Through IT system analysis the contractor shall define the following: the purpose, background, and intent of the system and its functional requirements; the dependencies among functions and tasks, and logical or mathematical descriptions of each function or both. Define the user's needs, including timing of development, data types and processing needs, communication requirements, report formats, level of user

friendliness, response time, off-the-shelf software requirements, security requirements, and system constraints. A recommended Plan of Action and Milestones (POA&M) outlining the tasks to be accomplished shall be provided IAW CDRL A001. The contractor shall also provide plans for the system, and a detailed cost-benefit analysis of the hardware, software, personnel, leased lines, and maintenance costs. Provide a technical report and installation engineering plan summarizing the research of the tasks above IAW CDRL A001.

3.3.3 System Software Design and Maintenance. The contractor shall participate in system software design in which each system's functional and performance requirements, as it relates to specific mission oriented functional requirements, shall be defined. Develop preliminary system design, and evaluate the system's capability to meet design goals and to integrate with existing or planned systems. Audit trails, transaction logging and recovery, definition of failure and error recovery requirements and capabilities, and a cost benefit analysis shall be conducted. The overall software system specifications shall include a detailed functional summary for each module, data input, screen formats for each input function, input data sources, processing requirements, outputs, interface requirements, data flow, and proposed programming languages. The system database specification shall include: organization of the database by record structure, field tables, storage requirements, and record linkages. The system program specifications shall include: a description of the functions and purposes of each module, accuracy and validity requirements, timing, flexibility, interface, and security requirements, and inputs and outputs. The contractor shall participate in the design review meetings, technical reviews, and conferences and presentations to provide system design expertise. Provide IT system specifications, technical reports, and hardware and software documentation following the standards referenced in summarizing the research. In addition, maintain software of deployed systems by analyzing trouble reports, developing, and testing software to correct problems. Two specific tasks are identified as follows:

- a. **Software Test Services.** The contractor shall perform software test services and develop test plans and procedures for formal testing. Organizational responsibilities for conducting and coordinating the test including contractor, government, and other agency requirements shall be identified, and formal tests shall be conducted by individuals other than those who developed the software or system. Provide test plans/procedures and test reports summarizing the research of the tasks, as described above (CDRL A005, A006).
- b. **Independent Verification and Validation (IV&V).** The contractor shall provide Independent Verification and Validation (IV&V) of software, software documentation, software products, and work performed by contractors under other government contracts software quality assurance programs. Review, analyze, test and evaluate the results of third party contractors for IV&V activities and provide a detailed report relative to their effectiveness (CDRL A001).

3.3.4 Network Planning Services. Assess network requirements and perform planning analysis. This analysis will include feasibility studies to define the purpose and objectives of the proposed network, the scope of the applications systems involved, the geographical locations that will be interconnected, and the associated costs of and recommendations on the overall feasibility of the network. Provide network maps identifying the geographic scope of the network and all application systems at each location, and the required protocols, traffic volumes, and response times. Establish security control requirements and back-up procedures to protect against errors, disruptions, and breaches of security. Provide technical reports defining the purpose and objectives of the proposed network (CDRL A001).

3.3.5 Software System Management. The contractor shall provide technical comments and recommendations for software system management of processing, database, file, and network system including suggestions for enhancements, report generation, data entry, and program support. Provide technical support for the evaluation, procurement, installation, and testing of all systems. Computer-aided design and engineering services as well as computer graphics generation support shall also be provided. Provide technical reports summarizing the research of the tasks above (CDRL A001).

3.3.6 Network Design Services. The contractor shall furnish network design engineering services and identify alternate network configurations. Evaluate each configuration to determine the required line controls and modes of operation and develop a cost and benefit analysis. Analyze software and protocol requirements taking into

consideration any current configuration constraints, the host computer, software, database management systems, other software programs in the network, and software diagnostics and maintenance parameters. Study the network hardware requirements using analysis methods such as computer modeling and simulation. Provide technical reports summarizing the research of the tasks above IAW CDRL A001.

3.3.7 System Communications and Protocols. The contractor shall provide services to analyze, test, develop and document communications interfaces to a system or sub-system. As such, services to develop an Interface Requirements Specification (IRS), following the guidelines of CDRL A007, shall be provided. Additionally, in performing software development, testing or analysis, the contractor shall specify and allocate the user's requirements to interface the existing and planned host end user computer equipment with the following communications protocols (CDRL A007):

- a. Record Message Traffic
 - Mode 1 interfaces to MDT, NOVA, and legacy systems
 - RIXT interfaces to LDMX, PCMT, and legacy systems
 - CUDIXS (and fleet broadcast) for mobile systems
 - Asynchronous interfaces (XON/XOFF) to the above systems
 - Interfaces to backside devices including AMP (ethernet), asynchronous TTY, kermit, and direct file transfer methods (NFS, FTP, HTML)
 - X.400 series protocols
 - X.500 series directory services
 - DoD-specific protocols for extending X.400 networks to mobile systems

- b. Tactical Message Traffic
 - Broadcast networks
 - IDS-8648 network (OTCIXS, TADIXS-A, SSIKS) protocols
 - HF e-mail implementation
 - HF/UHF VP Broadcast implementation
 - Point-to-point networks
 - JOTS-LAN protocols
 - TTY (JOTS and orderwire) implementations
 - HF/UHF CRATT protocols

- c. Network Infrastructure
 - TCP/IP networks
 - HDLC-based networks
 - Dialup access to networks
 - Routing protocols and management (to include RIP, OSPF, MOSPF, IGRP, and BGP)
 - ISDN dialup networks
 - Switched-56, T-1, and other "dedicated" networks
 - ATM networks
 - Emerging network technologies (SONET, etc.)
 - Gigabit Ethernet
 - IPV-6

3.3.8 CSCI Development Plan. The contractor shall define the Computer Software Configuration Item (CSCI) based on the system functional requirements. As such, analysis, development, or modification of a set of software requirement specifications (CDRL A008) shall be provided. This documentation shall be provided to the COR/project engineer for acceptance / review, and will establish a baseline for the software development process. A software development plan shall be developed (CDRL A009) for the COR/project engineer review including availability of non-developmental software items applicable to the system. The plan will include a description of the software testing activities and use of a software development library for the control of all sources codes and associated documentation.

3.3.9. CSCI Design. The contractor shall design, construct, test, and integrate the CSCI with adequate documentation to include their interfaces with hardware configuration items and other system software as defined in IEEE/EIA 12207.

3.3.10. CSCI Reports. The contractor shall maintain cost and schedule forecasts, analyses, and report to at least the CSCI level. These reports shall indicate the predicted versus actual progress and include budgeted versus actual expenditures (CDRL A001).

3.3.11. Communications Circuit Card. The contractor shall provide design and maintenance services for a PCI based serial communications card which can be utilized to provide I/O resources for intercommunication between a variety of military systems. The contractor shall provide services to analyze the processing resources of this software-driven circuit card assembly and the host end user computer equipment to assure the proper end-to-end data transmission, link control, security, and synchronization of the communication protocol interface ports.

3.3.12. System Testing. The contractor shall perform overall testing of paragraph 3.1 system software, as part of the Quality Assurance process. Included in this effort shall be testing on the system configuration / configurations which are representative of planned fleet or shore installations. This testing shall take into account, to the greatest degree possible, interconnections with external shipboard or shore based systems, to insure that the system works properly in an end-to-end environment.

3.3.13. System Integration Support. The contractor shall perform systems hardware and software integration and testing to ensure total operational and functional compatibility with interfacing/interacting systems, subsystems, equipment, and computer programs. Efforts which may be required include:

- a. Review of system and associated interface requirements specifications for potential impact.
- b. Review of system hardware and software performance characteristics.
- c. Development and update detailed system integration plans, procedures, design drawings, schematics, diagrams, and interface definitions.
- d. Installation and check-out of system software.
- e. Draft, review, and update of system installation and check-out procedures.

3.3.14. Deliverable Products. Any products generated during any work of Task B shall become the property of the government activity for which the service was provided. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order, this SOW and CDRL Items as indicated.

	<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a.	Technical Reports	A001
b.	Engineering Drawings	A002
c.	Test Plans	A005
d.	Test Reports	A006
e.	Interface Requirements Specification (IRS)	A007
f.	Software Requirements Specification (SRS)	A008
g.	Software Development Plan (SDP)	A009

3.4 Task C: Security Engineering.

Scope. The contractor shall address computer security issues from initial concept development throughout the system life-cycle of paragraph 3.1 systems. The contractor shall follow guidelines set forth by SPAWAR's GCCS-M initiative.

3.4.1. Computer Security Requirements Analyses. The contractor shall provide inputs to the Computer Security Accreditation Plan (CSAP). The CSAP shall outline the system certification and accreditation plan using the guidelines of DOD-STD-5200.28-STD, and it shall contain an analysis of the expected operational risks. Develop a

Certification Test and Evaluation (CT&E) Plan and Test Report that traces security-related requirements from the initial specifications to system and network implementation. All classes of network systems require a formal design model and systems designated B2 or higher require a separate verification plan. Develop detailed Contingency Plans that identify alternative operational plans for each system and network for which disruption of service would have a critical impact on mission accomplishment. Provide inputs to Certification and Accreditation Packages. Provide System Security Operating Procedures (SSOPs). Provide technical reports summarizing the research of the tasks stated above IAW CDRL A001. These deliverables comprise the whole of the security certification and accreditation packages for a single system/program. More than one system/program is required to be supported.

3.4.2. Network Security Requirements Analyses. The contractor shall review the network system architecture, concept of operations, and security environment to identify system vulnerabilities. Estimate the level of trust required by the network system. Based on this estimation, identify specific security features required by the network system to achieve the estimated level of trust and to offset known vulnerabilities. Test the final system security features and countermeasures against all applicable security checklists, such as the DII Security Checklist. Provide technical reports summarizing the research of the tasks above. Results of the checklist testing are to be provided in the CT&E Test Report and other documents, where applicable. Other documentation deliverables may include a Vulnerability Analysis and inputs to the CSAP. Analysis supporting model and simulation results shall be available for government review.

3.4.3 Risk Management Services. The contractor shall provide technical services to include Methods I and II Risk Assessments, Security Test and Evaluations (ST&Es), and computer security reviews for secure and non-secure, tactical and non-tactical computer systems and networks. Risk Assessments shall identify and validate threats, risks, and additional countermeasures required. Examples of Risk Assessments may be found in OPNAVINST 5239.1A. Prepare technical reports summarizing the results of the above efforts IAW CDRL A001. Final on-site operational Risk Assessments are required as part of the ST&E Report. The contractor shall use an automated risk assessment tool. However, a copy of the tool shall become the property of the activity for which the service requiring use of the tool was provided.

3.4.4. Security Test and Evaluations. The contractor shall provide technical services to support the development of ST&E Plans IAW CDRL A005 and Test Reports IAW CDRL_A006. Conduct on-site operational surveys. Identify network system vulnerabilities and associated in-place countermeasures from risk assessments and site-specific documentation. Develop comprehensive plan to reduce or protect against a vulnerability and develop specific pass/fail criteria for each effectiveness test. The contractor shall use automated ST&E tools. However, a copy of the tool shall become the property of the activity for which the service requiring use of the tool was provided. Documentation deliverables may include ST&E Plans and ST&E Reports for more than one site. Analysis supporting models and simulation results shall be available for government review.

3.4.5. Deliverables and Schedules. The contractor shall submit technical reports (CDRL A001)_related to Task C. The contractor shall submit required certification and accreditation documentation for each system/program related to Task C.

	<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a.	Technical Reports	A001
b.	Test Plans	A005
c.	Test Reports	A006

3.5 Task D: Test and Evaluation.

Scope. The contractor shall provide the technical expertise to conduct a thorough test and evaluation of all operational, functional and performance aspects of newly designed or modified systems, equipment or computer software of paragraph 3.1 systems. The contractor shall participate in test and evaluation program by preparing or

reviewing test and evaluation plans and procedures or both. Test program support services shall include the witnessing of specified in-plant tests, reducing services, and evaluation of test data. The contractor shall conduct laboratory and field tests at SPAWAR Systems Center Charleston and Joint Interoperability Test Command (JITC) Indian Head, Maryland, at other designated government facilities, and aboard ship. This effort may require the development of installation plans, the design and fabrication of test fixtures, and installation and maintenance of the equipment during the testing process. Other efforts, which may be required, include:

- a. Draft, review, and update Test and Evaluation Master Plans (TEMPS).
- b. Define system test and evaluation requirements as specified in requirements documents.
- c. Develop, review, and update program/project test plans, test specifications, and test procedures documentation.
- d. Provide technical support to program/project engineers at T&E technical reviews, test readiness reviews (TRRs), operational test readiness reviews (OTRRs) and technical meetings.
- e. Conduct system testing in accordance with approved system test procedures and provide a detailed test report upon completion.

3.5.1. Test Specifications, Plans, and Procedures. The contractor shall develop and/or review system/equipment inspection and acceptance test plans, procedures and specifications; prepare test requirements documentation for various programs and projects and systems, subsystems, equipment and software to ensure comprehensive verification of capabilities; review test plans, procedures, and specifications to ensure compliance with necessary requirements; and review vendor supplied test plans, procedures, and specifications for technical accuracy and adequacy, and report findings.

3.5.1.1 Test Plans/Procedures. The contractor shall prepare plans/procedures for testing and evaluating the various specified projects, programs, systems, subsystems, equipment and software IAW CDRL A005. The plan shall clearly define the objectives of the test, the procedures that must be carried out by the test team to meet these objectives, and the pass/fail criteria for the test. The test plan shall include:

- a. Test title
- b. Test objectives
- c. Unit(s) to be tested
- d. Test equipment required
- e. Fleet and outside services required (if any)
- f. Staff manpower required
- g. Test duration
- h. Number of times each test is to be performed
- i. Detailed test procedures and pass/fail criteria
- j. Test data sheets
- k. References

3.5.1.2. Test and Evaluation Plans. The contractor shall develop and / or provide technical inputs to Test and Evaluations Master Plans (TEMPS) for various projects and systems, subsystems, equipment, and software. TEMP modification or development shall be in accordance with the specifications of DoDI 5000.2-R. The contractor shall collect technical information from SPAWAR, from Operations Test and Evaluations Forces, and appropriate laboratories and field activities. The contractor shall integrate comments and recommendations provided during the internal SPAWAR review cycle of the initial draft and/or revision. The contractor shall further integrate comments and recommendations resulting from the formal OPEVAL and/or CNO review and shall prepare documentation to be submitted for review.

3.5.2. Engineering and Technical Support. The contractor shall provide engineering and technical support to program/project engineers in the test and evaluation of various projects, programs, or systems and associated interface systems, subsystems, equipment or software following approved test plans and procedures. Specifically, the contractor shall:

- a. Support/conduct functional testing as required to obtain certification and authorization for fielding.

- b. Conduct test in accordance with the applicable approved Test Plan and Procedures.
- c. Design and fabricate test aids as necessary for use in testing and evaluation of the specified system or equipment.

3.5.3. Test Bed Design and Development Services. The contractor shall support the evaluation of various projects, programs and related systems that require advance development of models and systems, laboratory test efforts to evaluate alternate design considerations, or data upon which to base a decision. The emphasis will be on providing a test facility to evaluate system/subsystem performance as well as conduct overall system integration testing of proposed development models. The contractor shall prepare and maintain (update) test bed and implementation plans that shall include task definition and schedules for design, development, fabrication, equipment installation, and test efforts associated with the test bed. The contractor shall provide services to support the project engineer in preparing the following:

- a. Lists of equipment and material with associated space and weight characteristics.
- b. Facility requirements definition documents.
- c. Installation drawings.
- d. General test plans.

3.5.4. Test Reports. The contractor shall prepare detailed test reports IAW CDRL A006, documenting the test and evaluation activities conducted to verify the effectiveness and suitability (including compatibility, interoperability, reliability, maintainability, and ILS requirements) for specified systems, equipment, and/or software. These reports shall include all data collected during the performance of T&E efforts relative to: the measurement and analysis of system and/or equipment design compliance with government specification for technical and operational performance. Test reports shall be prepared in sufficient depth to permit technical risk assessment, determination of program progress, early identification of technological and engineering deficiencies, and (where applicable) to support the certification of system/equipment readiness for operation evaluation or direct fleet introduction.

3.5.5 Deliverable Products. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order.

<u>DESCRIPTION</u>	<u>CDRL</u>
a. Test Plan/Procedures	A005
b. Test Report	A006

3.6 Task E: Installation, Maintenance and Site Support.

Scope. The Communication Systems Department maintains a permanent NAVMACS, C⁴ISR laboratory test bed utilized for both hardware and software test and evaluation, new technology analyses, and the evaluation of integration efforts. The contractor shall support the Communication Systems Department in the integration of equipment and components into completely tested and validated for various C⁴ISR projects, programs or systems such as, but not limited to those listed in paragraph 3.1 in accordance with the system integration and test plans. The contractor shall prepare system integration and test plans and SOVT procedures for government approval. Plans shall document all requirements for integration and test facilities, support systems, instrumentation and logistic support. The contractor shall provide technical and engineering services to install equipment; conduct integration testing; resolve interface problems; analyze other technical problems discovered during testing; correct deficiencies in hardware, software and documentation; and ensure the continuous updating of configuration baseline. In addition, the contractor shall:

3.6.1. Installation Support. The contractor shall provide hardware and software installation and integration support to the Communication Systems Department for various C⁴ISR projects, programs or systems, subsystem and

equipment programs. The contractor shall develop installation and integration plans, drawings, and procedures, and shall conduct installation and integration testing in accordance with Government approved plans and procedures.

3.6.2. Installation Planning. The contractor shall provide installation planning support for Communication Systems Department Laboratories C⁴ISR mobile and fixed sites located throughout the world. The contractor shall review/develop applicable facility and equipment drawings and specifications, perform site surveys, and develop installation plans, specification and procedures. Examples of drawing formats and content may be found in ASME Y14.100.

3.6.3. Technical/Operational Transition Support. The contractor shall provide transition support to various C⁴ISR projects, programs or systems and related systems, subsystems, and equipment. This support shall include the development and/or review of operational plans and procedures, development of contingency plans and procedures, technical conversion of software and hardware, and development of unique interface requirements. The contractor shall ensure that system requirements are operationally, functionally and physically consistent with the systems, equipment, software and facilities with which it interfaces.

3.6.4. Installation Technical Support. The contractor shall provide engineering and technical support services associated with the maintenance, fabrication, installation, and integration to various C⁴ISR projects, programs or systems and associated interface systems, subsystems, equipment and software.

3.6.4.1. Installation. The contractor shall provide the personnel resources, equipment, and materials necessary to maintain and repair various C⁴ISR systems and associated interface systems, subsystems, equipment and software during system/equipment/software installation at the SPAWAR Systems Center Charleston laboratories, fleet units, shore sites and mobile units throughout the world, as directed by the applicable task/delivery order. These efforts shall include:

- a. Conduct of site surveys/ship checks.
- b. Development/review of site installation plans and schedules.
- c. Review/development Installation Design Package (IDP) (CDRL A010)
- d. Review/development of site Base Electronic System Engineering Plans (BESEP) IAW CDRL A011.
- e. Equipment testing, packing/unpacking, movement and emplacement.
- f. Fabrication and assembly of equipment rack cabling and mounting hardware.
- g. Integration and testing of equipment and racks.
- h. Design, fabrication, installation, and testing of interface intercommunication, e.g., cable construction, etc.
- i. Provide materials in support of this effort.
- j. Design, construct, test and install unique cable harnesses.
- k. Preparing and performing system installation, check-outs, and formal SOVTs (IAW CDRL A012).
- l. Preparing as-built or modification plans/drawings (IAW CDRL A002).
- m. Preparing report of site installation results. (IAW CDRL A001)
- n. Preparing Equipment Facilities Requirements document for Fleet Training Centers using the guidelines of OPNAVINST 11102.

