

**SOLICITATION, OFFER AND AWARD**

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) RATING 00-C9 PAGE OF 1 262 PAGES

2. CONTRACT NO. 3. SOLICITATION NO. 1-41-1100.1015

4. TYPE OF SOLICITATION  SEALED BID (IFB)  NEGOTIATED (RFP)

5. DATE ISSUED 6. REQUISITION/PURCHASE NO.

7. ISSUED BY CODE 8. ADDRESS OFFER TO (If other than Item 7)

National Aeronautics and Space Administration  
Langley Research Center  
Hampton, VA 23681-0001

NASA, Langley Research Center  
9A Langley Boulevard, Bldg. 1195A, Room 103  
Hampton, VA 23681-0001

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

**SOLICITATION**

9. Sealed offers in original and twelve (12) 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 9A Langley Blvd., Bldg. 1195A, Rm. 103 until            local time            (Hour)            (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals. See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: A. NAME B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)

**11. TABLE OF CONTENTS**

(V)	SEC.	DESCRIPTION	PAGE(S)	(V)	SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
X	A	SOLICITATION/CONTRACT FORM	1	X	I	CONTRACT CLAUSES	22
X	B	SUPPLIES OR SERVICES AND PRICES/COSTS	2	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
X	C	DESCRIPTION/SPECS./WORK STATEMENT	3	X	J	LIST OF ATTACHMENTS	53
X	D	PACKAGING AND MARKING		PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X	E	INSPECTION AND ACCEPTANCE	4	X	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	133
X	F	DELIVERIES OR PERFORMANCE	6	X	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	147
X	G	CONTRACT ADMINISTRATION DATA	7	X	M	EVALUATION FACTORS FOR AWARD	175
X	H	SPECIAL CONTRACT REQUIREMENTS	11				

**OFFER (Must be fully completed by offeror)**

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

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

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232-8)

10 CALENDAR DAYS	20 CALENDAR DAYS	30 CALENDAR DAYS	CALENDAR DAYS
%	%	%	%

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 FACILITY 16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

15B. TELEPHONE NO. (Include area code)  15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE 17. SIGNATURE 18. OFFER DATE

**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS NUMBERED 20. AMOUNT 21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:  10 U.S.C 2304(c)( )  41 U.S.C 253(c)( )

23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM 25. below

24. ADMINISTERED BY (If other than Item 7) CODE 25. PAYMENT WILL BE MADE BY CODE

Criticality Designator C Financial Management Division  
Mail Stop 175, NASA, Langley Research Center  
Hampton, VA

26. NAME OF CONTRACTING OFFICER (Type or print) 27. UNITED STATES OF AMERICA 28. AWARD DATE

(Signature of Contracting Officer)

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

## TABLE OF CONTENTS

PAGE

SOLICITATION/CONTRACT FORM . . . . .	1
PART I - THE SCHEDULE . . . . .	2
SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS . . . . .	2
B.1 SCOPE OF WORK--ALTERNATE II (LaRC 52.212-90) (JUL 1991) . . . . .	2
B.2 LEVEL-OF-EFFORT . . . . .	2
B.3 ESTIMATED COST, AWARD FEE AND FIXED FEE . . . . .	2
B.4 SPECIFIED OTHER DIRECT COSTS . . . . .	3
B.5 CONTRACT FUNDING (NASA 18-52.232-81) (JUN 1990) . . . . .	3
B.6 ADMINISTRATION OF CONTRACT FUNDING (LaRC 52.232-100) (MAR 1989) . . . . .	3
SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT . . . . .	3
C.1 STATEMENT OF WORK--ALTERNATE I (LaRC 52.215-90) (JUN 1988) . . . . .	3
SECTION E - INSPECTION AND ACCEPTANCE . . . . .	4
E.1 INSPECTION OF SUPPLIES - COST-REIMBURSEMENT (FAR 52.246-3) (APR 1984) . . . . .	4
E.2 INSPECTION OF SERVICES - COST-REIMBURSEMENT (FAR 52.246-5) (APR 1984) . . . . .	5
E.3 FINAL INSPECTION AND ACCEPTANCE (LaRC 52.246-94) (JUN 1988) . . . . .	6
SECTION F - DELIVERIES OR PERFORMANCE . . . . .	6
F.1 STOP-WORK ORDER (FAR 52.212-13) (AUG 1989) ALTERNATE I (APR 1984) . . . . .	6
F.2 F.O.B. DESTINATION, WITHIN CONSIGNEE'S PREMISES (FAR 52.247-35) (APR 1984) . . . . .	6
F.3 PERIOD OF PERFORMANCE (NASA 18-52.212-74) (DEC 1988) . . . . .	7
F.4 PLACE OF DELIVERY--ALTERNATE II (LARC 52.212-92) (JUN 1988) . . . . .	7
F.5 PLACES OF PERFORMANCE--ALTERNATE II (LARC 52.212-98) (JUN 1988) . . . . .	7
F.6 REPORTS AND DOCUMENTATION DELIVERY (LARC 52.212-99) (JUN 1988) . . . . .	7
SECTION G - CONTRACT ADMINISTRATION DATA . . . . .	7
G.1 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 18-52.227-72) (APR 1984) . . . . .	7
G.2 WORK ORDERS (LARC 52.212-101) (OCT 1991) . . . . .	8
G.3 AWARD FEE EVALUATIONS (LARC 52.216-92) (JUN 1990) . . . . .	9
G.4 SUBMISSION OF INVOICES . . . . .	10
G.5 PAYMENTS--COST, AWARD FEE, AND FIXED FEE . . . . .	10
G.6 CONTRACT CLOSEOUT (LARC 52.242-90) (JUN 1988) . . . . .	10
SECTION H - SPECIAL CONTRACT REQUIREMENTS . . . . .	11
H.1 RIGHTS TO PROPOSAL DATA (TECHNICAL) (FAR 52.227-23) (JUN 1987) . . . . .	11
H.2 KEY PERSONNEL AND FACILITIES (NASA 18-52.235-71) (MAR 1989) . . . . .	11
H.3 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42) (MAY 1989) . . . . .	11

TABLE OF CONTENTS

PAGE

H.4	LIST OF GOVERNMENT-FURNISHED PROPERTY (NASA 18-52.245-76) (OCT 1988)	13
H.5	LIST OF INSTALLATION-PROVIDED PROPERTY AND SERVICES (NASA 18-52.245-77) (MAR 1989)	13
H.6	USE OF GOVERNMENT PRODUCTION AND RESEARCH PROPERTY ON A NO-CHARGE BASIS (NASA 18-52.245-80) (MAR 1989)	15
H.7	LIST OF GOVERNMENT-FURNISHED ITEMS	15
H.8	PROCUREMENT AUTHORITY (201-39.5202-3) (OCT 90 FIRMR)	15
H.9	CONTRACTOR EMPLOYEE'S SECURITY CLEARANCE (LaRC 52.204-90) (AUG 1992)	15
H.10	AUTOMATED INFORMATION SECURITY (AIS) PROGRAM/EMPLOYEE NATIONAL AGENCY CHECK (NAC) AND USER AGREEMENT EXECUTION (LaRC 52.239-90) (MAY 1991)	16
H.11	OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LaRC 52.212-104) (MAR 1992)	16
H.12	INCORPORATION OF SECTION K OF THE PROPOSAL BY REFERENCE (LaRC 52.215-107) (MAR 1989)	17
H.13	SUBCONTRACTING PLAN (LaRC 52.219-91) (JUN 1988)	17
H.14	EVIDENCE OF INSURANCE (LaRC 52.228-93) (MAR 1989)	17
H.15	VIRGINIA AND LOCAL SALES TAXES (LaRC 52.229-92) (APR 1992)	17
H.16	WAGE DETERMINATIONS AND FRINGE BENEFITS (LaRC 52.237-90) (NOV 1990)	18
H.17	CONSENT TO SUBCONTRACT	18
H.18	ADVANCE AGREEMENT ON SYSTEMS MAINTENANCE PRICES	18
H.19	OPTIONS	19
H.20	SYSTEMS MAINTENANCE PRICE POOL FOR SECTION C.4 OF THE STATEMENT OF WORK	22
PART II - CONTRACT CLAUSES		22
SECTION I - CONTRACT CLAUSES		22
PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS		53
SECTION J - LIST OF ATTACHMENTS		53