3.6.5. Technical Change Notices. The contractor shall design engineering changes and provide the following for paragraph 3.1 and associated interface systems: Field Change Bulletins (FCBs),(CDRL A013), Base Electronic System Engineering Plans (BESEPS) (CDRL A011), System Operational Verification Tests (SOVTs) (CDRL A012) and prototype field change kits. Upon tasking by the COR, the contractor shall develop and/or review Engineering Change Proposals (ECPs) (CDRL A014). These efforts will encompass all paragraph 3.1 and associated interface systems, present and future.

3.6.6. Field Change Kits. The contractor shall build prototype field change kits and production field change kits to enhance performance or correct deficiencies of various C⁴ISR requirements, programs or projects and associated systems as specified by the task/delivery order. The contractor shall provide all material required for the fabrication and assembly of both prototype and production field change kits upon written approval by the COR/project

engineer. The contractor shall submit Field Change Orders (FCO's), Design Change Notices (DCN's), and Engineering Change Plans (ECP's) in accordance with the CDRL items identified in paragraph 3.6.8.

3.6.7. Site Support. The contractor shall provide engineering and technical support in performing system installation and checkout testing at the SPAWAR Systems Center Charleston laboratories for various C⁴ISR requirements, programs and projects located throughout the world, as directed by the task order. These efforts shall include the performance of system installation, check-out, and formal SOVTs.

3.6.7.1. Site Support Liaison. The contractor shall provide support for the Communications Systems Department toll free help desk. The help desk shall be manned during normal working hours and as directed by the task order. In addition, the contractor will use an answering machine for support after normal working hours and check the system daily. The contractor shall respond to all site calls in a timely manner and maintain a log of all telephone conversations. The log will contain the time of call, site name, point of contact, a description of problems, and recommended actions. All information must be entered into the software database.

3.6.7.2. Site Support Maintenance. The contractor shall provide the personnel, resources, equipment, and material necessary to maintain and repair communications or related hardware and software systems, subsystems and equipment during installation and at SPAWAR Systems Center Charleston laboratories, fleet units, shore sites, and mobile units throughout the world.

3.6.8. Deliverable Products. The contractor shall submit deliverables in accordance with the following CDRL Items:

	<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a.	Technical Report	A001
b.	Engineering Drawings	A002
c.	Installation Design Package	A010
d.	Base Electronic System Engineering Plan (BESEP)	A011
e.	Formal SOVT	A012
f.	Field Change Bulletins	A013
g.	Engineering Change Proposal (ECP)	A014

The reports shall be delivered as specified by the task order with appropriate allowance made by the government for larger or more extensive efforts.

3.7 Task F: Configuration Management Support

3.7.1 Scope. The contractor shall provide configuration management (CM) support for all paragraph 3.1 programs within the Communications Department. This support shall include all activities related to CM planning, baseline management, configuration identification, configuration audits, formal qualification reviews (FQRs), engineering changes, and configuration management records and reports.

3.7.2 CM Planning. The contractor shall provide support to various programs and projects and associated interface system configuration management planning support. The contractor shall review/develop applicable CM planning documentation (CDRL A015).

3.7.3 CM Program. The contractor shall provide CM program engineering, technical, and analytical support to designated programs and projects. The CM program shall be in accordance with a government approved Configuration Management Plan (CDRL A015) which includes an organization structure with configuration control methods, configuration audits and configuration status accounting procedures for hardware and software. Efforts shall also include the review and evaluation of development/prime contractor configuration management programs and providing recommendations/comments.

3.7.4 Baseline Management. The contractor shall monitor and maintain accurate records reflecting the current Configuration baselines of the various programs, systems and/or projects and associated interface systems, subsystems, equipment, and software undergoing development, enhancement, test and evaluation, and life cycle management. They shall include the functional, allocated, development, and product baselines.

3.7.5 Configuration Identification. The contractor shall develop, review, update and maintain configuration identification records for various programs and/or projects and associated interface systems, equipment and software which include listing of unique hardware and software configuration items (CIs) (CDRL A016).

3.7.6 Configuration Accounting. The contractor shall ensure that the functional and physical characteristic of various requirements, programs and/or projects, or associated interface system configuration items (CIs) match the characteristic specified by the applicable configuration identification.

3.7.7 Configuration Audits and Review. The contractor shall provide engineering, technical and analytical support to project engineers in performance/conduct of program/project configuration audits and review.

3.7.8 Engineering Changes. The contractor shall evaluate all Engineering Change Proposals (ECPs) for potential system and/or equipment CM impact. Upon approval of an ECP, the contractor shall incorporate engineering change data into the system configuration management data records.

3.7.9 Configuration Management Records and Reports. The contractor shall establish and maintain CM records and generate the required CM reports (CDRL A001).

3.7.9.1 Configuration Status Records. The contractor shall maintain configuration status records on various programs and/or projects. The records shall be made available for periodic reviews by the Government.

3.7.9.2 Master Site Inventory. The contractor shall develop, update and maintain site inventory listings, databases, and shortage item lists for each site. The master site inventory listings and databases shall identify barcodes on items. All items provided shall reflect an accurate indication of all items actually received by the site (CDRL A016).

3.7.10 Deliverable Product. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Technical Report	A001
b. Configuration Management Plan	A015
c. Configuration Data Lists	A016
d. Master Site Inventory List	A016

3.8 Task G: Quality Assurance (QA) Support.

3.8.1 Scope. The contractor shall provide engineering technical and analytic support to the project engineer/Contracting officer’s Representative (COR). This support shall include quality assurance planning, verification and validation, and acceptance testing of paragraph 3.1 systems. The contractor shall submit a quality program plan (QPP) which shall be specific with respect to work required in the statement of work, but may include generic contractor procedures.

3.8.2 Quality Assurance Planning. The contractor shall provide quality assurance planning for various C⁴ISR requirements, programs, systems, and/or projects. The contractor shall review/develop applicable QA plan, procedures, and associated documentation including development/work performed by contractors under other government contracts IAW CDRL A017 for shore work and in accordance with the guidelines of NAVSEA Technical Specification 9090-310D for shipboard alterations/installations.

3.8.3 Procedures. The contractor shall document and keep current all procedures used to fabricate, assemble, modify, install, and test products. These written procedures will be made available to personnel required to perform the specific task.

3.8.4 Inspection System. The contractor shall establish and maintain a quality assurance inspection system to ensure adequate control of material, workmanship, and testing procedures. Systems, subsystems, equipment and software shall be subject to in-process reviews, approval, and test by the Government to determine operability, maintainability, reliability, and conformance with all applicable requirements and specifications, including:

- a. Preliminary Design Reviews (PDRs)
- b. Critical Design Reviews (CDRs)
- c. Product Approval Reviews
- d. Factory Acceptance Tests (FATs)
- e. Government Acceptance Tests

3.8.5 Acceptance Testing. The contractor shall provide system, subsystem, equipment and software acceptance testing support, including the development, review, and evaluation of acceptance test plans and procedures, technical specifications, and requirements documentation. The contractor shall participate as a member of the government’s acceptance tests team and, when specified in the task/delivery order, shall provide test personnel to conduct acceptance testing.

3.8.6 Software Quality Assurance. The contractor shall provide software quality assurance support to the Communication Systems Department. The contractor shall provide software quality assurance monitoring, testing, review, and documentation. All software design documentation and products shall be critically reviewed against IEEE/EIA 12207 and the following criteria:

- a. Contractual Requirements
- b. Interface Requirements
- c. Overall System Operational Effectiveness, and/or
- d. Applicable Specifications and Standards

3.8.6.1 Independent Verification and Validation. The contractor shall provide independent verification and validation (IV&V) of software, software documentation, software products, and prime contractor software quality assurance programs. The contractor shall independently review and analyze the results of third party contractor IV&V activities and provide a detailed report relative to their effectiveness IAW CDRL A001.

3.8.7 Deliverable Product. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order, this SOW and CDRL Items as indicated.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Technical Report	A001
b. Quality Program Plan (QPP)	A017

3.9 Task H: Logistic Support.

3.9.1 Scope. The contractor shall provide engineering, technical, and analytical support to the Communications System Division for various C⁴ISR requirements, programs and/or projects such as, but not limited to paragraph 3.1 systems and associated interface systems logistic support efforts. This support shall include the analysis, development, review, maintenance, tracking of system and equipment, logistics support planning, maintenance, and training data and documentation.

3.9.2 Logistics Planning Support. The contractor shall provide engineering, technical and analytical support for all Integrated Logistic Support (ILS) elements and disciplines, specifically the following:

- a. Computer Resources Support
- b. Configuration Management
- c. Design Interfaces
- d. Facilities
- e. ILS Planning
- f. Maintenance
- g. Manpower and Personnel
- h. Packaging, Handling, Storage, and Transportation
- i. Quality Assurance
- j. Reliability and Maintenance
- k. Safety
- l. Support Equipment
- m. Supply support
- n. Technical Data
- o. Training and training support

3.9.3 Provisioning Support. The contractor shall develop, review, update, and maintain Provisioning Technical Documentation (PTD) packages IAW CDRL A018 resulting from hardware procurement, Design Change Notices (DCN), field changes or from related fleet activities. PTD and updates will be prepared for the purpose of obtaining Material Support Dates (MSD) for new items provisioned and in the case of updates, revision of existing Allowance Parts Lists (APL).

3.9.3.1 Logistic System Support Data. The contractor shall collect, compile and provide system support technical data, which shall be used to update and enhance logistics procedures involving facilities maintenance, communications and space utilization.

3.9.3.2 Provisioning Technical Documentation Updates. The contractor shall develop, update, and maintain complete provisioning technical documentation (PTD) packages in accordance with applicable standards and/or instructions as well as update/maintain existing PTD packages due to design change notices (DCNs) or field change bulletins (FCBs). PTD and PTD updates will be prepared for submission to NAVICP Mechanicsburg, PA for the purpose of updating previously issued APLs for continued support of various C⁴ISR requirements, programs, and/or projects, and associated interface systems.

3.9.3.3 Acquisition Logistics Support Plan.

The contractor may be required to develop, or support development of an Acquisition Logistics Support Plan (ALSP). The ALSP is typically prepared by, or on behalf of, the Program Manager for users to identify the logistics support structure being put in place to operate and maintain the system on a Program scale. The ALSP shall include the following information:

- a. Introduction and Program Description
- b. ALS Planning.
- c. Maintenance Planning.
- d. Manpower and Personnel.
- e. Supply Support
- f. Support Equipment
- g. Technical Data.
- h. Training and Training Support
- i. Computer Resources Support
- j. Facilities
- k. Packaging, Handling,
- l. Design Interface
- m. Related Areas.

3.9.3.4 User Logistics Support Summary

The contractor may be required to develop, or support development of a User Logistics Support Summary (ULSS). The ULSS is typically prepared by, or on behalf of, the Program Manager for users to identify logistics resources necessary to operate and maintain the system's subsystems and equipments in their operational environment. The ULSS summarizes, in brief, the results of logistics planning and acquisition in the ALS. A separate ULSS may be required for each operating site. The ULSS may satisfy a number of formats commonly known as operational logistics support plan (OLSP) or summary (OLSS), phased support plan (PSP), material fielding plan (MFP), etc. The ULSS shall include the following information:

- a. Equipment nomenclature, description, equipment identification code, national stock number, manufacturer's part number, cognizant procuring activity, inventory control point, designated overhaul point or depot, training agent, and any other organizational participants.
- b. Maintenance concept.
- c. Installation locations.
- d. Support arrangements prior to organic support.
- e. Key participants in the logistic support of the system or component including name, activity, and area of responsibility.
- f. Allowance parts lists (APL) (i.e., initial outfitting list (IOL) numbers, or list of initial spare parts with stock numbers).
- g. List of technical documentation and stock points required for operations at each level of maintenance.
- h. List of support equipment for each level of maintenance, by stock or part number and manufacturer.
- i. Training courses by site and schedule.
- j. Personnel required for operation and maintenance (number, rate, Navy enlisted classification (NEC), military occupational specialty (MOS)). Identify changes to site manning documents attributable to the new equipment.
- k. Software support, including software support activity (SSA) point of contact.
- l. Facilities associated with the system, subsystems, or equipments by location including new facilities and modifications, and environmental, hazardous material, and safety considerations.
- m. Warranty provisions.
- n. Special or non-standard requirements.

3.9.4 Logistic Maintenance Support. The contractor shall develop, review, and update on various C⁴ISR requirements, programs and/or projects, and associated interface systems, subsystems, and equipment maintenance support documentation. The contractor shall review design change notices (DCNs), field change bulletins (FCBs), and fleet inputs for potential impact on system/equipment operation and maintenance (O&M) manuals, maintenance requirement cards (MRCs), and maintenance instructions and SOVT.

3.9.4.1 Logistic Analysis Support. The contractor shall review and submit recommended modifications to the initial provisioning baseline and spares levels based on analysis of usage data received from operating forces, and from recommendations received from the systems effectiveness function. Data analyzed includes:

- a. CASREPS
- b. Maintenance Data Collection Systems (MDCS)
- c. Mean Time Between Failure (MTBF) variances
- d. Field Service Reports
- e. Equipment Repair Data
- f. Remedy/Help Desk Database

3.9.4.2 Technical Manual Development. The contractor shall develop, review, and/or prepare updates to technical and Users manuals. Examples of technical manual content may be found in MIL-DTL-24784.

3.9.4.3 Maintenance Requirement Cards (MRCs). The contractor shall develop, review, and update Maintenance Requirement Cards (MRCs) IAW CDRL A019 due to design change notices (DCNs), field change bulletins (FCBs), and/or inputs from fleet activities for various C⁴ISR requirements, programs and/or projects and associated interface systems, subsystems, and equipment. Examples of MRC's may be found in MIL-P-24534.

3.9.5 Reliability and Maintainability. The contractor shall provide engineering, technical, and analytical support to the Communication Systems Department Reliability, Maintainability, and Availability (RMA) Programs in accordance with government- approved RMA Procedures.

3.9.5.1 Reliability. The contractor shall perform a reliability prediction and/or review/analyze prime contractor reliability prediction data. The contractor shall submit a Reliability Prediction Report or Reliability Prediction Data Analysis Report as applicable.

3.9.5.2 Maintainability. The contractor shall develop and/or conduct a maintainability program for various C⁴ISR requirements, programs and/or projects and/or associated interface systems, subsystems, and equipment. Examples of maintainability predictions may be found in MIL-HDBK-470.

3.9.5.2.1 Maintainability Predictions. The contractor shall develop, review and/or evaluate maintainability predictions. Examples of maintainability predictions may be found in MIL-HDBK-472. The contractor shall document and justify all assumptions and the applicability of all data used in development of each prediction. The predictions shall include all mechanical, electro-mechanical and electronic parts, and shall be based on the replacement of modules, chassis-mounted components and parts at the organizational maintenance level (O-Level). The results of these predictions shall be compared to the system's/equipment's required MCMT (Mean Corrective Maintenance Time). The contractor shall ensure that prediction MCMT values do not exceed the requirements as defined in the C⁴ISR or associated interface system specifications. The contractor shall recommend such changes in design as necessary to improve the predicted values sufficiently to meet the requirements. Documentation shall be provided IAW CDRL A001.

3.9.5.2.2 Maintainability Analysis. The contractor shall conduct an in-depth analysis of various C⁴ISR requirements, programs and/or projects, and associated interface systems, subsystems, and equipment maintainability data. The maintainability analysis shall be performed concurrently with Prime Contractor designed efforts for incorporation of the quantitative and qualitative maintainability requirements into the equipment design. The maintainability analysis shall evaluate system and equipment design changes along with the possible catastrophic and critical mode of equipment failure. The maintainability analysis shall include:

- a. A study of the indication/indicator of failure at the operation level and at the various of maintenance.
- b. A determination of required special tools and test equipment (including special alignment jigs and fixtures) for equipment maintenance.
- c. A review of potential design, maintenance, or production problems.
- d. Identification of principal items inhibiting maintainability achievements and proposed solutions.
- e. Identification of corrective and preventive maintenance features.

The contractor shall analyze the information obtained during the maintainability demonstration. This analysis shall include an evaluation of built-in test equipment (BITE), accessibility to plug-in modules and hard-wired components, effectiveness of fault indicators, and determination of whether the equipment has met the specified acceptance criteria. The contractor shall recommend correction to the applicable C⁴ISR requirements, programs and/or projects, or associated interface system technical manuals and determine the statistical distribution of repair items. Analyses supporting model and simulation results shall be available for government review.

The contractor shall develop and/or review operational availability (A⁰) estimates and conduct A⁰ analyses as prescribed in OPNAVINST 3000.12. The contractor shall assess the achievement of the A⁰ requirement contained in the applicable specification. The contractor shall recommend actions and alternatives to exceed A⁰ thresholds. All documentation required by this paragraph shall be IAW CDRL A001.

3.9.5.2.3 Maintainability Demonstration. The contractor shall provide engineering and technical support to the Communication Systems Department Program/Project Managers in conduct of systems, subsystems and equipment maintainability demonstrations. The contractor shall provide a Maintainability Demonstration Report IAW CDRL A001.

3.9.6 Deliverable Product. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order, this SOW and CDRL Items as indicated.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Technical Report	A001
b. Provisioning Technical Documentation (PTD)	A018
c. Maintenance Requirement Cards (MRC)	A019

3.10 Task I: MATERIAL CONTROL

3.10.1 Scope. The contractor shall provide the necessary resources to operate the logistics material storage at government warehouse facility located at SPAWAR Systems Center Charleston, Naval Weapons Station, Hanahan, SC. The contractor shall provide support for material shipping and receiving, inventory control, plant account monitoring, ordering and stocking of equipment and parts used to support the Communication Systems Department. Material control support shall be performed in accordance with the government, SPAWAR Systems Center Communication Systems Division procedures.

3.10.2 Inventory Status. The contractor shall develop and maintain an inventory control system for assigned systems, equipments, spares, and miscellaneous parts. This system shall include provisions for receipt, storage, issue, and/or shipment of these items. Government facilities may be utilized for these tasks.

3.10.3 Inventory Procedures. The contractor shall devise and implement procedures for a continuous on-going computer input-output analysis of parts, spares and supplies to effect optimum overall reporting of supply support. This will include:

- a. Data analysis to reflect signals and projects elements of impending problem areas.
- b. Recommending immediate action to preclude delinquent supply items.
- c. Barcoding.

3.10.4 Inventory Maintenance. The contractor shall review the following lists to ensure they accurately reflect Fleet Maintenance Support Requirements.

- a. Coordinated Ships Allowance Lists (COSALs)
- b. Allowance Parts List (APLs)
- c. Allowance Equipage Lists (AELs)
- d. Provisioning Parts Lists (PPLs)
- e. Tools and Test Equipment Lists (TTEs)

3.10.5 Logistics Miscellaneous. The contractor shall review APL and Technical Manual parts lists to validate repair echelon capabilities. The task functions are:

- a. Evaluate APLs and initiate change requests to maintain its effectiveness.
- b. Review, evaluate and report on the range and depth of technical overrides for designated equipment.
- c. Maintain Government's inventory control database.
- d. Input requisitions into BSA and maintain necessary inventory records as required.
- e. Maintain C⁴ISR Plant/Minor property database.

3.11 Task J: Training Support.

3.11.1 Scope. The contractor shall provide engineering, technical, analytical, and instructional support of training efforts to the Communication Systems Department for various C⁴ISR requirements, programs and/or projects such as those listed in paragraph 3.1. This support shall include the planning, analysis, coordination, development, review and maintaining training programs, plans, requirements and documentation via software and hard copy. This shall include potential application of distributed modeling and simulation for training utilizing Distributed Interactive Simulation and/or DoD High Level Architecture (HLA).

3.11.2 Training Planning. The contractor shall provide engineering, technical and analytical support to the Communication Systems Department training planning efforts, including support at training planning meetings and evaluation of work performed by contractors under other government contracts.

3.11.3 Training Requirements Analysis. The contractor shall analyze system, equipment and computer software specifications and associated documentation to identify the specific training requirements for new or modified equipment and/or software and provide a detailed report of finding IAW CDRL A001 to cognizant Communication Systems Department Program/Project Managers. Analyses supporting model and simulation results shall be available for government review.

3.11.4 Training Proposal. The contractor shall propose a training program, using the guidelines of MIL-HDBK-29612, which is to be presented at government designated facilities.

3.11.4.1 Training Proposal Evaluation. The contractor shall review other contractor companies training proposals and provide comments/recommendations to the Communication Systems Department program/project managers IAW CDRL A001.

3.11.5 Training Conference. The contractor shall provide engineering and technical support to the Communication System Department at training conferences. Support shall include review and evaluation of Prime Contractor's proposed training program, data and documentation and providing comments/ recommendations.

3.11.6 Training Coordination. The contractor shall interface with training centers and such other activities to ensure that adequate training support is provided throughout the life cycle of the C⁴ISR and/or associated interface systems.

3.11.7 Training Material and Services. The contractor shall develop, review or update on various C⁴ISR requirements, programs and/or projects, and/or C⁴ISR job-skills training course for maintenance and operation personnel.

These courses shall be suitable for presentation at a Government designated facility and for use by the Government to conduct any required follow-on training throughout the life cycle of the system/equipment and shall be IAW CDRL A020 and A021.

3.11.8. On-Site Training. The contractor shall develop a technical maintenance training program in accordance with the task/delivery order and CDRL A020 and A021, including a training course outline/syllabus. The contractor shall provide approved on-site maintenance training for installations of new and/or modified systems, equipment, or software. The contractor shall develop the training to concentrate on the most crucial, recurring maintenance and/or operator problems and to provide trouble-shooting techniques for correction or repair.

3.11.9. Formal Follow-On Training. The contractor shall develop a training course intended for use in formal follow-on training and suitable for presentation at a Government designated facility. The curricula shall be developed using the guidelines of MIL-HDBK-29612 and IAW CDRL A020 and A021.

3.11.10. Operator/Organizational Level (O-Level) Maintenance Training. The contractor shall develop Operator and Organization Maintenance (O-Level) Courses IAW CDRL A020 and A021. These courses shall, at a minimum, cover theory of operation, job skills of preventive maintenance, equipment/system operation, shutdown safety and emergency procedures, equipment checkout, and alignment procedures. The O-Level Maintenance shall be developed to provide O-Level maintenance personnel with the necessary information, skill development, and

practical application required for inspection, maintenance, lubrication, assembly, disassembly, adjustment, troubleshooting, failure analysis, use of tools and equipment, parts replacement, and repair in accordance with the equipment/system maintenance concept.

3.11.11. Instructor Advisory Service. When directed by the government, the contractor shall provide an on-site liaison to fleet training centers to assist in preparation and conduct follow-on government training of pilot training courses.

3.11.12. On-Site On-The-Job Training. The contractor shall provide on-the-job training to personnel in the operations and maintenance of currently installed C⁴ISR systems and equipment and for newly installed equipment or systems which become operationally ready during the period of the contract. The contractor shall develop course material for new hardware and update existing training material for both operator and maintenance personnel. The course material will include job data worksheet, outline, instructor and student guides, tests and visual aids (IAW current CNET requirements). Such training shall be on an “As Required” basis to accomplish on-site equipment familiarization for new personnel. The contractor will attend In-Progress Reviews (IPRs) and training conferences. The contractor shall also provide operator training associated with new operational software delivered to any C⁴ISR sites as required. All training material shall be IAW CDRL A020 and A021.

3.11.13. Training Equipment. The contractor shall develop training equipment designs/ configuration and support equipment, and procure/fabricate training equipment.

3.11.14. Deliverable Product. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order, this SOW and CDRL Items as indicated.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Technical Report	A001
b. Training Course/ Curriculum Outline	A020
c. Training Materials	A021

3.12 Task K: Program Management Support.

3.12.1 Scope. The contractor shall establish a program office to identify and coordinate all items of work, and assure that all efforts are directed toward a common goal. This program support effort shall be headed by a Program Manager who has overall responsibility for the successful execution of all work to be performed under this contract. The progress of this effort shall be documented by contractor provided progress and status reports, briefing materials, and milestone reports as directed by the task/delivery order (CDRL A001).

3.12.2 The contractor shall develop an annual contract requirements implementation plan (CDRL A001) for the project engineer's/COR's approval. This task implementation plan shall contain the anticipated level of effort as well as the labor categories for each task. This approved task implementation plan shall form the basis for communications between the project engineer/COR and the Contractor Program Manager.

3.12.3 The contractor shall develop monthly progress reports IAW CDRL A001 which shall include the following: cover sheet; number of hours by labor category charged to each task; cost of materials expended by task; and travel and per diem charged under each task. Fund expenditures shall be broken down by category of funds.

3.12.4 The contractor shall monitor various C⁴ISR requirements, mobile and fixed sites, and associated interface system program/project status during the following activities: review of vendor reports; periodic meetings with vendor and Government points of contact; participation in program/project conferences; status reviews; and meetings. Provide constant input to the Government regarding the status of all areas of assigned programs to include the following:

- a. Program Status
- b. Schedules and Milestones
- c. Documentation

- d. Testing
- e. Points of Contact
- f. Technical Issues
- g. Action Items

The contractor shall develop, update and maintain project status briefs, milestone charts and presentation material IAW CDRL A022.

3.12.5 The contractor shall furnish technical comments and recommendations to the Communication Systems Department at program reviews, in-process reviews, technical interchange meetings/visits to hardware and software manufacturer’s plants, and provide results in the form of minutes, trip reports, white papers or technical reports IAW CDRL A001.

3.12.6 The contractor shall attend program meetings and reviews as directed by the project engineer. This involves developing a recommended agenda, establishing a system to track action items, identifying problems/issues, and developing meeting information, data and minutes.

3.12.7 The contractor shall draft, update, review and provide inputs to program planning and technical documentation as defined by the task order. Provide the appropriate documentation, review comments, and recommendations to the program/project manager.

3.12.8 Deliverable Product. The contractor shall develop and/or review the following supporting documents, as defined by the task/delivery order, this SOW and CDRL Items as indicated.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Technical Report	A001
b. Contractors Progress	A022

4.0 REPORTS

4.1 Progress Reports

General. Progress reports shall be submitted on a monthly basis and delivered to SPAWAR Systems Center Charleston no later than the 10th of the following month. The first report shall be delivered no later than the 10th of the month following the first full month of the contract.

4.1.1 Contents. Monthly progress report shall include the following items and data:

- a. Cover sheet
- b. Number of labor hours by total contract, task/delivery order number, labor categories used, and names of employees charge to each labor category.
- c. Dollar amounts of material expended including outstanding monthly and cumulative commitments for total contract and each task/delivery order number.
- d. Monthly and cumulative travel and per diem charge for total contract and each task/delivery order.
- e. Monthly and cumulative total costs for contract and each task/delivery order.
- f. Program summary.
- g. Major milestone summary.
- h. Data requirements status.
- i. Action items.
- j. Identification of new problem areas.
- k. Status of previously identified problems.
- l. Effort to be completed during next reported period.
- m. Estimated total cost to complete.

- n. Justification for cost increases or schedules slippage, if any, which may differ from previous report or the original estimate to complete specific efforts.
- o. Identification of those task/delivery orders for which costs have exceeded 85% of the amount authorized.

4.1.2 Format. Reports shall be generated by standard commercial word processing and spreadsheet applications and shall include a cover sheet which shall identify the report by contract number, contractor's name, task/delivery order number and title, contract data requirements list (CDRL) number and title, period covered, and date of preparation. Reports shall include charts, curves and other visual aids that may be necessary to define the status of the contract clearly. Reports shall be delivered to the cognizant Spawar System Center Charleston Project Engineer either by standard mail or via electronic means.

4.1.3 Deliverables Products. When expenditures under this contract are at 85% of the ceiling price, the contractor shall send a letter to the Contracting Officer stating so. The contractor shall develop the following reports, as defined by the CDRL Item indicated.

<u>DESCRIPTION</u>	<u>CDRL ITEM</u>
a. Progress Report	A023

4.2 Financial Progress Reports Financial progress reports shall be submitted each Wednesday no later than noon, Eastern Standard Time. The weekly reports will be transmitted electronically to the COR (via a contractor furnished workstation) to provide the project engineer with current contract financial status.

5.0 CONTRACTOR FURNISHED FACILITIES.

5.1 The work will primarily be performed at SPAWAR Systems Center Charleston laboratories. However, the contractor shall maintain a facility in the Charleston S. C. area, to support SPAWAR Systems Center Charleston to perform the tasks set forth for this effort.

5.1.1 In performing this contract the contractor shall be required to perform various equipment/software integration efforts, component design engineering, breadboard and bench test, prototype fabrication, test bed design, and support services at SPAWAR Systems Center Charleston laboratories for government testing.

5.2 The contractor shall:

- a. Have adequate storage for documentation produced for the contract or used as reference material.
- b. Have Computer Aided Drafting (CAD) System compatible with AUTOCAD software from AUTODESK, Inc.
- c. Have Graphics presentation capability compatible with Windows unless otherwise directed by the task order.
- d. Provide all equipment required to perform the contract, which shall include but not be limited to the following: Office furniture, desktop microcomputers which are IBM PC compatible; software for word processing, database management, graphics and spreadsheets. The proper software for SPAWAR Systems Center is Microsoft Office including Excel, Word, Access, etc., In addition, the contractor must provide all required office equipment and supplies.
- e. Provide lab integration equipment (as directed) to include but not be limited to oscilloscope, Ohm-meter, power meters, signal generator, bit-error-test, protocol analyzers, logic analyzer.

5.3 The contractor shall furnish and be responsible for the maintenance and calibration of general-purpose test equipment necessary to perform tasks assigned under this contract. The contractor shall provide all general purpose hand tools required for performance under this contract.

6.0 DATA CALENDAR. The contractor shall provide a data calendar that shows all data items required under the contract and task/delivery orders and their delivery dates in matrix format. The calendar shall be updated monthly and provided with the monthly progress report.

7.0 MATERIAL

The contractor shall provide miscellaneous material to the extent authorized pursuant to individual task orders. Examples of the miscellaneous material to be furnished by the contractor include, but are not limited to, the following items:

Tactical Computers; Minicomputers; PC Motherboards; Real Time Software; Hard Disk; Floppy Diskette Drive; Network Servers; Network Server Expansion; Tape Drives; Tape Backup Systems; Workstation Network Interface Card; Work Stations; Communications Server; VME Chassis w/ Control Backplane; Software Tools; Operating Systems; Modems; Digital Service Units; Waveguides; IT-21 compliance hardware/ software systems; Automatic Switches; I/O boards; Computer Memory; Networking Products; Surge Suppressor; System Console; Color Graphic Interface Card; Multi-Sync Color Monitor with Keyboard; Uninterruptible Power System; Power Generator; High Resolution Display; CD-ROM and Recorder; and Power Converter.

The contractor will ensure that if replacement items are provided, they are to be equal or superior to the original manufacturer's specifications and interchangeable without alteration.

The contractor shall provide transportation for equipment or material items required under the contract and task/delivery orders. The contractor shall verify compliance/comply with the Navy Supply Systems before the use of commercial transportation system.

8.0 Required Standard of Workmanship

Unless otherwise specifically provided in this contract, the quality of all services rendered hereunder shall conform to the highest standards in the relevant profession, trade, or field of endeavor. All services shall be rendered by or supervised directly by individuals fully qualified in the relevant profession, trade, or field, and holding any licenses required by law.

5252.237-9401 PERSONNEL QUALIFICATIONS (MINIMUM) (JAN 1992)

(a) Personnel assigned to or utilized by the Contractor in the performance of this contract shall, as a minimum, meet the experience, educational, or other background requirements set forth below and shall be fully capable of performing in an efficient, reliable, and professional manner. If the offeror does not identify the labor categories listed below by the same specific title, then a cross-reference list should be provided in the offeror's proposal identifying the difference.

(b) The Government will review resumes of contractor personnel proposed to be assigned, and if personnel not currently in the employ of Contractor, a written agreement from potential employee to work will be part of the technical proposal.

(c) If the Ordering Officer questions the qualifications or competence of any persons performing under the contract, the burden of proof to sustain that the persons is qualified as prescribed herein shall be upon the contractor.

The Contractor must have personnel, organization, and administrative control necessary to ensure that the services performed meet all requirements specified in delivery orders. The work history of each Contractor employee shall contain experience directly related to the tasks and functions to be assigned. The Ordering Officer reserves the right

to determine if a given work history contains necessary and sufficiently detailed, related experience to reasonably ensure the ability for effective and efficient performance.

GENERAL PERSONNEL QUALIFICATION REQUIREMENTS

- a. Personnel assigned for performance of requirements under this contract shall meet at least the minimum qualifications.
- b. All Labor Categories require US Citizenship and eligibility for a DOD SECRET Clearance. An asterisk (*) designates Key personnel (which require resume submission).
- c. Each employee who is directly charged to a labor category under this contract shall meet each of the following minimum qualification requirements for that labor category.
 - 1) Each employee shall be fully capable of performing assigned functions in an efficient, reliable and professional manner.
 - 2) An employee's experience may be credited to meet both General and Specialized Experience minimum qualification requirements provided that it meets each of the minimum qualification requirements.
 - 3) In order to be credited to meet Specialized Experience minimum qualification requirements (if any) for a particular labor category, an employee's experience must have been obtained in the field of endeavor indicated by the labor category title.
 - 4) Progressive Experience is defined as work on increasingly diverse systems and equipment of more complexity and difficulty.
 - 5) Experience levels shall have been obtained from full time employment in the respective field of endeavor.
 - 6) U.S. active duty military experience can be applied toward general experience, if such experience was gained in the field of Communications, Cryptographic and other C⁴I systems and system operations.
 - 7) Appropriate Academic Discipline (AAD) refers to the fields of Engineering, Physics, Mathematics, Computer Science, and Engineering Technology. The applicable degree shall be from a school of higher education that is accredited in the specified discipline in which the degree was attained. A school shall be considered accredited if it is listed as such by the Accreditation Board for Engineering and Technology (ABET).
 - 8) Engineering experience will not be credited unless it was gained after award of the required engineering degree.
 - 9) The work to be performed under this contract as delineated in the DD Form 254 involves access to and handling of classified material up to and including **SECRET**.

1. **Program Manager:**

- a. **General Description:** As manager of the Contractor's operations, the incumbent plans, organizes, coordinates and administers tasks and personnel required to support Government programs utilizing this contract. The Program Manager will serve as the Contractor's liaison representative with SPAWARSYSCEN Charleston and will insure that all necessary efforts related to that liaison, and in general support of this contract, are accomplished. A sound theoretical and practical knowledge of general management principles and personnel management is essential. The Program Manager must demonstrate the ability to interface effectively with customers and to deliver quality products and program/project conclusions on time and within budget.

- b. Education: Must have at least a Bachelor's degree in Business, Engineering or Management from an accredited College or University. An advanced degree in management, or a related field, is desirable.
- c. Progressive Experience: Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, in support of one or more specific tasks. At least five (5) additional years of the total work experience must have been as a successful manager of a team of skilled professional, technical, and support personnel. At least four (4) of the last five (5) additional years must have been working in a management position supervising, directing, reviewing and coordinating work performed by other supervisory contractor staff while maintaining effective liaison with Government technical and contracting personnel.
- d. Specific Experience: Must have at least ten (10) years of experience in a management position dealing with Communications, Cryptographic and related C⁴I systems. Must have at least five (5) years of the last seven (7) years of experience in the acquisition, installation, and life cycle support of Navy Shipboard Electronic Systems - primarily Communications, Cryptographic and other C⁴I systems. Must be thoroughly familiar with the Navy Directives System and possess the ability to supervise the preparation and submission of forms and reports required by applicable directives.

2. **Lead Project Engineer:**

- a. General Description: As manager for engineering related efforts, the incumbent must display a wide range of engineering experience. The incumbent must be knowledgeable in all relevant engineering disciplines, and capable of developing high level strategies to solve problems. The Lead Project Engineer will assign tasking and provide guidance to individuals and groups of personnel in support of one or more Government programs or tasks. The incumbent plans, organizes, coordinates and administers the work tasks as set forth in individual task orders. The Lead Project Engineer ensures that necessary reports required in support of individual task/delivery orders are prepared and submitted as required. The Lead Project Engineer is responsible for reviewing all documentation to insure that it meets the goals and requirements prescribed in the task/delivery order Statement of Work. The incumbent will play a key role in accomplishing, or directing the accomplishment of, the necessary research to identify system needs, requirements, and designs. The incumbent will accomplish market research and technical analysis as required to determine the viability of systems and components. The Lead Project Engineer will communicate directly with Military or Government sponsors when required. The incumbent will generate high level briefings and attend meetings and reviews in support of the task/delivery order sponsor.
- b. Education: Must have at least a Bachelor of Science Degree in Electrical/ Electronic/ Computer Engineering, Physics, or Computer Science from an accredited College or University. An advanced degree in engineering or management is desirable.
- c. Progressive Experience: Must have at least fifteen (15) years experience in systems engineering, development, production, or test and evaluation in the area of communications and systems engineering. Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, in support of one or more specific engineering tasks. At least three (3) additional years of the total work experience must have been as a successful manager or leader of a team of skilled professional, technical, and support personnel. Must have demonstrated experience in writing proposals, technical papers, and technical briefs, in support of a Naval Communications System.
- d. Specific Experience: At least five (5) of the last seven (7) years work experience must be associated with the development, testing, and analyses of four or more of the following systems:

- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, JMHS, or similar.
- Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS, NOVA or similar.
- Communications Networks and Systems including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

3. **Senior Computer Engineer:**

- a. **General Description:** The incumbent must be knowledgeable of a wide array of computer architectures, operating systems, and programming languages. The Senior Computer Engineer will be responsible for analyzing software related tasks and deriving or devising solutions to meet the stated needs. He / she will perform system concept formulation, system design analysis, and subsystems design analysis. He / she will be responsible for developing project plans, guidelines and controls. He / she will generate proposals, product or system briefs, and technical papers in support of the task/delivery order task. He / she will lead or attend technical meetings with or on behalf of task sponsors. He / she will evaluate software products, and software code available commercially or via open source. He / she will generate new or modify existing software code as required. He / she will provide services to review, analyze, integrate and conduct test and evaluation of contractor or Government generated source data and will develop interim documentation as required.
- b. **Education:** Must have at least a Masters Degree in Computer Science or Computer Engineering in addition to a Bachelor of Science Degree in Computer Engineering, Electrical/Electronics Engineering, Physics, Computer Science or Mathematics.
- c. **Progressive Experience:** Must have at least seven (7) years total related work experience. Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, providing direct support for design, development, and implementation of UNIX based software products written in C, or C++. At least three (3) additional years of the total work experience must have been as a successful leader of a team of skilled professional, technical, and support personnel accomplishing software development tasks.
- d. **Specific Experience:** Must have demonstrable specific experience in designing, developing or testing systems or system components dealing with the following technologies, disciplines, and standards:
1. Object-oriented analysis, design and programming in C or C++ languages
 2. Client/server model architecture
 3. TCP/IP network programming
 4. X Window graphical interface programming
 5. Programming and scripting in a UNIX environment
 6. Programming and scripting specifically for the Windows NT/2000 Operating System
 7. Programming and scripting in a Real Time OS Environment such as VxWorks, pSOS, or QNX.
 8. Computer assisted software engineering (CASE)
 9. IEEE/EIA 12207 or the cancelled MIL-STD-498

At least five (5) of the last seven (7) years work experience must be associated with the development, testing, and analyses of four or more of the following systems:

- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, JMHS, or similar.
- Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA.