TABLE OF CONTENTS		PAGE
PART IV - REPRESENTATIONS AND INSTRUCTIONS . . . . .		133
<u>SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS</u>		
K.1	CONTINGENT FEE REPRESENTATION AND AGREEMENT (FAR 52.203-4) (APR 1984) . . . . .	133
K.2	CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (FAR 52.203-11) (APR 1991) . . . . .	133
K.3	TAXPAYER IDENTIFICATION (FAR 52.204-3) (SEP 1989) . . . . .	134
K.4	CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (FAR 52.209-5) (MAY 1989) . . . . .	135
K.5	TYPE OF BUSINESS ORGANIZATION (FAR 52.215-6) (JUL 1987) . . . . .	136
K.6	AUTHORIZED NEGOTIATORS (FAR 52.215-11) (APR 1984) . . . . .	136
K.7	PERIOD FOR ACCEPTANCE OF OFFER (FAR 52.215-19) (APR 1984) . . . . .	136
K.8	SMALL BUSINESS CONCERN REPRESENTATION (FAR 52.219-1) (JAN 1991) . . . . .	137
K.9	SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (FAR 52.219-2) (FEB 1990) . . . . .	137
K.10	WOMEN-OWNED SMALL BUSINESS REPRESENTATION (FAR 52.219-3) (APR 1984) . . . . .	138
K.11	PREFERENCE FOR LABOR SURPLUS AREA CONCERNS (FAR 52.220-1) (APR 1984) . . . . .	138
K.12	WALSH-HEALY PUBLIC CONTRACTS ACT REPRESENTATION (FAR 52.222-19) (APR 1984) . . . . .	139
K.13	CERTIFICATION OF NONSEGREGATED FACILITIES (FAR 52.222-21) (APR 1984) . . . . .	139
K.14	PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FAR 52.222-22) (APR 1984) . . . . .	140
K.15	AFFIRMATIVE ACTION COMPLIANCE (FAR 52.222-25) (APR 1984) . . . . .	140
K.16	EXEMPTION FROM APPLICATION OF SERVICE CONTRACT ACT PROVISIONS (FAR 52.222-48) (MAY 1989) . . . . .	140
K.17	CLEAN AIR AND WATER CERTIFICATION (FAR 52.223-1) (APR 1984) . . . . .	141
K.18	CERTIFICATION REGARDING A DRUG-FREE WORKPLACE (FAR 52.223-5) (JUL 1990) . . . . .	141
K.19	REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE (FAR 52.227-15) (JUN 1987) . . . . .	143
K.20	COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (CASB-1) (APR 1992) . . . . .	144
K.21	CONTRACTS BETWEEN NASA AND FORMER NASA EMPLOYEES (NASA 18-52.203-70) (DEC 1988) (NASA/FAR SUPPLEMENT) . . . . .	146
K.22	USE OF GOVERNMENT-OWNED PROPERTY (NASA 18-52.245-79) (MAR 1989) (NASA/FAR SUPPLEMENT) . . . . .	146
K.23	PAYMENT INFORMATION (LARC 52.232-98) (JUN 1988) . . . . .	147
<u>SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS</u>		
L.1	ORGANIZATIONAL CONFLICTS OF INTEREST CERTIFICATE--MARKETING CONSULTANTS (FAR 52.209-7) (NOV 1991) . . . . .	147
L.2	NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (FAR 52.212-7) (MAY 1986) . . . . .	148



TABLE OF CONTENTS		PAGE
L.3	SOLICITATION DEFINITIONS (FAR 52.215-5) (JUL 1987) . . . . .	148
L.4	UNNECESSARILY ELABORATE PROPOSALS OR QUOTATIONS (FAR 52.215-7) (APR 1984) . . . . .	149
L.5	AMENDMENTS TO SOLICITATIONS (FAR 52.215-8) (DEC 1989) . . . . .	149
L.6	SUBMISSION OF OFFERS (FAR 52.215-9) (DEC 1989) . . . . .	149
L.7	LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF PROPOSALS (FAR 52.215-10) (DEC 1989) . . . . .	149
L.8	PREPARATION OF OFFERS (FAR 52.215-13) (APR 1984) . . . . .	150
L.9	EXPLANATION TO PROSPECTIVE OFFERORS (FAR 52.215-14) (APR 1984) . .	151
L.10	FAILURE TO SUBMIT OFFER (FAR 52.215-15) (APR 1984) . . . . .	151
L.11	CONTRACT AWARD (FAR 52.215-16) (JUL 1990)--ALTERNATE II (AUG 1991) . . . . .	151
L.12	FACILITIES CAPITAL COST OF MONEY (FAR 52.215-30) (SEP 1987) . . . .	152
L.13	TYPE OF CONTRACT (FAR 52.216-1) (APR 1984) . . . . .	152
L.14	SIC CODE AND SMALL BUSINESS SIZE STANDARD (FAR 52.219-22) (JAN 1991) . . . . .	152
L.15	PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE REVIEW (FAR 52.222-24) (APR 1984) . . . . .	153
L.16	NOTICE OF COMPENSATION FOR PROFESSIONAL EMPLOYEES (FAR 52.222-45) (APR 1984) . . . . .	153
L.17	EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES (FAR 52.222-46) (APR 1984) . . . . .	153
L.18	ROYALTY INFORMATION (FAR 52.227-6) (APR 1984) . . . . .	154
L.19	SERVICE OF PROTEST (FAR 52.233-2) (NOV 1988) . . . . .	154
L.20	SUBMISSION OF SECURITY PLAN FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 18-52.204-77) (JAN 1992) (NASA/FAR SUPPLEMENT) . .	155
L.21	INCREASES IN ESTIMATED COSTS (NASA 18-52.215-70) (DEC 1988) . . . .	155
L.22	RESTRICTION ON USE AND DISCLOSURE OF PROPOSAL/QUOTATION INFORMATION (DATA) (NASA 18-52.215-72) (DEC 1984) . . . . .	155
L.23	EXPENSES RELATED TO OFFEROR SUBMISSIONS (NASA 18-52.215-75) (DEC 1988) . . . . .	156
L.24	FALSE STATEMENTS (NASA 18-52.215-76) (DEC 1988) . . . . .	156
L.25	DISPOSAL OF UNSUCCESSFUL PROPOSALS (NASA 18-52.215-80) (DEC 1988) . . . . .	156
L.26	SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN (NASA 18-52.219-73) (DEC 1988) ALTERNATE I (DEC 1988) . . . . .	156
L.27	PREPROPOSAL/PRE-BID CONFERENCE (NASA 18-52.215-77) (DEC 1988) . . .	156
L.28	CERTIFICATE OF PROCUREMENT INTEGRITY - OFFERS (LaRC 52.203-90) (JUL 1991) . . . . .	157
L.29	COMMUNICATIONS REGARDING THIS SOLICITATION (LaRC 52.204-95) (JUN 1988) . . . . .	157
L.30	BIDDERS LIBRARY . . . . .	158
L.31	NASA'S POLICY ON FACILITIES CAPITAL COST OF MONEY (LaRC 52.215-95) (JUN 1988) . . . . .	158
L.32	CERTIFICATION OF COST OR PRICING DATA (LaRC 52.215-97) (JUN 1988) . . . . .	158
L.33	REJECTION, NEGOTIATION, AWARD AND EXPENDITURE OF FUNDS (LaRC 52.215-99) (JUN 1988) . . . . .	159