- Communications Networks and Systems including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

4. *Computer Engineer (A): (Resume – 1)

- General Description:** The Computer Engineer must be knowledgeable of a wide array of computer architectures, operating systems, and programming languages. The Computer Engineer will perform tasks directly related to generation, maintenance, and documentation of software code. He / she must be capable of evaluating existing software modules to identify and correct functional problems. He / she must be able to utilize standard software tools including editors, debuggers, and compilers. He / she must be capable of evaluating and configuring computer hardware and software components, performing specific tests and providing written analysis. He / she may be required to assist in formulating and implementing new software and system designs. He / she will support generation of proposals, product or system briefs, and technical papers in support of the task/delivery order task. He / she will participate in technical meetings with the ISEA / SSA team or task sponsors. He / she will evaluate software products, and software code available commercially or via open source.
- Education:** Must have at least a Bachelor of Science Degree in Electrical/ Electronics/ Computer Engineering, or Computer Science.
- Progressive Experience:** Must have at least eight (8) years of relevant work experience. Must have worked at least five (5) years in a small, medium, or large organization under multiple layers of management, providing direct support for design, development, and implementation of UNIX or Windows NT based software products written in C, or C++. He / she must have performed at least 1 year directly supporting the software base of a military communications system.
- Specific Experience:** He / she must also be able to demonstrate experience in at least three (3) of the last eight (8) years in UNIX or Windows NT based development using the C and C++ languages, and GUI applications including X/Motif or Win32. He / she must have accomplished software development tasks requiring the use of interprocess communications, preferably TCP/IP based communications.

5. *Computer Engineer (B): (Resume - 1)

- General Description:** The Computer Engineer must be knowledgeable of a wide array of computer architectures, operating systems, and programming languages. The Computer Engineer will perform tasks directly related to generation, maintenance, and documentation of software code. He / she must be capable of evaluating existing software modules to identify and correct functional problems. He / she must be able to utilize standard software tools including editors, debuggers, and compilers. He / she must be capable of evaluating and configuring computer hardware and software components, performing specific tests and providing written analysis. He / she may be required to assist in formulating and implementing new software and system designs. He / she will support generation of proposals, product or system briefs, and technical papers in support of the task/delivery order task. He / she will participate in technical meetings with the ISEA / SSA team or task sponsors. He / she will evaluate software products, and software code available commercially or via open source.
- Education:** Must have at least a Bachelor of Science Degree in Electrical/ Electronics/ Computer Engineering, or Computer Science.
- Progressive Experience:** Must have at least ten (10) years of practical experience in the design, development, test and evaluation of system software. Programming languages utilized would include Ultra 16 and one or more of the following additional languages: C, C++, or Java.

- d. Specific Experience: Must demonstrate at least five (5) of the last ten (10) years experience including developing and maintaining software for the UNIX and VxWorks based CUDIXS system. Must also demonstrate at least two (2) of the last five (5) years experience maintaining software for VxWorks based NAVMACS Communications Controller. System programming experience shall include the following processor systems: AN/UYK-20, AN/UYK-44, TAC-3 and TAC-4 workstations, and Motorola 68xxx based VME controllers. Must have experience in programming for VME bus based communications.

6. Senior Electronics Engineer:

- a. General Description: The Senior Electronics Engineer will be responsible for providing electrical or electronic expertise to assist with system concept formulation, system design analysis, and subsystems design analysis. The incumbent will be responsible for developing project plans, guidelines and controls. He / she will generate proposals, product or system briefs, and technical papers in support of the task/delivery order task. He / she will lead or attend technical meetings with, or on behalf of, task sponsors. He / she will evaluate electrical and electronics hardware and software products, available commercially or via open source. He / she will reviews, analyze, integrates and conducts test and evaluation of contractor or Government generated source data and will develop, or assist in development of, guidance documentation.
- b. Education: Must have at least a Masters Degree in a Computer Science or Engineering discipline, in addition to a Bachelor of Science Degree in Electrical/Electronics/ Computer Engineering, or Physics.
- c. Progressive Experience. Must have at least ten (10) years experience in systems engineering, development, production, or test and evaluation of electronic systems or components. Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, providing direct support for design, development, and implementation of electrical or electronic components. At least three (3) additional years of the total work experience must have been as a successful leader of a team of skilled professional, technical, and support personnel accomplishing software development tasks.
- d. Specific Experience: Must have at least five (5) years experience in the acquisition, installation, and/or life cycle support of Navy Shipboard electronic systems primarily communications, cryptographic and navigation. A minimum of three (3) years experience using red/black criteria for electronic systems installations and / or design is required.

At least five (5) of the last seven (7) years work experience must be associated with the development, testing, and analyses of four or more of the following systems:

- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, JMHS, or similar.
- Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or similar.
- Communications Networks and Systems including DMS, DTH (AUTODIN), ISNS, TIDS, ADNS, or similar.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

7. *Electronics / Electrical Engineer: (Resumes - 1)

- a. General Description: The Electronics Engineer will be responsible for providing electrical or electronic expertise to assist with development or support of existing electronic designs and systems and will include tasks such as system concept formulation, system design analysis, and subsystems design analysis. He / she will be responsible for developing project plans, guidelines

and controls. He / she will generate system briefs, and technical papers in support of the task/delivery order task. He / she will evaluate electrical and electronics hardware and software products, available commercially or via open source. He / she will participate in the design, integration, and testing of components in a completed system. He / she will review, analyze, integrate and conducts test and evaluation of contractor or Government generated source data and will develop, or assist in development of, guidance documentation.

- b. Education: Must have at least a Bachelor of Science Degree in Electrical/Electronics Engineering, Computer Engineering, or Physics.
- c. Progressive Experience: Must have a total of five (5) or more years of professional experience. Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, providing direct support for design, development, and implementation of electrical or electronic components.
- d. Specific Experience: At least three (3) of the last five (5) years work experience must be associated with the development, analysis, integration, testing, or installation of four or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, JMHS, or similar.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS, NOVA or similar.
 - Communications Networks and Systems including DMS, DTH (AUTODIN), ISNS, TIDS, ADNS, or similar.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

8. Mechanical Engineer:

- a. General Description: The Mechanical Engineer will be responsible for providing mechanical expertise to assist with development or support of existing hardware designs, systems and support components. He / she will provide design services to create mechanical components, fixtures, and devices required for new or existing systems. He / she will participate in the design, integration, and testing of components in a completed system. He / she will accomplish calculations for structural strength, HVAC loads and requirements, system cooling requirements, and system weight and moment. He / she will provide support for installation site survey's and installation drawings. He / she will be responsible for developing project plans, guidelines and controls. He / she will generate system briefs, and technical papers in support of the task/delivery order task. He / she will evaluate mechanical hardware products which are commercially available, for use. He / she will coordinate and conduct environmental test evolutions, and review and analyze system environmental test data. He / she will review contractor or Government generated source data and will develop, or assist in development of, guidance documentation.
- b. Education: Must have at least a Bachelor of Science Degree in Mechanical Engineering or Physics.
- c. Progressive Experience: Must have a total of five (5) or more years of professional experience. Must have worked at least three (3) years in a small, medium, or large organization under multiple layers of management, providing direct support for design, development, and implementation of mechanical systems.
- d. Specific Experience: Must have operated in the lead or support role during accomplishment of environmental test evolutions in accordance with MIL-S-167, MIL-S-901D, and MIL-STD-810. At least three (3) of the last five (5) years work experience must be associated with the documentation, testing, and installation of Navy communications systems.

9. Engineer:

- a. General Description: The Junior Engineer is an entry-level position which may be utilized in any of the major disciplines including Electrical / Electronics, Computer, or Mechanical Engineering. The Junior Engineer will be responsible for providing assistance for other engineers in the given field. The general description for engineers in the appropriate field is applicable.
- b. Education: Must have at least a Bachelor of Science Degree in Electrical/Electronics Engineering, Computer Engineering, Mechanical Engineering, Physics, Computer Science or Mathematics.
- c. Progressive Experience: Must have at least one (1) year of general engineering experience in the Electrical/Electronic, Computer, or Mechanical Engineering discipline.
- d. Specific Experience. None

10. *Senior Analyst:(Resumes - 1)

- a. General Description: The Senior Analyst will be responsible for logical analysis, test, and evaluation of all programs within the contractual scope of work. He / she may perform comprehensive analysis of hardware/software concepts, design and test requirements. He / she will review, analyze, integrate and conduct test and evaluation of contractor or Government generated source data and develops interim documentation. He / she will perform system concept formulation, system design analysis, and subsystems design analysis. He / she will be responsible for developing project plans, guidelines and controls. He / she may act as the contractor's liaison with the SPAWARSYSCEN point of contact. He / she will ensure that all required reports are prepared and submitted. He / she will prepare briefing packages and presentations, attend project planning meetings with sponsors and other cognizant activities and contractors. He / she may provide workload forecasts and project manning requirements and will monitor task progress and expenditures to ensure that requirements are met and that ceiling limits are not exceeded. He / she will prepare task modifications as required and ensures that there are no interruptions in workflow. He / she will prepare costs estimates and maintain schedules and review all task expenditures to ensure that they have been properly allocated. He / she will review all task material and equipment requirements to ensure that all material is received as required and that long lead material and shortfalls are identified.

=====

Senior Analyst Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least a Bachelor of Science Degree in Electrical/Electronics Engineering, Physics, Computer Science or Mathematics.
- c. Progressive Experience: Must have a total of seven (7) or more years of professional experience. Must have at least five (5) years of progressive experience in C⁴ISR IT equipment, software, digital computers or microprocessors.
- d. Specific Experience: Must have at least five (5) years of the last seven (7) years experience as an analyst working with two or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, and JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, and ADNS.

=====

Senior Analyst Education and Experience Equivalence Option (B)

- b. Education: Must have at least an Associate Degree in a related technical discipline.
- c. Progressive Experience. Must have at least eight (8) years experience with analysis techniques, test and evaluation procedures or support requirements for P-3C, TSC, TCOMM or related C⁴ISR requirements.
- d. Specific Experience. Must have at least six (6) of the last eight (8) years experience with analysis techniques, test and evaluation procedures or support requirements for three (3) or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, and JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, and ADNS.

Senior Analyst Education and Experience Equivalence Option (C)

- b. Education. Must have at least a High School Diploma.
- c. Progressive Experience. Must have at least (15) years experience in planning, organizing, coordinating, and administering the work tasks as set forth in individual task/delivery orders for a project.
- d. Specific Experience. Must have at least eight (8) of the last fifteen (15) years experience with analysis techniques, test and evaluation procedures or support requirements for three (3) or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.

11. Analyst:

- a. General Description: The Analyst position will require expertise in logical analysis, test, and evaluation of all programs within the contractual scope of work. He / she will perform comprehensive analysis of hardware/software concepts, design and test requirements. He / she will review, analyze, integrate and conduct test and evaluation of contractor or Government generated source data and develop interim documentation. He / she may perform system concept formulation, system design analysis, and subsystems design analysis. He / she will be responsible for developing project plans, guidelines and controls. He / she will be responsible for analysis and documentation of segments or phases of broader, more complex projects.

Analyst Education and Experience Equivalence Option (A)

- b. Education: Must have at least an Associate's Degree in a related technical discipline.
- c. Progressive Experience: Must have at least ten (10) years of practical experience in logical analysis, test, and evaluation of all programs within the contractual scope of work. Must have at

least six (6) years of practical experience in support of C⁴I systems development or production programs.

- d. **Specific Experience:** Must have at least four (4) years of the last six (6) years experience shall be with analysis techniques, test and evaluation procedures or test support requirements for C⁴I systems. Must have at least four (4) of the last eight (8) years experience with analysis techniques, test and evaluation procedures or support requirements for three (3) or more of the following systems:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, and JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, and ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

Analyst Education and Experience Equivalence Option (B)

- b. **Education:** Must have at least a High School Diploma.
- c. **Progressive Experience:** Must have at least twelve (12) years of practical experience in logical analysis, test, and evaluation of all programs within the contractual scope of work. Must have at least eight (8) years of practical experience with analysis techniques, test and evaluation procedures or support requirements in support of C⁴I systems development or production programs.
- d. **Specific Experience:** Must have at least six (6) of the last ten (10) years experience with analysis techniques, test and evaluation procedures or support requirements for three (3) or more of the following systems:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, and JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, and ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

12. *Electronics Technician Supervisor: (Resume-2)

- a. **General Description:** The Electronics Technician Supervisor will be responsible for supervising and / or leading a team of Technical personnel. He / she will be responsible to provide direction, and performance evaluation for subordinate Technicians and technical personnel. He / she must have extensive experience in maintenance, troubleshooting and repair of electronic, and electrical hardware. He / she must be intimately familiar with electronic test equipment including digital voltmeters, oscilloscopes, protocol analyzers, signal generators, and spectrum analyzers. He / she must be fully familiar with the concepts and working principals of electronic systems and components. He / she must be familiar with the practices and principles used in technical drawings and manuals, and must be capable of using these guidance documents to troubleshoot or repair equipment. He / she must be familiar with Naval Installation specifications and standards including, NAVSEA 9090.310, Mil-Std-1399 Section 300, Information Assurance Publication IA PUB-5239-31/June 2000, and NSTISSAM TEMPEST / 2-95. He / she will be required to generate, evaluate, and modify technical documentation in support of program tasks. He / she

must be willing to travel to remote CONUS and OCONUS sites to maintain, repair, groom or certify electronic systems and components. He / she must generate written reports to document findings resulting from performance of a particular procedure, installation, certification, or technical assistance evolution.

=====

ET Supervisor Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least an Associates Degree in Computer Science, Electronics Technology. Curriculum must have dealt directly with the maintenance, troubleshooting, or repair of the following: digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- c. Progressive Experience: Must have at least fifteen (15) years of practical hands-on experience in the maintenance, troubleshooting, or repair of digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems. Must have worked at least seven (7) years as a Technician III, accomplishing System Operation and Verification and / or QA testing on Military electronics systems. A minimum of five (5) work years must have been accomplished in a supervisory capacity.
- d. Specific Experience: Must have at least ten (10) of the last fifteen (15) years in maintenance and repair of ship/submarine external communications equipment and systems. Must have work experience with at least five (5) of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

=====

ET Supervisor Education and Experience Equivalence Option (B)

=====

- b. Education: Designee(s) must be a graduate of a military Class A electronics school, a two year civilian technical electronics curriculum, or a four year trade apprenticeship training program. Curriculum must have dealt directly with the maintenance, troubleshooting, or repair of the following: digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- c. Progressive Experience: Have, as a minimum, twenty (20) years hands-on experience in the field of naval electronic systems and equipment. This experience must include operational, maintenance and managerial work assignments. Must have worked at least seven (7) years as a Technician III, accomplishing System Operation and Verification and / or QA testing on Military electronics systems. A minimum of five (5) work years must have been accomplished in a supervisory capacity.
- d. Specific Experience: Must have at least twelve (12) of the last fifteen (15) years in maintenance and repair of ship/submarine external communications equipment and systems. Must have work experience with at least five (5) of the following systems:

- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
- Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
- Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, EMS or ADNS.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, Or ADMS.

13. *Electronics Technician III: (Resumes - 5)

a. General Description: The Electronics Technician III must have extensive experience in maintenance, troubleshooting and repair of electronic and electrical hardware. He / she must be intimately familiar with electronic test equipment including digital voltmeters, oscilloscopes, protocol analyzers, signal generators, and spectrum analyzers. He / she must be fully familiar with the concepts and working principals of electronic systems and components. He / she must be familiar with the practices and principles used in technical drawings and manuals, and must be capable of using these guidance documents to troubleshoot or repair equipment. He / she will be required to generate, evaluate, and modify technical documentation in support of program tasks. He / she must be familiar with Naval Installation specifications and standards including, NAVSEA 9090.310, Mil-Std-1399 Section 300, Information Assurance Publication IA PUB-5239-31/June 2000, and NSTISSAM TEMPEST / 2-95. He / she must be willing to travel to remote CONUS and OCONUS sites to maintain, repair, groom or certify electronic systems and components. He / she must generate written reports to document findings resulting from performance of a particular procedure, installation, certification, or technical assistance evolution.

=====

ET III Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least an Associates Degree in Computer Science, Electronics Technology. Curriculum must have dealt directly with the maintenance, troubleshooting, or repair of the following: digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- c. Progressive Experience: Must have at least ten (10) years of practical hands-on experience in the maintenance, troubleshooting, or repair of digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems. Must have worked at least four (4) years as a Technician II, accomplishing System Operation and Verification or QA testing or component repair on Military electronics systems.
- d. Specific Experience. Must have at least six (6) years of the last eight (8) years, which must be in the maintenance and repair of at least five (5) the following systems, subsystems and equipment
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, EMS or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.
- =====

ET III Education and Experience Equivalence Option (B)

=====

- a. Education. Must have at least a High School Diploma plus satisfactory completion of an electronic trade school or Navy Electronics school.
- b. Progressive Experience. Must have at least of ten (10) years of practical hands-on experience in the maintenance, troubleshooting, or repair of digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems. Must have worked at least four (4) years as a Technician II, accomplishing System Operation and Verification or QA testing, or component repair on Military electronics systems.
- c. Specific Experience: Must have at least eight (8) years of last ten (10) years, which must be in the maintenance and repair of the following systems, which must be in the maintenance and repair of five (5) or more subsystems and equipment.
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

14. Electronics Technician II:

- a. General Description: The Electronics Technician II must be experienced in maintenance, troubleshooting and repair of electronic and electrical hardware. He / she must be familiar with electronic test equipment including digital voltmeters, oscilloscopes, protocol analyzers, signal generators, and spectrum analyzers. He / she must be familiar with the concepts and working principals of electronic systems and components. He / she must be familiar with the practices and principles used in technical drawings and manuals, and must be capable of using these guidance documents to troubleshoot or repair equipment. He / she must be willing to travel to remote CONUS and OCONUS sites to maintain, repair, groom or certify electronic systems and components. He / she must generate written reports to document findings resulting from performance of a particular procedure, installation, certification, or technical assistance evolution.

=====

ET II Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least an Associates Degree in Computer Science, Electronics Technology. Curriculum must have dealt directly with the maintenance, troubleshooting, or repair of the following: digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- c. Progressive Experience: Must have at least six (6) years of practical experience in the maintenance, troubleshooting, or repair of digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- d. Specific Experience: Must have at least four (4) years of the last six (6) years of experience which must be in the maintenance and repair of four (4) or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA

- Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, EMS or ADNS.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

=====

ET II Education and Experience Equivalence Option (B)

=====

- b. Education: Must have at least a High School Diploma plus satisfactory completion of an electronic trade school or Navy Electronics School.
- c. Progressive Experience: Must have at least eight (8) years appropriate experience in the maintenance, troubleshooting, or repair of digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- d. Specific Experience: Must have at least six (6) years of the last eight (8) years of experience which must be in the maintenance and repair of five (5) or more of the following systems.
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

15. Electronics Technician I:

- a. General Description: The Electronics Technician I will be required to perform duties in support of senior Technicians. He / she will be required to assist with maintenance, troubleshooting and repair of electronic and electrical hardware. He / she must be capable of utilizing technical drawings and manuals, as guides to maintain, repair, or assemble electrical and electronic components and support components, under the supervision of a senior technician. He / she will be required to utilize existing procedures and tests to document proper operation of equipment components and systems, under supervision of a senior technician. He / she must be willing to travel to remote CONUS and OCONUS sites in the company of a senior technician, to maintain, repair, groom or certify electronic systems and components.

=====

ET I Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least an Associates Degree in Electronics Technology.
 - c. Progressive Experience: Must have at least four (4) years appropriate experience in electronics, troubleshooting, and equipment repair. Computer or communications technician courses may be substituted for the education requirements.
 - d. Specific Experience: Must have at least two (2) years of experience in troubleshooting and repair of electronic equipment including digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, or modems.
- =====

ET I Education and Experience Equivalence Option (B)

- =====
- b. Education: Must have at least a High School Diploma plus satisfactory completion of an electronic trade school or Navy Electronics School.
 - c. Progressive Experience: Must have at least four (4) years appropriate experience in electronics, troubleshooting, equipment repair, computer or communications technician courses may be substituted for the Education and Specific Experience.
 - d. Specific Experience: Must have at least two (2) years of practical experience in two or more of the following:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, EMS or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

16. Electronics Assembler:

- a. General Description: The Electronics Assembler is an entry-level position for integration, and assembly of electronic and electrical components. He / she will be required to perform duties in support of senior Technicians. He / she will be required to utilize wiring tables or cable running sheets for the purpose of assembling electronic components, fabricating interconnecting cables, performing system checkouts, and troubleshooting the completed assemblies. He / she must be capable of utilizing basic test equipment.
- b. Education: Completion of an accredited High School or Trade School curriculum,
- c. Progressive Experience: Must have at least one year experience working with an electrical or electronics firm. Must be capable of reading electrical/electronic schematics and drawings and assembling complex equipment with sufficient supervision.
- d. Specific Experience: None.

17. *Communications Trainer: (Resumes - 3)

- a. General Description: The Communications Trainer is responsible for training U.S. Armed Forces personnel in operation, administration, and basic troubleshooting of communications systems. He / she must have excellent communications skills, and be intimately familiar with the hardware / software of interest. He / she will be required to generate, proof, and modify training documentation and curricula. He / she will be required to perform training on CONUS or OCONUS sites. He / she may be required to ride military ships or aircraft in performance of assigned tasks. He / she must have extensive experience in military communications methods, and practices, and be capable of providing instruction in these areas.
- b. Education: Completion of U.S. Navy Radioman A school or equivalent.
- c. Progressive Experience: Must have at least four (4) years experience in Military communications, at the rate of Radioman, Information Technology Specialist, or equivalent. Must have experience in conducting on-the-job training in various settings, along with providing classroom training for at least two (2) years. Must have assisted in, or accomplished,

development and revision of training curriculums, training courses, and instructor and student guides.

- d. Specific Experience: Must have detailed knowledge of Military message types including JANAP 128, ACP 126M, ACP 127, and ACP 123 message formats. Detailed knowledge of Military message transmission circuits including CUDIXS, RIXT, MMS, MODE1, SSIXS, ELF, SBC, SLVR and OTCIXS/TADIXS is required. At least two (2) years of experience in operating and maintaining NAVMACS, NAVMACS II, or SMS systems is required. Must have in-depth knowledge of UNIX and Windows computer operating systems and be capable of performing low level operation and configuration tasks. At least two (2) years experience in interfacing with computer systems on TCP/IP based networks, including network routers and directory servers, is required.

18. *Senior Logistics Technician: (Resumes - 1)

- a. General Description: The Senior Logistics Technician is responsible for overall direction of a group of Logistics Technicians. He / she must plan and schedule regular activities involved with logistic analysis of Military systems. He / she must interface with local and program sponsors to insure that logistics reviews and data are available for analysis. He / she must support logistics In Process Team (IPT) and Analysis meetings by analyzing logistics information and compiling it into completed reports or presentations. He / she must direct the effort to generate new, and maintain existing system APL's. He / she must insure that liaison with Inventory Control Authorities such as NAVSEALOGCEN, NAVICP and DLA are maintained and that up to date logistics information is exchanged, as it pertains to the system being supported. He / she must insure that Preventive Maintenance System documentation is current, and certified through the applicable NAVSEA activity. He / she generates, reviews, and corrects Technical Manual information in accordance with applicable standards. He / she assists with generation or modification of hardware training curricula in accordance with applicable standards.

=====

Senior Logistics Technician Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least a Bachelor 's Degree in Engineering, Mathematics, Science, Management or a related field.
- c. Progressive Experience: Must have at least eight (8) years on various Military programs involving the acquisition of logistics elements for system support, logistics planning to include establishment of maintenance and material management systems and equipment provisioning. At least two (2) years of management experience, directing a group of logistics oriented personnel, is required.
- d. Specific Experience: Four (4) of the last six (6) years of work experience must be involved with management of the following ILS elements: Test Equipment Support; Technical Data; Training and Training Support; Computer Resources Support; and Packaging, Handling, Storage and Transportation. Certified Reliability Center Maintenance Level II (RCM) Technician. In-depth knowledge of the Navy Supply System, and experience in integrated logistics support planning and implementation for Naval Systems including at least two (2) of the following is required:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS.
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

Senior Logistics Technician Education and Experience Equivalence Option (B)

- b. Education: Completion of an accredited High School or Trade School with US Naval Military training centering on Supply Support.
- c. Progressive Experience: A minimum of ten (10) years total experience in U.S. Military logistics support providing documentation, acquisition, management, and distribution of material, equipment, and resources necessary for the coordinated completion of projects. At least two (2) years of management experience, directing a group of logistics oriented personnel, is required.
- d. Specific Experience: Four (4) of the last six (6) years of work experience must be involved with management of the following ILS elements: Test Equipment Support; Technical Data; Training and Training Support; Computer Resources Support; and Packaging, Handling, Storage and Transportation. Must be a certified Reliability Center Maintenance Level II (RCM) Technician. In-depth knowledge of the Navy Supply System, and experience in integrated logistics support planning and implementation for Naval Systems including at least two (2) of the following is required:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

19. *Logistics Technician: (Resumes - 1)

- a. General Description: The Logistics Technician is responsible for development, review, and maintenance of logistics documents. He / she must support logistics In Process Team (IPT) and Analysis meetings by analyzing logistics information and compiling it into completed reports or presentations. He / she must develop new, and maintain existing system APL's. He / she must provide liaison with other logistics activities such as NAVSEALOGCEN, NAVICP and DLA and insure that up to date logistic information is exchanged, as it pertains to the system being supported. He / she must provide assistance for generation and maintenance of Preventive Maintenance System (PMS) documentation. He / she develops, reviews, and corrects Technical Manual information in accordance with applicable standards. He / she assists with generation or modification of hardware training curricula in accordance with applicable standards.

Logistics Technician Education and Experience Equivalence Option (A)

- b. Education: Completion of an Associates Degree.
- c. Progressive Experience: Must have at least four (4) years of general and practical experience in progressively responsible technical duties which include: providing maintenance, inventory storage, cataloging, property use and material coordination through technical supply management, provisioning, data analysis, report preparation and integrated logistic support.
- d. Specific Experience: Must be a certified Reliability Center Maintenance Level II (RCM) Technician. Must have at least three (3) years experience in providing maintenance, inventory storage, cataloging, property use and material coordination through technical supply management, provisioning, data analysis, and report preparation for two (2) or more of the following systems:

- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
- Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
- Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
- Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.
-

Logistics Technician Education and Experience Equivalence Option (B)

- b. Education: Must be a High School Graduate.
- c. Progressive Experience: Must have at least five (5) years of general and practical experience in progressively responsible technical duties which include: providing maintenance, inventory storage, cataloging, property use and material coordination through technical supply management, provisioning, data analysis, report preparation and integrated logistic support.
- d. Specific Experience: Must be a certified Reliability Center Maintenance Level II (RCM) Technician. Must have at least four (4) years experience in providing maintenance, inventory storage, cataloging, property use and material coordination through technical supply management, provisioning, data analysis, and report preparation for two (2) or more of the following systems:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.

20. Computer Data/Technical Library Specialist:

- a. General Description: The Computer Data / Technical Library Specialist is required to manage documents and technical information for access by Military and civilian users. He / she must be thoroughly familiar with standard library techniques including: listing/ cataloging, filing, researching incoming and currently held library material, updating documents/publications and supplements, establishing and maintaining an inventory/check-out control system for library documentation, and ordering documents, publications and reference materials. He / she will be responsible for maintenance of large volumes of electronic documents on distributed computer systems, and in hardcopy form. He / she will be responsible for duplication of information to various media formats including CD-RW, DDS tape, and floppy disk. He / she will be responsible for distribution of various Technical Manuals in both electronic and paper formats, as well as tracking their delivery. He / she will be required to generate reports detailing document duplication and distribution for task leaders.
- b. Education: Must be a High School Graduate.
- c. Progressive Experience: Must have at least three (3) years military or civilian work experience using standard library techniques.
- d. Specific Experience: Must have specific experience utilizing duplication media such as CD-RW or DDS tape drives. Must be capable of using Windows NT or UNIX based duplication software and utilities.

21. Supply Specialist:

- a. General Description: The Supply Specialist ensures that all Government Furnished Equipment or Material (GFE/GFM) or other specified materials are properly procured, received, and segregated by division, sponsored program, and functional areas. He / she must be completely familiar with the Navy supply system for acquisitions and control and will be required to accomplish equipment purchase through the National Stock System, Government Contracts, or via open commercial sources. He / she must be knowledgeable of Navy Transportation Systems operations as related to preparation of documentation for shipping, receiving, tracking, and controlling material. He / she is responsible for the coordination of incoming and outgoing shipments and producing the paperwork and supporting documentation to accompany them through the Navy Transportation System. He / she may provide general supervision for warehousing and supply functions.
- b. Education: Must be a High School Graduate.
- c. Progressive Experience: Must have at least five (5) years military or civilian experience in the performance of all aspects of technical supply management work such as inventory management, storage management, cataloging, property utilization related to depot, local or other supply activities.
- d. Specific Experience: Must have two (2) years experience interacting with SPAWAR procuring and shipping personnel.

22. Warehouse Specialist:

- a. General Description: The Warehouse Specialist will perform a variety of tasks, aimed at directing, tracking and supporting movement of material from a warehouse or storage facility, to intermediate locations. He / she will be required to verify materials (or merchandise) against receiving documents, and note or report discrepancies and obvious damages. He / she will be responsible for maintaining an electronic database which details components, part numbers, serial numbers, quantities, and locations. He / she will be responsible for routing of materials to prescribed storage locations and storing, stacking, or palletizing materials in accordance with prescribed storage methods. He / she shall be capable of operating a warehouse complex and performing related duties including inventory, staging, packing, storage and shipping of electronic equipment and related material. . He / she must operate hand or power trucks in performing warehouse duties.
- b. Education: Must be a High School Graduate.
- c. Progressive Experience: Must have at least two (2) years experience working in a warehouse or material management environment.
- d. Specific Experience: Must have utilized a computer-based inventory and bar coding system for entry, identification and tracking of material.

23. Laborer (Material Handling):

- a. General Description: The Material Handling Laborer is required to perform physical tasks to transport or store materials or merchandise. Duties involve one or more of the following: Manually loading or unloading freight cars, trucks, or other transporting devices; unpacking, shelving, or placing items in proper storage locations; or transporting goods by hand-truck, cart, or wheelbarrow. He / she shall be capable of assisting technicians and engineers where no technical expertise or education is required.
- b. Education: Must be a High School Graduate or equivalent.

- c. Progressive Experience: None
- d. Specific Experience: None.

24. *Quality Assurance/Control Specialist: (Resumes - 1)

- a. General Description: The Quality Assurance / Control Specialist is responsible for Insuring that systems, components, and software are properly assembled, and operate in accordance with guidance specifications. As such, he / she must be intimately familiar with electronic test equipment including digital voltmeters, oscilloscopes, protocol analyzers, signal generators, and spectrum analyzers. He / she must be fully familiar with the concepts and working principals of electronic systems and components. He / she must be familiar with the practices and principles used in technical drawings and manuals, and must be capable of using these guidance documents to identify defective systems, hardware, or operational software. He / she will be required to review, generate, evaluate, and modify technical documentation in support of program tasks. That documentation will include Technical Manuals, Operator and Administrative manuals, test procedures and special procedures. He / she must be familiar with Naval Installation specifications and standards including, NAVSEA 9090.310, Mil-Std-1399 Section 300, Information Assurance Publication IA PUB-5239-31/June 2000, and NSTISSAM TEMPEST / 2-95. He / she must generate written reports to document findings resulting from performance of a particular Quality Assurance procedure or test evolution. He / she must have excellent communications skills, and be capable of positively transferring knowledge of problems encountered to other engineers or technicians. He / she must have extensive experience in military communications methods, and practices, and be capable of providing instruction in these areas.

=====

Quality Assurance Technician Education and Experience Equivalence Option (A)

=====

- b. Education: Must have at least an Associates Degree in Computer Science, Electronics Technology. Curriculum must have dealt directly with the maintenance, troubleshooting, or repair of the following: digital computers, computer peripheral/interface equipment, VME based systems, digital multiplexers, switches, radio frequency transmitters, receivers, antennas, and modems.
- c. Progressive Experience: Must have at least five (5) years with training in quality assurance/quality control programs and two (2) years of quality assurance/quality control experience an various Navy electronic system, subsystem or computer software programs
- d. Specific Experience: Must have in-depth knowledge and expertise in quality assurance/quality control programs. Must have in-depth knowledge of UNIX and Windows computer operating systems and their operation and configuration. Experience must include two (2) years on various Navy programs involving state-of the-art communication systems, electronic systems, and subsystems or computer software. Must have at least four (4) of the last seven (7) years, which must be quality assurance / quality control two (2) or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.

=====

Quality Assurance Technician Education and Experience Equivalence Option (B)

=====

- b. Education: Must have at least a High School Diploma plus satisfactory completion of an electronic trade school or Navy Electronics school.
- c. Progressive Experience: Must have at least ten (10) years appropriate experience in quality assurance/quality control programs on various Navy electronic systems, subsystem or computer software programs may be substituted for the Education and Specific Experience requirements.
- d. Specific Experience: Must have in-depth knowledge of UNIX and Windows computer operating systems and their operation and configuration. Must have at least five (5) years of the last eight (8) years, which must be quality assurance / quality control four (4) or more of the following systems:
 - Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.

25. Supervisory Drafter:

- a. General Description: The Supervisory is responsible for scheduling and directing Drafter personnel in a coordinated effort to complete tasks. He / she will develop estimates for drafting services upon request. He / she must fulfill requirements of Drafter. He / she must be capable of preparing complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Performs highly complex and unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. He / she regularly provides review and first-line approval for drawings and drawings packages produced by lower level draftspersons and insures that all drawings are produced in accordance with applicable guidance documents. He / she insures that problems involved in the manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on knowledge design intent. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. He / she must be capable of working from sketches and verbal information supplied by an engineer or designer determines the most appropriate views, detail drawings, and supplemental information needed to complete assignments in accordance with any and all applicable guidelines and specifications. He / she must select required
- b. Education: Must have at least an Associate Degree in Electronic Technology.
- c. Progressive Experience: Must have at least twelve (12) years of drafting experience and complete familiarity with official drawing guidelines, specifications, and procedures. Must have performed in a supervisory role for at least (2) years.
- d. Specific Experience:
 - At least eight (8) years of experience utilizing AutoCAD 2000 or later Computer Aided Design (CAD) software.
 - At least eight (8) years experience developing Military specific drawing packages including: Ships Installation Drawings (SIDs), Ship Alterations (ShipAlts), Temporary Alterations (TempAlts), Installation Control Drawings (ICDs), Installation Design Packages (IDPs), Basic Electronic Systems Engineering Plans (BESEP's) or As-Built drawings.

26. Drafter III:

- a. General Description: The Drafter generates technical drawings for use in installations, or system documentation. He / she must be capable of preparing complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features, which require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. He / she must be capable of working from sketches and verbal information supplied by an engineer or designer determines the most appropriate views, detail drawings, and supplemental information needed to complete assignments in accordance with any and all applicable guidelines and specifications. He / she must select required information from precedents, manufacturers' catalogs, and technical guides and independently resolve most problems encountered. He / she may be required to work on-site with engineer or designer to produce initial sketches of remote-site work and prepare complete sets of drawings, as described above, from these sketches. He / she will be required to produce sketches which can be passed to lower level draftspersons for drawing generation and must be able to provide all necessary guidance to lower level draftspersons for resolution of all but the complex or unusually difficult problems.
- b. Education: Must have at least an Associate Degree in Electronic Technology.
- c. Progressive Experience: Must have at least eight (8) years of drafting experience.
- d. Specific Experience:
 - At least five (5) years of experience utilizing AutoCAD 2000 or later Computer Aided Design (CAD) software.
 - At least five (5) years experience developing Military specific drawing packages including: Ships Installation Drawings (SIDs), Ship Alterations (ShipAlts), Temporary Alterations (TempAlts), Installation Control Drawings (ICDs), Installation Design Packages (IDPs), Basic Electronic Systems Engineering Plans (BESEP's) or As-Built drawings.

27. Drafter I:

- a. General Description: The Drafter 1 is an entry-level position required for production of technical drawings. Must be capable of preparing various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, and sources of information and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are to be produced from sketches, which clearly depict the desired product or results.
- b. Education: Must have at least an Associate Degree in Electronic Technology
- c. Progressive Experience: Must have at least four (4) years of drafting experience.
- d. Specific Experience: Must have generated electrical / electronic drawings and diagrams utilizing AutoCAD 2000 or higher.

28. Computer Operator II:

- a. General Description: The Computer Operator II is an advanced-level position responsible for general office support. Designee(s) must possess an ability to process scheduled routines which present few difficult operating problems (e.g., infrequent or easily resolved error conditions); apply standard operating or corrective procedures in response to computer output instructions or

error conditions; refers problems which do not respond to preplanned procedure to supervisor. He / she shall be capable of researching logistical or technical problems, and compiling them in report format. He / she must have the ability to collect, organize and enter data into the computer via keyboard. He / she will be expected to prepare word processing documents with extensive tabular statistical information and create and manipulate spreadsheets. He / she must be capable of working with, and instructing other Computer Operator workers in work procedures and document formats.

- b. Education: Must have at least a n Associates Degree in Secretarial or Office Automation curricula.
- c. Progressive Experience: Designee(s) must have worked in an office environment for at least five (5) years.
- d. Specific Experience: Must have at least three (5) years of practical experience in data entry and formatting via common productivity tools such as the Microsoft Office Suite.

29. Computer Operator I:

- a. General Description: The Computer Operator 1 is an entry-level position responsible for general office support. Designee(s) must possess an ability to process scheduled routines which present few difficult operating problems (e.g., infrequent or easily resolved error conditions); apply standard operating or corrective procedures in response to computer output instructions or error conditions; refers problems which do not respond to preplanned procedure to supervisor. He / she shall be capable of researching logistical or technical problems, and compiling them in report format. He / she must have the ability to collect, organize and enter data into the computer via keyboard. He / she will be expected to prepare word processing documents with extensive tabular statistical information and create and manipulate spreadsheets
- b. Education: Must have at least a High School Diploma
- c. Progressive Experience: Designee(s) must have worked in an office environment for at least two (2) years.
- d. Specific Experience: Basic knowledge of, and experience with standard word processing, presentation, spreadsheet and scheduling productivity applications. Familiarity with Microsoft Office or other computer office suites is essential. Applicant will be expected to prepare word processing documents with extensive tabular statistical information, template proficiency, create and manipulate spreadsheets. Must be capable of typing at a rate of 40 words per minute or greater.

30. *Technical Writer/Editor: (Resumes –1)

- a. General Description: The Technical Writer is required to produce or edit technical documents for Military systems. He / she will be required to research military systems and or components and generate technical documentation in accordance with applicable standards and formats. He / she will be required to utilize varied information sources including commercial documentation, military documentation, library information, and internet based information to produce adequate technical documents. He/ she will be required to interface with program engineers and technicians to retrieve data concerned with specific hardware or administrative or operational procedures, which must be included in the technical documents. He / she will be required to generate or incorporate figures, and drawings which illustrate system components and interconnection. Knowledge of and familiarity with various Windows NT and UNIX based electronic document management software packages will be required. He / she will be responsible for reviewing and maintaining existing documents and providing modifications and updates as required.