	TABLE OF CONTENTS	PAGE
L.34	DRAFT PROVISION - IDENTIFICATION OF UNCOMPENSATED OVERTIME (18-52.237-71) ( 1992) . . . . .	159
L.35	CERTIFICATE OF MAINTAINABILITY . . . . .	160
L.36	CONTRACTOR/GOVERNMENT INTERFACE . . . . .	160
L.37	CONTRACTOR'S OFF-SITE FACILITY . . . . .	160
L.38	USE OF GOVERNMENT SUPPLY SOURCES . . . . .	160
L.39	SMALL DISADVANTAGED BUSINESS SUBCONTRACTING GOAL . . . . .	160
L.40	PROPOSAL PREPARATION AND SUBMISSION - SPECIAL INSTRUCTIONS . . . . .	161
SECTION M	- EVALUATION FACTORS FOR AWARD . . . . .	175
M.1	METHOD OF EVALUATION . . . . .	175
M.2	EVALUATION FACTORS . . . . .	176
M.3	RELATIVE IMPORTANCE OF EVALUATION FACTORS . . . . .	180

## PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS

## B.1 SCOPE OF WORK--ALTERNATE II (LaRC 52.212-90) (JUL 1991)

A. The Contractor shall, except as otherwise specified herein, furnish all personnel, facilities, services, equipment, supplies, and materials necessary for performance of Scientific Computing Operations, Maintenance, and Communications Services as described in Exhibit A, Statement of Work (SOW), dated September 18, 1992.

B. Specific detailed performance requirements within the Statement of Work for Section C.6, LaRC Distributed System and Data Reduction Support will be directed by the Government in accordance with the procedures outlined in G.2, Work Orders.

## B.2 LEVEL-OF-EFFORT

A. In performing work under Section C, Description/Specifications/Work Statement (excluding Section C.4) the Contractor is obligated to provide 641,370 direct productive labor hours as defined below.

B. Direct productive level-of-effort hours are defined as those hours actually worked (including overtime) by personnel in the performance of the work set forth in Section C, except for C.4, Central Scientific Computing Complex (CSCC) Maintenance. First-line supervision of the work performed in support of the Statement of Work is considered to be direct and all corresponding hours are considered as direct productive level-of-effort hours.

C. Productive non-level-of-effort hours are defined as those hours expended by personnel such as the Contract Manager, Deputy Contract Manager (if proposed), Technical Managers, financial, clerical, and procurement personnel in managing or administering the work.

D. All paid absences (vacation, holidays, sick, etc.) are considered non-productive hours.

## B.3 ESTIMATED COST, AWARD FEE AND FIXED FEE

A. The estimated cost of this contract is \$ \_\_\_\_\_, exclusive of the award fee of \$ \_\_\_\_\_ and fixed fee\* of \$0. The total estimated cost, award fee, and fixed fee is \$ \_\_\_\_\_.

B. The award fee available for each evaluation period is as follows:

<u>Period</u>	<u>Available Award Fee</u>
8/9/93 - 1/31/94	\$
2/1/94 - 7/31/94	\$
8/1/94 - 1/31/95	\$
2/1/95 - 7/31/95	\$

\*A fixed fee amount will be inserted if the Government exercises any of the one-month options to extend the period of performance as set forth in Section H.

## B.4 SPECIFIED OTHER DIRECT COSTS

The estimated cost of this contract includes the following estimates for material, equipment, software, travel, training, and fixed-price specialized services such as, commercialized available graphics and publications, and board repair, required for performance of the Statement of Work except Section C.4.

<u>Initial Period</u>	<u>First Option</u>	<u>Second Option</u>	<u>Third Option</u>	<u>Fourth Option</u>	<u>Fifth Option</u>	<u>Sixth Option</u>	<u>Seventh Option</u>	<u>Eighth Option</u>
\$4,450,000	\$5,224,000	\$8,599,000	\$255,700	\$255,700	\$255,700	\$255,700	\$255,700	\$255,700

These costs are the Government's best estimate of what the actuals will be. There will be no adjustment in the fee(s) of the contract should the actuals be different than these estimates, unless there is a change to the contract, under the Changes clause of this contract, which impacts these estimates.