Technical Writer Education and Experience Equivalence Option (A)

- b. Education: Must have at least a Bachelor's degree in English, Journalism or Technical Writing.
- c. Progressive Experience: Must have at least five (5) years of experience in the actual writing and editing of technical documentation dealing with Technical Manuals, Development, Test and Evaluation or Integrated Logistics Support of Military Communications systems.
- d. Specific Experience: Must have significant experience utilizing software tools including Microsoft Word, Adobe Framemaker, AutoCad 2000, Visio 2000, or similar editing and illustrating tools. Must have significant experience utilizing electronic document scanners and digital cameras, and transfer of captured information to electronic media. Must have at least two (2) years of experience in the actual writing and editing of technical documentation dealing with Technical Manuals, Development, Test and Evaluation or Integrated Logistics Support of the following systems:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

Technical Writer Education and Experience Equivalence Option (B)

- b. Education: Must have at least an Associates Degree in English, Journalism or Technical Writing.
- c. Progressive Experience. Must have at least eight (8) years of experience in the actual writing and editing of technical documentation dealing with Technical Manuals, Development, Test and Evaluation or Integrated Logistics Support of Military Communications systems.
- d. Specific Experience. Must have significant experience utilizing software tools including Microsoft Word, Adobe Framemaker, AutoCad 2000, Visio 2000, or similar editing and illustrating tools. Must have significant experience utilizing electronic document scanners and digital cameras, and transfer of captured information to electronic media. Must have at least four (4) years of experience in the actual writing and editing of technical documentation dealing with Technical Manuals, Development, Test and Evaluation or Integrated Logistics Support of the following systems:
- Messaging Systems Afloat including DMS, NAVMACS, NAVMACS II, SMS, or JMHS
 - Messaging Systems Ashore including DMS, CUDIXS, FMX/DUSC, NAVMACS II, PCMT, MMS or NOVA
 - Communications Networks including DMS, DTH (AUTODIN), ISNS, TIDS, or ADNS.
 - Satellite Communications systems including UHF, DAMA, EHF, NECC, SHF, or ADMS.

(a) The contractor shall participate in the Government-Industry Data Exchange Program (GIDEP) under the latest revision of GIDEP Requirements Guide, NAVSEA S0300-BU-GYD-010. GIDEP is an invaluable tool in the government's war against inefficiency, and is limited to participating activities. GIDEP will retain and provide data and/or reports provided in compliance with this contract on a privileged basis. Compliance with the provisions of this clause shall not relieve the contractor from complying with other provisions of the contract.

(b) The contractor may insert paragraph (a) of this clause in any subcontract hereunder exceeding \$500,000. When so inserted, the word "contractor" shall be changed to "subcontractor."

GIDEP materials, software and information are available without charge from:

GIDEP Operations Center
PO Box 8000
Corona, CA 91718-8000

Phone: (909) 273-4677 or DSN 933-4677

FAX: (909) 273-5200

Internet: <http://www.gidep.corona.navy.mil>

C-313 SECURITY REQUIREMENTS

The work to be performed under this contract as delineated in the DD Form 254, Attachment No. 1, involves access to and handling of classified material up to and including **SECRET**.

In addition to the requirements of the FAR 52.204-2 "Security Requirements" clause, the Contractor shall appoint a Security Officer, who shall (1) be responsible for all security aspects of the work performed under this contract, (2) assure compliance with the National Industry Security Program Operating Manual (DODINST 5220.22M), and (3) assure compliance with any written instructions from the Security Officer, SPAWAR System Center Charleston.

C-314 DISPOSITION OF GOVERNMENT FURNISHED PROPERTY

When disposition instructions for Government Furnished Property are contained in the accountable contract or on the supporting shipping documents (DD Form 1149) the Contractor shall initiate and submit an excess inventory listing to the Procuring Contracting Officer (PCO), via the activity Property Administrator.

When disposition instructions are not stipulated in the contract or supporting shipping document (DD Form 1149) and excess inventory listing identifying Government Furnished Property and, under cost reimbursement contracts, Contractor Acquired Property, will also be submitted to the PCO, via the activity Property Administrator, at which time disposition instructions will be provided.

At the time of the Contractor's regular annual inventory, the Contractor will provide the PCO, via the activity Property Administrator, a copy of the physical inventory listing.

C-315 WORKWEEK

(a) All or a portion of the effort under this contract will be performed on a Government installation. The normal workweek for Government employees at Space and Naval Warfare Systems Charleston is 8:00 AM to 4:30 PM. Work at this Government installation, shall be performed by the contractor within the normal workweek unless differing hours are specified on the individual task orders. Following is a list of holidays observed by the Government:

<u>Name of Holiday</u>	<u>Time of Observance</u>
New Year's Day	1 January
Martin Luther King Jr. Day	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	4 July
Labor Day	First Monday in September
Columbus Day	Second Monday in October
Veteran's Day	11 November
Thanksgiving Day	Fourth Thursday in November
Christmas Day	25 December

(b) If any of the above holidays occur on a Saturday or a Sunday, then such holiday shall be observed by the Contractor in accordance with the practice as observed by the assigned Government employees at the using activity.

(c) If the Contractor is prevented from performance as the result of an Executive Order or an administrative leave determination applying to the using activity, such time may be charged to the contract as direct cost provided such charges are consistent with the Contractor's accounting practices.

(d) This contract does not allow for payment of overtime during the normal workweek for employees who are not exempted from the Fair Labor Standards Act unless expressly authorized by the Ordering Officer. Under Federal regulations the payment of overtime is required only when an employee works more than 40 hours in a normal week period.

C-317 NOTICE TO CONTRACTOR OF CERTAIN DRUG DETECTION PROCEDURES

(a) Pursuant to Navy policy applicable to both Government and contractor personnel, measures will be taken to prevent the introduction and utilization of illegal drugs and related paraphernalia into Government Work areas.

(b) In furtherance of the Navy's drug control program, unannounced periodic inspections of the following nature may be conducted by installation security authorities:

(1) Routine inspection of contractor occupied work spaces.

(2) Random inspections of vehicles on entry or exit, with drug detection dog teams as available, to eliminate them as a safe haven for storage of or trafficking in illegal drugs.

(3) Random inspections of personnel possessions on entry or exit from the installation.

(c) When there is probable cause to believe that a contractor employee on board a naval installation has been engaged in use, possession or trafficking of drugs, the installation authorities may detain said employee until the employee can be removed from the installation, or can be released to the local authorities having jurisdiction.

(d) Trafficking in illegal drug and drug paraphernalia by contract employees while on a military vessel/installation may lead to possible withdrawal or downgrading of security clearance, and/or referral for prosecution by appropriate law enforcement authorities.

(e) The contractor is responsible for the conduct of employees performing work under this contract and is, therefore, responsible to assure that employees are notified of these provisions prior to assignment.

(f) The removal of contractor personnel from a Government vessel or installation as a result of the drug offenses shall not be cause for excusable delay, nor shall such action be deemed a basis for an equitable adjustment to price, delivery or other provisions of this contract.

C-319 LIABILITY INSURANCE--COST TYPE CONTRACTS

(a) The following types of insurance are required in accordance with the FAR 52.228-7 "Insurance--Liability to Third Persons" clause and shall be maintained in the minimum amounts shown:

- (1) Workers' compensation and employers' liability: minimum of \$100,000
- (2) Comprehensive general liability: \$500,000 per occurrence
- (3) Automobile liability: \$200,000 per person
\$500,000 per occurrence
\$ 20,000 per occurrence for property damage

(b) When requested by the contracting officer, the contractor shall furnish to the Contracting Officer a certificate or written statement of insurance. The written statement of insurance must contain the following information: policy number, policyholder, carrier, amount of coverage, dates of effectiveness (i.e., performance period), and contract number. The contract number shall be cited on the certificate of insurance.

C-324 OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS

(a) If performance of any work under this contract is required at a SPAWARSCEN Charleston facility, the Contractor shall contact the SPAWARSCEN Charleston Safety and Environmental Office, Code 0AD, prior to performance of ANY work under this contract.

(b) Contractors are responsible for following all safety and health related State and Federal statutes and corresponding State, Federal and/or Navy regulations protecting the environment, contractor employees, and persons who live and work in and around contractor and/or federal facilities.

(c) Contractors shall monitor their employees and ensure that they are following all safety regulations particular to the work areas. Contractors shall ensure that their employees (i) wear appropriate safety equipment and clothing, (ii) are familiar with all relevant emergency procedures should an accident occur, and (iii) have access to a telephone and telephone numbers, to include emergency telephone numbers, for the SPAWARSCEN Charleston facility where work is performed.

C-325 KEY PERSONNEL

(a) The offeror agrees to assign to this contract those key personnel listed in paragraph (d) below. No substitutions shall be made except in accordance with this clause.

(b) The offeror agrees that during the first **30** days of the contract performance period no personnel substitutions will be permitted unless such substitutions are necessitated by an individual'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 required by paragraph (c) below. After the initial 30 day period, all proposed substitutions must be submitted in writing, at least fifteen (15) days (thirty (30) days if a security clearance is to be obtained) in advance of the proposed substitutions to the contracting officer. These substitution requests shall provide the information required by paragraph (c) below.

(c) All requests for approval of substitutions under this contract must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. They must contain a complete resume for the proposed substitute or addition, and any other information requested by the Contracting Officer or needed by him to approve or disapprove the proposed substitutions. All substitutions proposed during the duration of this contract must have qualifications of the person being replaced. The Contracting Officer or his authorized representative will evaluate such requests and promptly notify the contractor of his approval or disapproval thereof in writing.

(d) List of Key Personnel

*Names of Key Personnel shall be included at time of contract award.

<u>*NAME</u>	<u>CONTRACT LABOR CATEGORY</u>
_____	Computer Engineer
_____	Electronics / Electrical Engineer
_____	Senior Analyst
_____	Electronics Technician Supervisor
_____	Electronics Technician III
_____	Communications Trainer
_____	Senior Logistics Technician
_____	Logistics Technician
_____	Quality Assurance/Control Specialist
_____	Technical Writer/Editor

(e) If the Contracting Officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated or have otherwise become unavailable for the contract work is not reasonably forthcoming or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the Contracting Officer for default or for the convenience of the Government, as appropriate. In addition, if the Contractor is found at fault for the condition, the Contracting Officer may elect to equitably decrease the contract price or fixed fee to compensate the Government for any resultant delay, loss or damage.

(f) If the offeror wishes to add personnel to be used in a labor category he shall employ the procedures outlined in paragraph (c) above. Adding personnel will only be permitted in the event of an indefinite quantity contract, where the Government has issued a delivery order for labor hours that would exceed a normal forty hour week if performed only by the number of employees originally proposed.

C-326 DELIVERY/TASK ORDER PROCEDURES - ALTERNATE I

Both level of effort (term) and completion type orders may be issued under this contract. Each delivery or task order will include the order type deemed appropriate by the Government.

(a) *Procedures.* Each delivery/task order shall be placed in accordance with the following procedures:

(1) Upon identification of a requirement, the Contracting Officer’s Representative (COR) or originator shall contact the Contractor for the purpose of arriving at a common understanding of the technical components which constitute the basis for performance under this delivery/task order and identifying the elements necessary for preparing a detailed Statement of Work (SOW) which contains sufficient definition to allow all parties to clearly identify an end product consistent with the scope of the contract.

(2) Within five (5) days, the Contractor shall submit to the COR and/or originator a signed submittal which includes a complete SOW, breakdown of labor, material, and ODCs in accordance with Section B of the basic contract. Discussions may be held with the contractor to resolve/clarify any discrepancies. After both parties have reached agreement regarding the technical requirements of the SOW and the cost estimate, the Contractor and the COR and/or originator shall sign and date the document to signify their common understanding of the delivery/task order requirements. The electronic copy of the complete SOW shall be submitted in Microsoft Word 97 with the following formatting characteristics: (1) No headers and/or footers; (2) One-inch (1”) margins all around; (3) Times New Roman 10 font; (4) Portrait orientation; (5) Track changes accepted or rejected; and (6) Normal Style.

(3) A complete package, including the signed estimate will be forwarded by the COR to the Ordering Officer for final review and award of the delivery/task order. The cost estimate from the Contractor shall contain the following information to enable the Ordering Officer to make a determination of price reasonableness:

(i) Cost Plus Fixed Fee (CPFF).

(A) Direct labor, including labor categories, hours, rates and total.

(B) Indirect Rates.

(C) Other Direct Costs (ODCs).

1. Travel identified in the SOW needs only a total cost. Travel requirements not identified in the SOW must be fully documented including destination, number of people, number of days, airfare, per diem, car rental and other charges.

2. Material exceeding a unit price of \$2,500 must be itemized. All other materials need only a total cost.

3. Equipment must be identified as Information Technology (IT) or non-IT. All IT equipment must be itemized. Non-IT equipment exceeding a unit price of \$2,500 must be itemized. All other equipment not identified above needs only a total cost.

4. Other, as required by the proposed task/delivery order.

(D) Subcontractors. Subcontractors need only submit total cost with labor categories and hours to the prime contractor. Costs, with the same level of detail as submitted by the prime contractor for the task/delivery order, shall be submitted directly to the Government by the subcontractor.

(E) Consultants. Consultants need only submit total cost with labor categories and hours to the prime contractor. Costs, with the same level of detail as submitted by the prime contractor for the task/delivery order, shall be submitted directly to the Government by the subcontractor.

(F) Other Information.

1. A statement that the cost estimate is based upon either a completion or level of effort task and the anticipated duration of the delivery/task order.

2. For Small Business and 8(a) set-asides, the Contractor shall state that they are in compliance with the FAR 52.219-14 clause.

(G) Fee as specified in basic contract.

(H) Any backup documentation not provided when you submit your cost estimate may be requested later by the Ordering Officer.

(4) Once the Ordering Officer/Administrator has reviewed and accepted the Contractor's cost estimate, a DD Form 1155 will be executed by the Contracting Officer/Ordering Officer and sent to the Contractor as notice to begin work. The Contractor is cautioned that no work is to be started prior to receipt of a properly signed and executed DD Form 1155, Order for Supplies/Services. If the cost estimate is insufficient or discussions are needed, the administrator will contact the Contractor to negotiate requirements.

(b) *Content and Effect.* Each CPFF delivery/task order shall include:

(i) Effective date of order,

(ii) Contract and delivery/task order numbers,

(iii) Type of delivery/task order (i.e., completion or term),

(iv) Estimated hours (provided for information only on completion-type orders),

(v) Estimated cost, fee or price,

(vi) Scope, including reference to applicable (contract) specifications,

(vii) Delivery or performance date,

(viii) Place of delivery or performance,

(ix) Accounting and appropriation data, and

(x) Other information as appropriate (e.g., Government Furnished Property, material, or facilities to be made available for performance of the order; safety requirements; security requirements set forth on DD Form 254; data requirements set forth on DD Form 1423; etc.).

(c) *Maintenance of Records.* The Contractor shall maintain the following cost records under this contract as a minimum:

(1) Records for each delivery/task order, indicating the number of hours of direct labor performed, segregated to the individual employee performing the work,

(2) Records for each individual employee, identifying direct labor performed and segregated as to delivery/task order for which performed, and

(3) Records of all direct non-labor costs, allocated to individual delivery/task order.

(4) Nothing herein shall be deemed to excuse the Contractor from maintaining records required by other provisions of this contract.

(d) *Contractor Notification.* (1) The Contractor is responsible for immediately notifying the Ordering Officer/Administrator of any difficulties in performing in accordance with the terms of the order.

(2) Each delivery or task order under a cost reimbursement contract is deemed to include the FAR 52.232-20 "Limitation of Cost" or the FAR 52.232-22 "Limitation of Funds" clause, whichever is applicable.

C-329 CONTRACTOR RESPONSIBILITY DURING DESTRUCTIVE WEATHER CONDITIONS

During imminent destructive weather conditions, contractors working within government confines are required to secure all materials and equipment for the tasks and projects assigned to ensure proper protection and avoidance of potential hazards, unless otherwise advised by the Government On-Site Representative or the COR. Furthermore, contractors may be tasked under an existing contract or order to provide assistance as needed for any recovery. Tasking for such assistance does not authorize the contractor to exceed the actual or "Not to Exceed" amount stated on the task order or contract modification. At no time, shall the contractor place or expose its employees or any other person to life threatening or personally hazardous conditions.

C-701 YEAR 2000 COMPLIANCE REQUIREMENT--INFORMATION TECHNOLOGY

(a) All information technology (IT), whether commercial or noncommercial, delivered under this contract that will be required to perform date/time processing involving dates subsequent to December 31, 1999, shall be Year 2000 compliant when properly installed, operated, and maintained in accordance with the contract specifications and applicable documentation. If the contract requires that specific deliverables operate together as a system, this requirement shall apply to those deliverables as a system.

(b) Definitions

"Commercial items" is defined at the FAR 52.202-1 "Definitions" clause of this contract.

"Information technology" or "IT" as used in this requirement, means any equipment, or interconnected system(s) or subsystem(s) of equipment, that is used in the automatic acquisition storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency.

- (1) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency which—
 - (i) Requires the use of such equipment; or
 - (ii) Requires the use, to significant extent, of such equipment in the performance of a service or the furnishing of a product.
- (2) The term "information technology" includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources.
- (3) The term "information technology" further includes for this contract—
 - (i) Any equipment that is acquired by a contractor incidental to a contract; or
 - (ii) Any IT (regardless of the course) used by the contractor in the performance of this contract to develop or modify IT under the requirements of this contract, or
 - (iii) Any equipment that contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are information technology.

“Year 2000 compliant” means that the IT accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to *the extent* that other IT, used in combination with the IT being delivered, properly exchanges date/time data with it. The “*proper exchange*” of date/time data shall be in accordance with the interface requirements specification(s) of the contract.

(c) For line item deliverables which are commercial items, and which include commercial IT, the terms and conditions of the standard commercial warranty covering such commercial IT shall apply in addition to, and to the extent such terms and conditions are consistent with this requirement. Any applicable commercial warranty shall be incorporated into this contract by attachment.

(d) Notwithstanding any provision to the contrary in any warranty of this contract, or in the absence of any such warranty or warranties, the remedies available to the Government under this requirement shall include those provided in the inspection clause(s) of this contract. Nothing in this requirement shall be construed to limit any rights or remedies the Government may otherwise have under this contract.

(e) Unless specified elsewhere in the contract, the Contractor will also deliver to the Government a report summarizing any Year 2000 compliance testing that was performed and the results thereof.

(f) The remedies available to the Government for noncompliance with this requirement shall remain available *until 31 January 2002 or one hundred eighty (180) days* after acceptance of the last deliverable IT, item under this contract (including any option exercised hereunder), *whichever is later*. The remedies of this specification are in addition to all otherwise existing remedies, including, but not limited to, latent defect remedies.

C-719 EXEMPTION FROM ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY REQUIREMENTS (JUN 2001)

(a) The Government has determined that the following exemption(s) to the Electronic and Information Technology (EIT) Accessibility Standards (36 C.F.R. § 1194) are applicable to this procurement:

- The EIT to be provided under this contract has been designated as a National Security System.
- The EIT acquired by the contractor is incidental to this contract.
- The EIT to be provided under this contract would require a fundamental alteration in the nature of the product or its components in order to comply with the EIT Accessibility Standards.
- The EIT to be provided under this contract will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment.
- Compliance with the EIT Accessibility Standards would impose an undue burden on the agency.
- The EIT to be provided under this contract is purchased in accordance with FAR Subpart 13.2 prior to January 1, 2003.

(b) Notwithstanding that an exemption exists, the Contractor may furnish supplies or services provided under this contract that comply with the EIT Accessibility Standards (36 C.F.R. § 1194).