## B.5 CONTRACT FUNDING (NASA 18-52.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$ \_\_\_\_\_ and covers the following estimated period of performance:

(b) An additional amount of \$ \_\_\_\_\_ is obligated under this contract for payment of fee.

## B.6 ADMINISTRATION OF CONTRACT FUNDING (LaRC 52.232-100) (MAR 1989)

A. The Contractor agrees that all future incremental funding shall be accomplished by Administrative Change Modification and that the funding procedure shall in no way change the Contractor's notification obligations as set forth in the "Limitation of Funds" clause.

B. In addition to the requirements of the "Limitation of Funds" clause, the Contractor shall notify the Contracting Officer in writing if, at any time, the Contractor has reason to believe that the total cost to the Government, exclusive of any fee, for the complete performance of this contract will be greater or substantially less than the then total estimated cost of the contract. Such notification shall give a revised estimate of the total cost for the performance of this contract.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

## C.1 STATEMENT OF WORK--ALTERNATE I (LaRC 52.215-90) (JUN 1988)

The Contractor shall perform the effort specified in Exhibit A, Statement of Work entitled, "Scientific Computing Operations, Maintenance, and Communication Services."

SECTION E - INSPECTION AND ACCEPTANCEE.1 INSPECTION OF SUPPLIES - COST-REIMBURSEMENT (FAR 52.246-3)  
(APR 1984)

(a) Definitions. "Contractor's managerial personnel," as used in this clause, means any of the Contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of--

- (1) All or substantially all of the Contractor's business;
- (2) All or substantially all of the Contractor's operation at a plant or separate location at which the contract is being performed; or
- (3) A separate and complete major industrial operation connected with performing this contract.

"Supplies," as used in this clause, includes but is not limited to raw materials, components, intermediate assemblies, end products, lots of supplies, and, when the contract does not include the Warranty of Data clause, data.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the supplies, fabricating methods, and special tooling under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test the contract supplies, to the extent practicable at all places and times, including the period of manufacture, and in any event before acceptance. The Government may also inspect the plant or plants of the Contractor or any subcontractor engaged in the contract performance. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspection or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish and shall require subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) Unless otherwise specified in the contract, the Government shall accept supplies as promptly as practicable after delivery, and supplies shall be deemed accepted 60 days after delivery, unless accepted earlier.

(f) At any time during contract performance, but no later than 6 months (or such other time as may be specified in the contract) after acceptance of the supplies to be delivered under the contract, the Government may require the Contractor to replace or correct any supplies that are nonconforming at time of delivery.

Supplies are nonconforming when they are defective in material or workmanship or are otherwise not in conformity with contract requirements. Except as otherwise provided in paragraph (h) below, the cost of replacement or correction shall be included in allowable cost, determined as provided in the Allowable Cost and Payment clause, but no additional fee shall be paid. The Contractor shall not tender for acceptance supplies required to be replaced or corrected without disclosing the former requirement for replacement or correction, and, when required, shall disclose the corrective action taken.

(g) (1) If the Contractor fails to proceed with reasonable promptness to perform required replacement or correction, the Government may--

(i) By contract or otherwise, perform the replacement or correction and charge to the Contractor any increased cost or make an equitable reduction in any fixed fee paid or payable under the contract;

(ii) Require delivery of undelivered supplies at an equitable reduction in any fixed fee paid or payable under the contract; or

(iii) Terminate the contract for default.

(2) Failure to agree on the amount of increased cost to be charged to the Contractor or to the reduction in the fixed fee shall be a dispute.

(h) Notwithstanding paragraphs (f) and (g) above, the Government may at any time require the Contractor to correct or replace, without cost to the Government, nonconforming supplies, if the nonconformances are due to (1) fraud, lack of good faith, or willful misconduct on the part of the Contractor's managerial personnel or (2) the conduct of one or more of the Contractor's employees selected or retained by the Contractor after any of the Contractor's managerial personnel has reasonable grounds to believe that the employee is habitually careless or unqualified.

(i) This clause applies in the same manner to corrected or replacement supplies as to supplies originally delivered.

(j) The Contractor shall have no obligation or liability under this contract to replace supplies that were nonconforming at the time of delivery, except as provided in this clause or as may be otherwise provided in the contract.

(k) Except as otherwise specified in the contract, the Contractor's obligation to correct or replace Government-furnished property shall be governed by the clause pertaining to Government property.

#### E.2 INSPECTION OF SERVICES - COST-REIMBURSEMENT (FAR 52.246-5) (APR 1984)

(a) Definition. "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If any of the services performed do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, for no additional fee. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce any fee payable under the contract to reflect the reduced value of the services performed.

(e) If the Contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and reduce any fee payable by an amount that is equitable under the circumstances or (2) terminate the contract for default.

## E.3 FINAL INSPECTION AND ACCEPTANCE (LaRC 52.246-94) (JUN 1988)

Final inspection and acceptance of all items specified for delivery under this contract shall be accomplished by the Contracting Officer or his duly authorized representative at destination.

SECTION F - DELIVERIES OR PERFORMANCE

## F.1 STOP-WORK ORDER (FAR 52.212-13) (AUG 1989) ALTERNATE I (APR 1984)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work order is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall

either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if -

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

F.2 F.O.B. DESTINATION, WITHIN CONSIGNEE'S PREMISES (FAR 52.247-35)  
(APR 1984)

(a) The term "F.O.B. destination, within consignee's premises," as used in this clause, means free of expense to the Government delivered and laid down within the

doors of the consignee's premises, including delivery to specific rooms within a building if so specified.

(b) The Contractor shall -

(1) (i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

(5) Furnish a delivery schedule and designate the mode of delivering carrier; and

(6) Pay and bear all charges to the specified point of delivery.

F.3 PERIOD OF PERFORMANCE (NASA 18-52.212-74) (DEC 1988)

The period of performance of this contract shall be August 9, 1993, through July 31, 1995.

F.4 PLACE OF DELIVERY--ALTERNATE II (LARC 52.212-92) (JUN 1988)

Delivery of all items hereunder shall be f.o.b. Langley Research Center.

F.5 PLACES OF PERFORMANCE--ALTERNATE II (LARC 52.212-98)  
(JUN 1988)

The places of performance shall be the Contractor's facility and NASA Langley Research Center (LaRC), Hampton, Virginia 23681-0001.

F.6 REPORTS AND DOCUMENTATION DELIVERY (LARC 52.212-99)  
(JUN 1988)

The Contractor shall provide to the Government all reports and items of documentation as required by the SOW, Section I (Contract Clauses), and Exhibit B (Contract Documentation Requirements).

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NASA 18-52.227-72) (APR 1984)

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights - Retention by the Contractor (Short Form)", whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:



<u>Title</u>	<u>Office Code</u>	<u>Address (including zip code)</u>
New Technology Representative	200	NASA, Langley Research Center Hampton, VA 23681-0001
Patent Representative	143	NASA, Langley Research Center Hampton, VA 23681-0001

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 18-27.375-3 of the NASA FAR Supplement.

#### G.2 WORK ORDERS (LARC 52.212-101) (OCT 1991)

A. The work to be performed within Section C.6, LaRC Distributed System and Data Reduction Support of the Statement of Work, will be more specifically directed by means of written work orders issued by the Government, containing the following information:

1. Date
2. Job order/work order number
3. Originator
4. Description of work, specifications and/or end item
5. Required schedule
6. Manpower estimate
- (\*) 7. Material cost estimate
- (\*) 8. Government-furnished material
- (\*) 9. Applicable special instructions

(\*) To be provided at the option of the Government.

B. Two copies of each work order will be furnished to the Contractor. One shall be retained by the Contractor and one shall be returned to the Contracting Officer's Technical Representative upon completion of the work specified. Completed work orders shall contain, as applicable, actual completion dates and/or

delivery dates, actual man-hours expended, actual material and labor costs incurred, and any remarks which the Contractor may wish to make with respect to his performance thereunder.

C. The Contractor shall furnish a control and reporting system capable of accurately obtaining on a weekly basis actual man-hours, labor costs, and material costs associated with each LARC work order number.

D. If any work order is considered by the Contractor to be outside the scope of this contract, or if the Contractor has reason to believe that he will exceed the scope of his contractual obligation (e.g., contract level of effort, contract funding, contract estimated cost) in the performance thereof, the Contractor shall immediately notify the Contracting Officer in writing, and shall not perform any work pending resolution by the Contracting Officer.

### G.3 AWARD FEE EVALUATIONS (LARC 52.216-92) (JUN 1990)

A. The Contractor's performance hereunder shall be evaluated each period by an Evaluation Board in accordance with an established evaluation plan. A copy of this plan shall be furnished to the Contractor within 60 days of the effective date of this contract. This plan may be modified by the Government and a copy of any modification will be provided to the Contractor. The Board shall review the Contractor's performance for each period in the following areas:

- Continuous Improvement
- Technical Performance
- Management
- Cost
- Safety

B. The findings of the Board shall be reported to the Fee Determination Official (a cognizant individual at the program director level or higher of LARC management) who will determine to what extent the Contractor's performance for the preceding award fee evaluation period warrants payment of some portion of the available award fee specified in Section B.3. In no event will any unawarded portion of fee for any evaluation period become available for award in subsequent periods.

C. The Contractor will be notified of the Fee Determination Official's determination of award fee by the Contracting Officer in a Notice of Award Fee, and such decision shall be binding on both parties and not subject to the Section I clause entitled "Disputes - Alternate I."

D. In the event this contract is terminated prior to a regularly scheduled award fee determination, the fee to be paid to the Contractor shall be an appropriate portion of any available award fee, as may be determined by the Fee Determination Official.

E. The Contractor may submit evaluation plan recommendations pertinent to evaluation criteria, methods of measurement, definitions, ground rules, relative importance, etc., to the Contracting Officer. Such recommendations may be for the initial evaluation period or for subsequent periods. Recommendations for the

initial period should be received by the Contracting Officer no later than the effective date of the contract and for subsequent periods no later than thirty (30) days prior to the beginning of the period.