SECTION D Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

D-305 PREPARATION FOR DELIVERY

(a) Supplies shall be prepared for delivery in accordance with ASTM-D-3951, "Standard Practice for Commercial Packaging", dated 1 September 1995.

(b) The contractor shall mark all shipments under this contract in accordance with MIL-STD-129, Military Standard Marking for Shipment and Storage".

D-307 PROHIBITED PACKING MATERIALS

The use of asbestos, excelsior, newspaper or shredded paper (all types including waxed paper, computer paper and similar hydroscopic or non-neutral material) is prohibited. In addition, loose fill polystyrene and plastic as packing materials are prohibited for items destined for afloat units.

D-308 MARKING OF SHIPMENT

Each shipment of material and/or data shall be clearly marked to show the following information:

SHIP TO:	MARK FOR:
RECEIVING OFFICER	Contract #: _____
	Delivery Order #: _____
	Item #: _____
	Receiving Officer Code: _____

The receiving office is located at _____*_____ and is open for deliveries _____*_____.

****TO BE INDICATED ON INDIVIDUAL DELIVERY/TASK ORDERS.***

SECTION E Inspection and Acceptance

CLAUSES INCORPORATED BY REFERENCE:

52.246-3	Inspection Of Supplies Cost-Reimbursement	MAY 2001
52.246-5	Inspection Of Services Cost-Reimbursement	APR 1984

CLAUSES INCORPORATED BY FULL TEXT

E-303 INSPECTION AND ACCEPTANCE--DESTINATION

Inspection and acceptance of the supplies/services to be furnished hereunder shall be made at destination by the Contracting Officer's Representative or his duly authorized representative.

SECTION F Deliveries or Performance

CLAUSES INCORPORATED BY REFERENCE:

52.242-15	Stop-Work Order	AUG 1989
52.242-15 Alt I	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.242-17	Government Delay Of Work	APR 1984
52.247-34	F.O.B. Destination	NOV 1991
52.247-48	F.O.B. Destination--Evidence Of Shipment	FEB 1999
52.247-55	F.O.B. Point For Delivery Of Government-Furnished Property	APR 1984

CLAUSES INCORPORATED BY FULL TEXT

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://farsite.hill.af.mil/>
www.arnet.gov/far

F-303 PERIODS OF PERFORMANCE FOR ORDERING, ORDERS, AND OPTIONS TO EXTEND TERM OF THE CONTRACT

The period of performance of the contract, for the purpose of issuing delivery or task orders is as follows:

CLIN(S) PERIOD(S) OF PERFORMANCE FOR ISSUING ORDERS

LOT I - 0001 and 0002 One year from date of award.

The period of performance for each order shall be stated within such order. Additional time of not more than 180 days beyond the ordering period may be allowed for completion of outstanding orders.

The period of performance for option CLIN(S) to extend the term of the contract is as follows:

CLIN(S) PERIOD(S) OF PERFORMANCE

LOT II – 0003 and 0004 One year from expiration of the Base Year.
 LOT III – 0005 and 0006 One year from expiration of LOT II, 1st Option Year.
 LOT IV – 0007 and 0008 One year from expiration of LOT III, 2nd Option Year.
 LOT V – 0009 and 0010 One year from expiration of LOT IV, 3rd Option Year.

The above period(s) of performance for the option(s) to extend the term of the contract shall apply only if the Government exercises the option(s) as stated in **Section B** in accordance with the FAR clause 52.217-9 entitled, Option to Extend the Term of the Contract.

SECTION G Contract Administration Data**CLAUSES INCORPORATED BY REFERENCE:**

252.242-7000 Postaward Conference

DEC 1991

CLAUSES INCORPORATED BY FULL TEXT**252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)**

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

G-307 APPOINTMENT OF ORDERING OFFICER(S)

(a) The contracting officer and/or his duly authorized representative at the following activity(ies) are designated as Ordering Officers:

Name: * Mr. Louis Connor _____
 Activity: SPAWAR System Center Charleston _____

Code: 0215LC
 Address: P. O. Box 190022
North Charleston, SC 29419-9022
 Phone: (843)218-4567 DSN: 588-4567

(b) The above individual(s) is/are responsible for issuing and administering any orders placed hereunder. Ordering Officers may negotiate revisions/modifications to orders, but only within the scope of this contract. Ordering Officers have no authority to modify any provision of this basic contract. Any deviation from the terms of the basic contract must be submitted to the Procuring Contracting Officer (PCO) for contractual action. Ordering Officers may enter into mutual no-cost cancellations of orders under this contract and may reduce the scope of orders/tasks, but Terminations for Convenience or Terminations for Default shall be issued only by the PCO.

***TO BE IDENTIFIED AT TIME OF AWARD.**

G-314 TYPE OF CONTRACT

This is a Cost-Plus-Fixed Fee, Indefinite Delivery, Indefinite Quantity type contract.

G-317 INVOICING INSTRUCTIONS (COST REIMBURSEMENT CONTRACTS)

(a) Invoices/vouchers shall be submitted not more than every 2 weeks covering the amount claimed to be due for services rendered and cost incurred thereunder. There will be a lapse of no more than thirty days between performance and submission of invoices.

(b) The contractor will prepare five (5) copies of his invoices/vouchers. The original and one (1) copy of the invoices/vouchers will be forwarded to the cognizant Defense Contract Audit Agency (DCAA). Four (4) copies of the invoices/vouchers shall be forwarded to Space and Naval Warfare Systems Center Charleston, Code 123.

(c) Invoices/vouchers will contain the following information:

(1) Contract number and contract line item number;
 (2) Description of work;
 (3) Straight time labor charges by man-hours, classification and price; in the case of cost-plus-fixed-fee type contracts, the invoice shall cite direct labor hours and labor rates incurred by labor category, total costs incurred and fixed fee billed.

(4) Premium time and charges (if any) by man-hours, classification, price/cost and name of approving official.

(5) Uncompensated overtime hours (if any) worked for the invoice period, by labor category, as identified in the FAR 52.237-10 "Identification of Uncompensated Overtime" provision.

(6) Travel and per diem costs (if any).

(7) Other costs incurred and allowable under the contract and identification of such costs.

(8) Additional information as required.

(9) Withholding under the Payments clause, if any.

(10) Cumulative value of all billings to date by cost incurred and fixed fee billed.

(d) For all but the final invoice/voucher, DCAA will review and approve invoices/vouchers for provisional payment and forward them to the paying office. Payment will be made by the Disbursing Office upon the basis of the DCAA approved invoice/voucher. The Contracting Officer's Representative (COR) will review his/her copy of the invoice/voucher and complete a Contractor Invoice Review Form. The COR will retain this form in the COR files. If the COR identifies discrepancies on the invoice, he will pursue resolution with the Contractor and request a revised invoice reflecting the correction.

(e) The final invoice/voucher will be forwarded to the Contracting Officer for approval and forwarding to the DCAA and disbursing office for final payment. The final invoice/voucher identified as such will list all invoices/vouchers previously tendered. Final payment will be predicated upon the execution of a Material Inspection and Receiving Report (DD Form 250) or other acceptance shall be deemed to have occurred on the effective date of the contract settlement. In accordance with FAR 32.905(f)(6), the Material Inspection and Receiving Report (DD Form 250) shall include the signature, printed name, title, mailing address, and telephone number of the Government official responsible for acceptance or approval of the supplies or services. The Contracting Officer's Representative is the acceptance and approval official.

(f) The COR, ACOR and cognizant DCAA offices of this contract are:

CONTRACTING OFFICER'S REPRESENTATIVE (COR):

NAME: _____*

CODE: _____ 532JS _____

ADDRESS: _____ P. O. Box 190022 _____
 _____ North Charleston, SC 29419-9022 _____

Phone: _____

ALTERNATE CONTRACTING OFFICER'S REPRESENTATIVE (ACOR):
(if appointed)

NAME: _____* None _____

CODE: _____

ADDRESS: _____

DEFENSE CONTRACT AUDIT AGENCY (DCAA):

NAME: _____* Mid-Atlantic Region Columbia Branch Office

ADDRESS: _____ Defense Contract Audit Agency (DCAA) _____
 _____ One Mall North, Suite 200 _____
 _____ 10025 Governor Warfield Parkway _____
 _____ Columbia, Maryland 21044-3329 _____

(g) The DCAA office specified above is hereby designated as the cognizant audit agency for payments resulting from this contract, receiving invoices/vouchers from contractor, approving interim vouchers and issuing DCAA Form 1, Notice of Contract Costs Suspended and/or Disapproved, to deduct costs where allowability is questionable.

(h) The Contracting Officer, or his/her designated authorized representative, approves all completion/final invoices/vouchers and sends them to the disbursing office; and may issue or direct the issuance of DCAA Form 1 on any cost when there is reason to believe it should be suspended or disallowed.

(i) No interest penalty shall be paid to the contractor as a result of delayed contract financing payments. For purposes of the final invoice, payment is made after acceptance of services by the Government and is subject to assessment of interest penalty for payment delays in accordance with the FAR 52.232-25, Prompt Payment, clause of this contract.

(j) For purposes of payment under the final invoice, the constructive period in paragraph (a) (6) of the FAR 52.232-25, Prompt Payment, clause of this contract is changed from 7 days to 30 days.

*[*To be completed at time of award.]*

G-319 RETENTION OF GOVERNMENT PROPERTY ADMINISTRATION

In accordance with FAR 42.201, the Procuring Contracting Officer specifically retains performance of property administration functions under this contract. The Space and Naval Warfare Systems Center-Charleston, Code 09A12, Property Control Branch, P.O. Box 190022, North Charleston, S.C. 29419-9022 is hereby designated by the Contracting Officer as the Property Administrator to ensure compliance with the contract's property requirements and the provisions of FAR Subpart 45.5.

G-320 SUBMISSION OF DD FORM 1662 "DOD PROPERTY IN THE CUSTODY OF CONTRACTORS"

Pursuant to the clause at DFARS 252.245-7001 "Reports of Government Property" clause, the contractor shall provide in duplicate the DD Form 1662 to the activity property administrator at the address set forth below by 31 October of the current year:

Space and Naval Warfare Systems Center-Charleston
Code 09A12, Property Control Branch
P.O. Box 190022
North Charleston, S.C. 29419-9022

SECTION H Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

5252.215-9210 INCORPORATION OF REPRESENTATIONS AND CERTIFICATIONS BY REFERENCE (NOV 1991)

All representations and certifications and other written statements made by the contractor in response to Section K of the solicitation or at the request of the contracting officer which are incident to the award of the contract or modification of this contract, are hereby incorporated by references with the same force and effect as if they were given in full text.

(End of clause)

5252.219-9201 SMALL BUSINESS SUBCONTRACTING PLAN (OCT 1995)

Pursuant to Public Law 95-507, the Contractor's Subcontracting Plan for small business, Veteran-owned small business, Service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns is hereby approved and attached hereto as Attachment *9 and is made a part of this contract.

**To be completed at time of award.*

5252.232-9206 SEGREGATION OF COSTS [DEVIATION]

The Contractor agrees to segregate costs incurred under this contract at the lowest level of performance, either task or subtask, rather than on a total contract basis, and to submit invoices reflecting costs incurred at that level. Invoices shall contain summaries of work charged during the period covered, as well as overall cumulative summaries by labor category for all work invoiced to date, by line item, task or subtask.

Where multiple lines of accounting are present, the ACRN preceding the accounting citation will be found in Section B and/or Section G of the contract or in the task or delivery order which authorizes work. Payment of Contractor invoices shall be accomplished only by charging the ACRN which corresponds to the work invoiced.

5252.243-9400 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (JAN 1992)

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the Contractor’s facilities or in any other manner communicates with Contractor personnel during the performance of this contract shall constitute a change under the Changes clause of this contract.

(b) The Contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer’s. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof. The address and telephone number of the Contracting Officer is:

NAME SPAWARSYSCEN Charleston Contracting Officer(s)
 ADDRESS P. O. Box 190022, North Charleston, SC 29419-9022
 TELEPHONE (843)218-5932

5252.245-9201 GOVERNMENT FURNISHED PROPERTY (MAR 2002)

The Government will provide only that property set forth below, notwithstanding any provisions of the specification(s) to the contrary:

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>DATE</u>	<u>LOCATION</u>
*	*	*	*

**To be indicated under individual task/delivery orders if applicable.*

H-302 ORGANIZATIONAL CONFLICT OF INTEREST (SYSTEMS ENGINEERING)

(a) This contract provides for systems engineering and related technical support for various C⁴ISR requirements, programs and/or projects (including hardware and software elements in various stages of development). The parties recognize that by the Contractor providing this support, a potential conflict of interest arises as defined by FAR 9.505-1.

(b) For the purpose of this clause, the term “contractor” means the contractor, its subsidiaries and affiliates, joint ventures involving the contractor, any entity with which the contractor may hereafter merge or affiliate, and any other successor of the contractor.

(c) During the term of this contract and for a period of three (3) years after completion of this contract, the Contractor agrees that it will not supply (whether as a prime contractor, subcontractor at any tier, or consultant to a supplier) to the Department of Defense, any product, item or major component of an item or product, which was the subject of the systems engineering and/or technical direction in support of C⁴ISR programs or projects performed under this contract. The contractor shall, within 15 days after the effective date of this contract, provide, in writing, to the Contracting Officer, a representation that all employees, agents and subcontractors involved in the performance of this contract have been informed of the provisions of this clause. Any subcontractor that performs any work relative to this contract shall be subject to this clause. The contractor agrees to place in each subcontract affected by these provisions the necessary language contained in this clause.

(d) The Contractor further agrees that it will not perform engineering services and technical support of the type described in the SOW for any product it has designed, developed, or manufactured in whole or in part. The Contractor further agrees to notify the Contracting Officer should it be tasked to conduct engineering and technical support on such products and to take no action until directed to do so by the Contracting Officer.

(e) The Contractor acknowledges the full force and effect of this clause. It agrees to be bound by its terms and conditions and understands that violation of this clause may, in the judgment of the Contracting Officer, be cause for Termination for Default under FAR 52.249-6. The Contractor also acknowledges that this does not represent the sole and exclusive remedy available to the Government in the event the Contractor breaches this Organizational Conflict of Interest clause.

H-320 ALTERNATIVES AND UPDATES TO SPECIFICATIONS AND STANDARDS

(a) The Department of Defense is --

(1) committed to minimizing the use of military and federal specifications and standards; and

(2) seeking to use non-government specifications and standards to the maximum extent practicable to satisfy its requirements.

(b) The Contractor --

(1) is encouraged to identify and propose alternatives to specifications and standards cited in this contract;

(2) may submit to the Contracting Officer a proposal addressing alternatives to contractually mandated military, federal, or commercial specifications and standards, consisting of the following:

(i) a copy of the proposed alternatives;

(ii) a comparison of the proposed alternatives to the specifications

or standards cited in the contract; and

(iii) an analysis supporting the feasibility and cost-effectiveness of the proposed alternatives.

(c) If the Contractor has a contract, or multiple DOD contracts, that incorporate outdated or different versions of military, federal, or commercial specifications or standards, the Contractor may request that all of its contracts be updated to the latest version of the applicable specifications or standards. Updating must not affect the form, fit, or function of any deliverable item, and must demonstrate a benefit to the government. The Contractor may submit updating requests to the Contracting Officer through the cognizant contract administration office. The government will, to the extent practicable, evaluate the acceptability of any proposed alternative. If a proposed alternative is not considered for the instant procurement, it will be considered for future procurement. If the Contracting Officer does not accept the proposed alternative, the Contractor agrees to perform the contract in accordance with the specifications and standards cited in the contract.

H-323 CONTRACTOR PICTURE BADGE

(a) A contractor picture badge may be issued to contractor personnel by the Naval Security/Pass Office at the contract performance site upon receipt of a valid visit request from the Contractor and a picture badge request from the COR. A list of personnel requiring picture badges must be provided to the COR to verify that the contract or delivery/task order authorizes performance at the specific government installation prior to completion of the picture badge request.

(b) An automobile decal will be issued by the Naval Security/Pass Office at the contract performance site upon presentation of a valid contractor picture badge and the completion of the Badge and Decal Record.

(c) The contractor assumes full responsibility for the proper use of the identification badge and automobile decal, and shall be responsible for the return of the badge and/or destruction of the automobile decal upon termination of personnel or expiration or completion of the contract.

(d) At the completion of the contract, the contractor shall forward to the Naval Security/Pass Office responsible for issuing the badges a list of all unreturned badges with a written explanation of any missing badges.

H-329 CONTRACTOR ACQUIRED PROPERTY/GOVERNMENT FURNISHED PROPERTY

This contract contains the clause entitled "Government Furnished Property". However, receipt of Government Furnished Property or Contractor Acquired Property is not authorized under this contract. Such property may be acquired only upon receipt of a fully executed delivery or task order or modification to a delivery or task order that specifically authorizes acquisition of the property by the contractor. Requests for Contractor Acquired Property must be made to the cognizant Contracting Officer.

Any property acquired by the Contractor without a delivery or task order or modification to a delivery or task order authorizing such acquisition, is done so at the Contractor's own risk.

H-341 EMPLOYMENT OF NAVY PERSONNEL RESTRICTED

In performing this contract, the Contractor will not use as a consultant or employ (on either a full or part-time basis) any active duty Navy personnel (civilian or military) without the prior approval of the Contracting Officer. Such approval may be given only in circumstances where it is clear that no law and no DOD or Navy instructions, regulations, or policies might possibly be contravened and no appearance of a conflict of interest will result.

H-343 CONTRACT DATA REQUIREMENTS – DELIVERY ORDERS

The data items shown on the DD Form 1423, Contract Data Requirements List, or included in the Statement of Work are either known data requirements or a general description of the data to be clarified or restated on each delivery order.

H-344 DELIVERY ORDER LIMITATION OF COST/FUNDS

In accordance with the FAR Clause 52.232-20, "Limitation of Cost," or 52.232-22 "Limitation of Funds," the Government shall not be obligated to reimburse the Contractor for work performed, items delivered, or any costs incurred under orders issued under the resultant contract, except as authorized by the contracting officer.

The cost factors utilized in determining the estimated costs under any order placed hereunder shall be the applicable rates current at the time of issuance of the task or delivery order, not to exceed, however, any ceilings established by the terms of this contract.

If at any time 75% of either the estimated cost or estimated level of effort specified in the task or delivery order is reached and it appears that additional funds and/or level of effort is required to complete performance, the Contractor shall promptly notify the Ordering Officer in writing. Such notification shall include the cost and level of effort expended and that which will be required to complete performance. The Government shall have the right to modify the task or delivery order accordingly.

If the Contractor exceeds the estimated costs authorized by task or delivery order placed hereunder, the Government will be responsible only for reimbursement of the cost and payment of fee in an amount up to that established by the task or delivery order.

The total amount of all task or delivery orders issued shall not exceed the estimated costs and fixed fee or level of effort set forth in this contract.

H-345 WAGE DETERMINATION APPLICABLE, SERVICE CONTRACT ACT

Attachment 2 (*See Section J*) incorporated herein sets forth the applicable Service Contract Act Wage Determination by the Secretary of Labor.

H-349 REIMBURSEMENTS UNDER COST REIMBURSEMENT OR TIME-AND-MATERIAL OR LABOR-HOUR CONTRACTS (MAR 2000)

(a) Office Equipment

The costs for acquisition, usage or rental of General Purpose Office Equipment including, but not limited to, typewriters, word processing machines, computers, computer time, printers, reprographic and xerographic copying machines, telecopiers, telephone equipment, and postage machines are considered overhead expenses and shall not be directly reimbursable under this contract. Such costs shall be included in the hourly rates payable under paragraph (a)(1) of the FAR 52.232-7 "Payments under Time-and-Material and Labor-Hour Contracts" clause, if this is a time-and-material or labor-hour contract. These overhead expenses will be reimbursed to the contractor as indirect costs under the FAR 52.216-7 "Allowable Cost and Payment" clause, if this is a cost-reimbursement contract.

(b) Overtime

Overtime is contemplated only on an emergency basis. However, if the need for overtime arises, such overtime shall not be worked without written authorization from the Contracting Officer.

(c) Overtime/Holiday Rate

(1) Overtime is defined as time worked in one workweek in excess of 40 hours in such workweek. Holiday time is defined as any time worked on a legal Federal Holiday. Legal Federal holidays for the purpose of this contract are listed below:

- New Year's Day
- Martin Luther King's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

(2) Overtime and/or holiday work may be worked by the Contractor only to the extent it is specifically authorized in writing, by the ordering activity on individual orders placed under the contract. No additional hours of overtime may be worked without additional written authorization.

(3) Unless the contractor states otherwise in contractor's proposal it will be deemed that the contractor shall observe the same holidays as the Government and shall otherwise be open for business Monday through Friday during the performance of the contract.

(d) Vehicle and/or Truck Rental

When any special vehicles and/or trucks are required, the cost for contractor-owned vehicles and/or trucks shall be included in the overhead rate. The contractor shall be reimbursed for actual rental/lease of vehicles and/or trucks only if authorized by individual task/delivery orders. Reimbursement of such rental shall be made based on actual amounts paid by the contractor.

(e) Expendable Material:

Expendable materials, such as clerical supplies and materials, which are considered to be a normal cost of doing business, are considered to be overhead expenses and are not directly reimbursable under this contract.

(f) Other Material:

Material, other than expendable material, shall be furnished pursuant to specific authorization in a task/delivery order issued under this contract. The contractor will be required to support all material costs claimed by submission of paid subcontractor invoices. Contractor will be reimbursed at the contractor's cost less any applicable discount, plus material handling costs.

H-350 REIMBURSEMENT OF TRAVEL COSTS

(a) Contractor Request and Government Approval of Travel

Any travel under the contract must be specifically identified by the contractor in a written quotation to the Ordering Officer prior to incurring any travel costs. Travel under this contract is only authorized under task/delivery orders issued by the Ordering Officer or by a modification to an issued task/delivery order. The travel request shall include, as a minimum, the following:

- (1) Contract number
- (2) Date, time, and place of proposed travel
- (3) Purpose of travel and how it relates to the contract
- (4) Contractor's estimated cost of travel
- (5) Name(s) of individual(s) traveling and;
- (6) A breakdown of estimated travel and per diem charges.

(b) General

(1) The costs for travel, subsistence, and lodging shall be reimbursed to the contractor only to the extent that it is necessary and authorized for performance of the work under this contract. The costs for travel, subsistence, and lodging shall be reimbursed to the contractor in accordance with the Federal Acquisition Regulation (FAR) 31.205-46, which is incorporated by reference into this contract. As specified in FAR 31.205-46(a) (2), reimbursement for the costs incurred for lodging, meals and incidental expenses (as defined in the travel regulations cited subparagraphs (b)(1)(i) through (b)(1)(iii) below) shall be considered to be reasonable and allowable only to

the extent that they do not exceed on a daily basis the maximum per diem rates in effect at the time of travel as set forth in the following:

(i) Federal Travel Regulation* prescribed by the General Services Administration for travel in the contiguous 48 United States;

(ii) Joint Travel Regulation, Volume 2, DoD Civilian Personnel, Appendix A, prescribed by the Department of Defense for travel in Alaska, Hawaii, The Commonwealth of Puerto Rico, and the territories and possessions of the United States; or

(iii) Standardized Regulations, (Government Civilians, Foreign Areas), Section 925, "Maximum Travel Per Diem Allowances in Foreign Areas" prescribed by the Department of State, for travel in areas not covered in the travel regulations cited in subparagraphs (b)(1)(i) and (b)(1)(ii) above.

* Federal Travel Regulation (FTR) Amendment 75 was published in the Federal Register as a Final Rule on December 2, 1998. This final rule changed how the FTR maximum per diem rate limitations are computed, including extracting lodging taxes from the per diem rates and allowing payment of lodging taxes as a miscellaneous expense instead. Some contractors may encounter a significant administrative burden and incur substantial costs in modifying their systems to comply with this Final Rule. Therefore, contractors may choose to satisfy the limitation on allowable travel costs by continuing to use the FTR maximum per diem rates and the definitions of lodging, meals, and incidental expenses in effect on December 31, 1998, or the revised FTR rates and definitions that went into effect on January 01, 1999. Contractors may choose the maximum per diem rate computation methodology for all contractor travel from October 01, 1999 through September 30, 2002 (see the DAR deviations issued under DAR Tracking Number 99-O0013, 2000-O0005, and 2001-O0003). Contractors shall use the revised FTR rates and definitions that went into effect on January 01, 1999 for all contractor travel after October 01, 2002, unless (A) the Director of Defense Procurement further extends the deviation, or (B) the coverage in FAR 31.205-46(a) (2) is revised.

(2) Personnel in travel status from and to the contractor's place of business and designated work site or vice versa, shall be considered to be performing work under the contract, and contractor shall bill such travel time at the straight (regular) time rate shown in Section B; however, such billing shall not exceed eight hours per person for any one person while in travel status during one calendar day.

(c) Per Diem

(1) The contractor shall not be paid per diem for contractor personnel who reside in the metropolitan area in which the tasks are being performed. Per diem shall not be paid on services performed at contractor's home facility and at any facility required by the contract, or at any location within a radius of 50 miles from the contractor's home facility and any facility required by this contract.

(2) Costs for subsistence and lodging shall be paid to the contractor only to the extent that overnight stay is necessary and authorized in writing by the Government for performance of the work under this contract. When authorized, per diem shall be paid by the contractor to his employees at a rate not to exceed the rate specified in the travel regulations cited in FAR 31.205-46(a)(2) and authorized in writing by the Government. The authorized per diem rate shall be the same as the prevailing locality per diem rate. If this contract is a definite or indefinite delivery contract, then the written Government authorization will be by task/delivery orders issued by the Ordering Officer or by a modification to an issued task/delivery order. If this contract is not a definite or indefinite delivery contract, then the written Government authorization will be by written notice of approval from the Contracting Officer's Representative (COR).

(3) Reimbursement to the contractor for per diem shall be limited to payments to employees for authorized per diem, as described above, not to exceed the authorized per diem. Fractional parts of a day shall be payable on a prorated basis for purposes of billing for per diem charges attributed to subsistence on days of travel. Fractional billing shall be on a 1/4, 1/2, and 3/4 basis. The contractor shall retain supporting documentation for per diem paid

to employees as evidence of actual payments, as required by the FAR 52.216-7 "Allowable Cost and Payment" clause of the contract.

(d) Transportation

(1) For transportation other than described in subparagraph (d)(5) below, the contractor shall be paid on the basis of actual amounts paid to the extent that such transportation is necessary for the performance of work under the contract and is authorized in writing by the Government. If this contract is a definite or indefinite delivery contract, then the written Government authorization will be by task/delivery orders issued by the Ordering Officer or by a modification to an issued task/delivery order. If this contract is not a definite or indefinite delivery contract, then the written Government authorization will be by written notice of approval from the Contracting Officer's Representative (COR).

(2) When transportation by privately owned conveyance is authorized, the contractor shall be paid on a mileage basis not to exceed the applicable Government transportation rate specified in the travel regulations cited in FAR 31.205-46(a)(2) and is authorized in writing by the Government. If this contract is a definite or indefinite delivery contract, then the written Government authorization will be by task/delivery orders issued by the Ordering Officer or by a modification to an issued task/delivery order. If this contract is not a definite or indefinite delivery contract, then the written Government authorization will be by written notice of approval from the Contracting Officer's Representative (COR).

(3) The contractor agrees, in the performance of necessary travel, to use the lowest cost mode commensurate with the requirements of the mission and in accordance with good traffic management principles. When it is necessary to use air or rail travel, the contractor agrees to use coach, tourist class or similar accommodations to the extent consistent with the successful and economical accomplishment of the mission for which the travel is being performed. Documentation must be provided to substantiate non-availability of coach or tourist if business or first class is proposed to accomplish travel requirements.

(4) The contractor's invoices shall include evidence, such as receipts, substantiating actual costs incurred for authorized travel. Such payments shall never exceed the rates of common carrier.

(5) The contractor shall not be paid for travel mileage for contractor personnel who reside in the metropolitan area in which the services are being performed. Travel mileage shall not be paid for services performed at the contractor's home facility or at any location within a driving radius of 50 miles from the contractor's home facility.

H-352 CONTRACT MAXIMUM AMOUNT

During the life of this contract, the total maximum dollar amount available for placement under task orders is cumulative with each option exercised, and unexpended balances may be used in succeeding option years.

H-355 CONTRACTOR IDENTIFICATION

(a) Contractor employees must be clearly identifiable while on Government property by wearing appropriate badges.

(b) Contractor employees are required to clearly identify themselves and the company they work for whenever making contact with Government personnel by telephone or other electronic means.

H-358 APPLICATION OF DFARS 252.227-7013 AND 252.227-7015 TECHNICAL DATA CLAUSES

The DFARS 252.227-7015, Technical Data--Commercial Items, clause applies to technical data that pertains to a "commercial item" as defined in the DFARS 252.227-7015 clause. The DFARS 252.227-7013, Rights in Technical Data--Noncommercial Items, clause applies to all other technical data.

SECTION I Contract Clauses**CLAUSES INCORPORATED BY REFERENCE:**

52.202-1	Definitions	DEC 2001
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
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	JUN 1997
52.204-2	Security Requirements	AUG 1996
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JUL 1995
52.211-5	Material Requirements	AUG 2000
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	DEC 1998
52.215-17	Waiver of Facilities Capital Cost of Money	OCT 1997
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	OCT 1997
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
52.216-7	Allowable Cost And Payment	FEB 2002
52.216-8	Fixed Fee	MAR 1997
52.219-8	Utilization of Small Business Concerns	OCT 2000
52.219-9	Small Business Subcontracting Plan	JAN 2002
52.219-9 Alt I	Small Business Subcontracting Plan (Jan 2002) Alternate I	OCT 2001
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.219-25	Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting	OCT 1999
52.222-3	Convict Labor	AUG 1996
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	SEP 2000
52.222-21	Prohibition Of Segregated Facilities	FEB 1999

52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans	DEC 2001
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	DEC 2001
52.222-41	Service Contract Act Of 1965, As Amended	MAY 1989
52.223-5	Pollution Prevention and Right-to-Know Information	APR 1998
52.223-10	Waste Reduction Program	AUG 2000
52.223-14	Toxic Chemical Release Reporting	OCT 2000
52.225-13	Restrictions on Certain Foreign Purchases	JUL 2000
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.227-3	Patent Indemnity	APR 1984
52.227-12	Patent Rights--Retention By The Contractor (Long Form)	JAN 1997
52.227-12	Patent Rights--Retention By The Contractor (Long Form)	JAN 1997
52.228-3	Worker's Compensation Insurance (Defense Base Act)	APR 1984
52.228-5	Insurance - Work On A Government Installation	JAN 1997
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.230-2	Cost Accounting Standards	APR 1998
52.230-3	Disclosure And Consistency Of Cost Accounting Practices	APR 1998
52.230-6	Administration of Cost Accounting Standards	NOV 1999
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-17	Interest	JUN 1996
52.232-20	Limitation Of Cost	APR 1984
52.232-22	Limitation Of Funds	APR 1984
52.232-23	Assignment Of Claims	JAN 1986
52.232-25	Prompt Payment	FEB 2002
52.232-25 Alt I	Prompt Payment (Feb 2002) Alternate I	FEB 2002
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	MAY 1999
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.237-2	Protection Of Government Buildings, Equipment, And Vegetation	APR 1984
52.237-3	Continuity Of Services	JAN 1991
52.239-1	Privacy or Security Safeguards	AUG 1996
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
52.243-2 Alt II	Changes--Cost Reimbursement (Aug 1987) - Alternate II	APR 1984
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	MAY 2002
52.245-5 (Dev)	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (Deviation)	AUG 1999
52.245-19	Government Property Furnished "As Is"	APR 1984
52.246-25	Limitation Of Liability--Services	FEB 1997
52.248-1	Value Engineering	FEB 2000
52.249-6	Termination (Cost Reimbursement)	SEP 1996
52.249-14	Excusable Delays	APR 1984
52.251-1	Government Supply Sources	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991

252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense- Contract-Related Felonies	MAR 1999
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7002	Payment For Subline Items Not Separately Priced	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004	Required Central Contractor Registration	NOV 2001
252.204-7005	Oral Attestation of Security Responsibilities	NOV 2001
252.205-7000	Provisions Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7000	Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate Range Nuclear Forces (INF) Treaty	NOV 1995
252.211-7000	Acquisition Streamlining	DEC 1991
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	OCT 1998
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
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	MAR 1998
252.225-7002	Qualifying Country Sources As Subcontractors	DEC 1991
252.225-7007	Buy American Act--Trade Agreements--Balance of Payments Program	SEP 2001
252.225-7009	Duty-Free Entry--Qualifying Country Supplies (End Products and Components)	AUG 2000
252.225-7012	Preference For Certain Domestic Commodities	APR 2002
252.225-7026	Reporting Of Contract Performance Outside The United States	JUN 2000
252.225-7031	Secondary Arab Boycott Of Israel	JUN 1992
252.225-7037	Duty Free Entry--Eligible End Products	AUG 2000
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises-DoD Contracts	SEP 2001
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
252.227-7015	Technical Data--Commercial Items	NOV 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
252.227-7036	Declaration of Technical Data Conformity	JAN 1997
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.231-7000	Supplemental Cost Principles	DEC 1991
252.245-7001	Reports Of Government Property	MAY 1994
252.246-7001	Warranty Of Data	DEC 1991
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.251-7000	Ordering From Government Supply Sources	MAY 1995

CLAUSES INCORPORATED BY FULL TEXT

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)--ALTERNATE II (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor 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) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) 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.

(2) 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.

(3) 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 Contractor 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 clause, 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 Contractor's determination of the prices to be offered in the catalog or marketplace.

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

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

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

(2) the Contract Auditor.

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

52.216-18 ORDERING. (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from date of contract award through one year thereafter, unless terminated or extended in accordance with provisions herein.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than **\$5,000.00**, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor:

(1) Any order for a single item in excess of **500,000.00**;

(2) Any order for a combination of items in excess of **1,500,000.00**; or

(3) A series of orders from the same ordering office within **3** days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within **5** days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

52.216-22 INDEFINITE QUANTITY. (OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in Clause B-312 as the "maximum". The Government shall

order at least the quantity of supplies or services designated in Clause B-312 as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after **180 days after contract expiration**.

52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not **exceed 6 months**. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days prior to contract expiration.

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days prior to contract expiration; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed **five (5) years and six (6) months**.

52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed the rates indicated in the individual delivery/task orders, or the overtime premium is paid for work --

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
- (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
- (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
- (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply

to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION

Employee Class	SCA Number	Monetary Wage-Fringe Benefits
Senior Analyst (Computer Systems Analyst III)	03103	\$27.93
Analyst (Computer System Analyst II)	03102	\$23.97
Electronics Technician III	23183	\$18.88
Electronics Technician II	23182	\$17.98
Electronics Technician I	23181	\$17.06
Electronics Assembler (Engineering Technician III)	29083	\$11.26
Communications Trainer (Instructor)	29160	\$17.06
Computer Data/Technical Library Specialist (Librarian)	13047	\$16.94
Supply Specialist (Supply Technician)	01400	\$13.94
Warehouse Specialist	21400	\$12.79

Laborer (Material Handling)	21040	\$9.94
Quality Assurance/Control Specialist (Engineering Tech IV)	29084	\$16.19
Supervisory Drafter (Drafter IV)	29064	\$23.94
Drafter III	29063	\$21.46
Drafter I	29061	\$12.35
Computer Operator II	03042	\$12.35
Computer Operator I	03041	\$10.71
Technical Writer/Editor	29480	\$23.30

52.244-2 SUBCONTRACTS (AUG 1998) - ALTERNATE I (AUG 1998)

(a) Definitions. As used in this clause--

Approved purchasing system means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

Consent to subcontract means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

Subcontract means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

TO BE DETERMINED AT TIME OF AWARD OF BASIC CONTRACT OR PRIOR TO PLACEMENT OF INDIVIDUAL TASK ORDERS.

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

- (i) A description of the supplies or services to be subcontracted.
- (ii) Identification of the type of subcontract to be used.
- (iii) Identification of the proposed subcontractor.
- (iv) The proposed subcontract price.
- (v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.
- (vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.
- (vii) A negotiation memorandum reflecting--
 - (A) The principal elements of the subcontract price negotiations;
 - (B) The most significant considerations controlling establishment of initial or revised prices;
 - (C) The reason cost or pricing data were or were not required;
 - (D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;
 - (E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;
 - (F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and
 - (G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.
- (2) If the Contractor has an approved purchasing system and consent is not required under paragraph (c), (d), or (e) of this clause, the Contractor nevertheless shall notify the Contracting Officer reasonably in advance of entering into any (i) cost-plus-fixed-fee subcontract, or (ii) fixed-price subcontract that exceeds the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of this contract. The notification shall include the information required by paragraphs (f)(1)(i) through (f)(1)(iv) of this clause.
- (g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--
 - (1) Of the acceptability of any subcontract terms or conditions;
 - (2) Of the allowability of any cost under this contract; or
 - (3) To relieve the Contractor of any responsibility for performing this contract.
- (h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

TO BE IDENTIFIED AT TIME OF AWARD.

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://farsite.hill.af.mil/>
www.arnet.gov/far

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation of any Defense Federal Acquisition Regulation Supplement (DFARS) (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

252.225-7043 ANTITERRORISM/FORCE PROTECTION POLICY FOR DEFENSE CONTRACTORS OUTSIDE THE UNITED STATES (JUN 1998)

(a) Except as provided in paragraph (b) of this clause, the Contractor and its subcontractors, if performing or traveling outside the United States under this contract, shall--

(1) Affiliate with the Overseas Security Advisory Council, if the Contractor or subcontractor is a U.S. entity;

(2) Ensure that Contractor and subcontractor personnel who are U.S. nationals and are in-country on a non-transitory basis, register with the U.S. Embassy, and that Contractor and subcontractor personnel who are third country nationals comply with any security related requirements of the Embassy of their nationality;

(3) Provide, to Contractor and subcontractor personnel, antiterrorism/force protection awareness information commensurate with that which the Department of Defense (DoD) provides to its military and civilian personnel and their families, to the extent such information can be made available prior to travel outside the United States; and

(4) Obtain and comply with the most current antiterrorism/force protection guidance for Contractor and subcontractor personnel.

(b) The requirements of this clause do not apply to any subcontractor that is--

- (1) A foreign government;
- (2) A representative of a foreign government; or
- (3) A foreign corporation wholly owned by a foreign government.

(c) Information and guidance pertaining to DoD antiterrorism/force protection can be obtained from Space and Naval Warfare Systems Center Charleston, Security Code 0A1; by telephone, DSN 588-4084 or 6737 or commercial (843) 218-4084 or 6737.

Section J List of Documents, Exhibits and Other Attachments

DOCUMENT TYPE	DESCRIPTION	PAGES	DATED
Exhibit A	Contract Data Requirement List (DD Form 1423)	6	
Attachment 1	DD Form 254	3	
Attachment 2	Wage Determination No 94-2474, Rev 21	8	APR-04-2002
Attachment 3	NONE		
Attachment 4	NONE		
Attachment 5	Reference Information Sheet		
Attachment 6	Past Performance Questionnaire		
Attachment 7A	Personnel Matrix		
Attachment 7B	Resume Format		
Attachment 8	Cost Breakdown Spreadsheet (Electronic Document)		