#### G.4 SUBMISSION OF INVOICES

Proper invoices, as determined under the Section I clause entitled "Prompt Payment," shall be addressed to the designated payment office shown in Block 12. on page 1 of this contract. Cost invoices shall be submitted through the delegated Government Audit Agency, which shall be the designated billing office. Fee invoices shall be submitted through the NASA Contracting Officer with a copy to the delegated Audit Agency. The Contractor shall furnish with each invoices for Systems Maintenance, (C.4.1 of SOW), the certification required by H.18.

#### G.5 PAYMENTS--COST, AWARD FEE, AND FIXED FEE

Payments of cost shall be made in monthly installments. Payments of award fee shall be made in response to and in the amount of the Fee Determination Official's written Notice of Award Fee as set forth in G.5. Payments of award fee are subject to the withholding provisions of the Section I clause entitled "Award Fee." Payments of fixed fee shall be made in monthly installments based upon the percentage of completion of work as determined by the Contracting Officer.

#### G.6 CONTRACT CLOSEOUT (LARC 52.242-90) (JUN 1988)

A. Reassignment--After receipt, inspection, and acceptance by the Government of all required articles and/or services, and resolution of any pending issues raised during the Period of Performance, this contract will be reassigned to the NASA Langley Research Center Contracting Officer for Contract Closeout. All transactions subsequent to the physical completion of the contract should, therefore, be addressed to the said Contracting Officer at NASA Langley Research Center, Mail Stop 126, who may be reached by telephone at (804) 864-2462.

B. "Quick Closeout"--Paragraph (f) of the Allowable Cost and Payment clause of this contract addresses the "Quick Closeout Procedure" delineated by Subpart 42.7 of the Federal Acquisition Regulation (FAR). It should be understood that the said procedure applies to the settlement of indirect costs for a specific contract in advance of the determination of final indirect cost rates when the amount of unsettled indirect cost to be allocated to the contract is relatively insignificant. Therefore, the "Quick Closeout" procedure does not preclude the provisions of paragraph (d) of the Allowable Cost and Payment clause nor does it constitute a waiver of final audit of the Contractor's Completion Voucher.

C. Completion Voucher Submittal--Notwithstanding the provisions of the Allowable Cost and Payment clause, as soon as practicable after settlement of the Contractor's indirect cost rates applicable to performance of the contract, the Contractor shall submit a Completion Voucher as required by the aforesaid clause. The Completion Voucher shall be supported by a cumulative claim and reconciliation statement and executed NASA Forms 778, Contractor's Release, and 780, Contractor's Assignment of Refunds, Rebates, Credits, and Other Amounts. Unless directed otherwise by the Contracting Officer for Contract Closeout, the Contractor shall

forward the said Completion Voucher directly to the cognizant Government Agency to which audit functions under the contract have been delegated.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 RIGHTS TO PROPOSAL DATA (TECHNICAL) (FAR 52.227-23) (JUN 1987)

Except for data contained on pages TO BE NEGOTIATED, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated TO BE NEGOTIATED, upon which this contract is based.

H.2 KEY PERSONNEL AND FACILITIES (NASA 18-52.235-71)  
(MAR 1989)

(a) The personnel and/or facilities listed below (or specified in the Contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the Contractor shall (1) notify the Contracting Officer reasonably in advance and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract.

(b) The Contractor shall make no diversion without the Contracting Officer's written consent; provided, that the Contracting Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause.

(c) The list of personnel and/or facilities (shown below or as specified in the Contract Schedule) may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

TO BE NEGOTIATED

H.3 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42)  
(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

<u>Employee Class</u>	<u>Monetary Wage</u>
Computer Operator I	\$ 7.57
Computer Operator II	\$ 8.47
Computer Operator III	\$ 9.45
Data Specialist	\$ 7.57
Facility Monitor	\$ 8.47
Documentation Specialist	\$ 7.57
Communications Specialist	\$ 8.47
Communications Systems Specialist I	\$12.84
Communications Systems Specialist II	\$14.14
Communications Systems Specialist III	\$15.54
Electronics Technician II	\$11.63
Electronics Technician III	\$12.84
Requirements Specialist	\$10.50

### FRINGE BENEFITS

- Annual Leave - Receives 13 days paid leave for service up to 3 years; 20 days for 3 to 15 years service; and 26 days for 15 years service or over.
- Sick Leave - Receives 13 days paid leave per year.
- Holidays - Receives 10 paid holidays per year.
- Health Insurance - Government pays up to 75% of health insurance.
- Group Life Insurance - Government pays one-third of basic life insurance premium under the Federal Employees Group Life Insurance (FEGLI). Government also offers an additional term-life insurance (National Employees Benefits Association (NEBA)), for which employees pay the full premium.
- Retirement - The Federal Government provides three retirement plans identified as the Civil Service Retirement System (CSRS), the Federal Employees Retirement System (FERS), and CSRS Offset. Under the CSRS, the Government contributes 7% of the employees' base pay towards the retirement benefit and 1.45% towards Medicare. Under the FERS, the Government contributes 12.9% of the employees' base pay towards a basic benefit plan, 6.2% to Social Security, 1.45% towards Medicare, and 1% (plus matching contributions of up to 4% of basic pay depending on employees' contributions) to a thrift savings plan. Under the CSRS Offset, the Government contributes 0.8% of the employees' base pay towards the retirement benefit, 6.2% to Social Security, and 1.45% towards Medicare.

Part-time Federal employees receive pro rata annual leave, sick leave, holiday leave, health insurance, and group life insurance benefits based on the number of hours worked.

H.4 LIST OF GOVERNMENT-FURNISHED PROPERTY (NASA 18-52.245-76)  
(OCT 1988)

For the performance of work under this contract, the Government will make available Government property identified in Exhibit C of this contract on a no-charge-for-use basis. The Contractor shall use this property in the performance of this contract at the Contractor's facility and at other location(s) as may be approved by the Contracting Officer. Under the FAR 52.245 Government Property clause of this contract, the Contractor is accountable for the identified property.

H.5 LIST OF INSTALLATION-PROVIDED PROPERTY AND SERVICES  
(NASA 18-52.245-77) (MAR 1989)

In accordance with the Installation Provided Government Property clause of this contract, the Contractor is authorized use of the types of property and services listed below, to the extent they are available, while on-site at the NASA installation.

Authorized for work performed under the SOW except Section C.4, Systems Maintenance:

(a) Office space, work area space, communication hardware storage areas, and utilities. The Contractor shall use Government telephones for official purposes only.

(b) General- and special-purpose equipment, including office furniture.

(1) Equipment to be made available to the Contractor for use in performance of this contract on-site and at such other locations as approved by the Contracting Officer is listed in Exhibit D. The Government retains accountability for this property under the Installation-Provided Government Property clause, regardless of its authorized location.

(2) If the Contractor acquires property as a direct cost under this contract, this property also shall become accountable to the Government upon its entry into the NASA Equipment Management System (NEMS) in accordance with the property-reporting requirements of this contract.

(3) The Contractor shall not bring on-site for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval. This restriction does not pertain to Contractor furnished vehicles.

- (c) Reproduction services
- (d) Hardware maintenance services on all Installation-Provided ADP equipment (terminals, personal computers, word processors)
- \*(e) Library service
- \*(f) Emergency medical treatment, primarily first aid in nature, for injuries sustained while on duty at Langley Research Center
- (g) Hearing examinations (for employees designated to work in high noise level areas)
- \*(h) On-Center mail delivery service
- \*(i) Cafeteria privileges for Contractor employees during normal operating hours.
- (j) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services shall be provided on-site, as approved by the Contracting Officer.
- (k) Government material cards issued to permit authorized Contractor personnel to draw supplies from LaRC Stores; provided such withdrawals are approved by the COTR.
- (l) Fuel, scheduled maintenance, parts and repairs (except those covered by manufacturer's warranty) for all Contractor-provided vehicles.
- (m) Supplies from stores stock such as sheet metal, angle iron, tubing, wire, and plexiglass.
- (n) Fabrication services requiring elaborate special tooling as available.

Authorized for work performed under Section C.4, Systems Maintenance, of the SOW:

- (a) Maintenance work area of approximately 1,300 square feet including utilities. The Contractor shall use Government telephones for communication on LaRC.

The responsibilities of the Contractor as contemplated by paragraph (a) of the Installation-Provided Government Property clause are defined in the following property management directives and installation supplements to these Directives:

- (1) NHB 4200.1, NASA Equipment Management Manual.
- (2) NHB 4200.2, NASA Equipment Management System (NEMS) User's Guide for Property Custodians.
- (3) NHB 4300.1, NASA Personal Property Disposal Manual.
- (4) NHB 4100.1, NASA Materials Inventory Management Manual.

\*Authorized for all contract requirements.

#### H.6 USE OF GOVERNMENT PRODUCTION AND RESEARCH PROPERTY ON A NO-CHARGE BASIS (NASA 18-52.245-80) (MAR 1989)

In performing this contract, the Contractor is authorized to use on a no-charge, noninterference basis the Government-owned production and research property

provided to the Contractor under the contract(s) specified below and identified in the cognizant Contracting Officer's letter approving use of the property. Use is authorized on the basis that it will not interfere with performance of the Government contract(s) under which the property was originally furnished. Use shall be in accordance with the terms and conditions of these contract(s) and the cognizant Contracting Officer's approval letter.

Contract No(s): TO BE NEGOTIATED

#### H.7 LIST OF GOVERNMENT-FURNISHED ITEMS

The items identified below are provided to the Contractor in performance of this contract, for use both on-site and off-site:

1. Magnetic tape, printer paper, and other data processing supplies.
2. Supplies from stores stock such as drafting, copier, graph paper, and other office supplies.
3. Publications and blank forms stocked by the installation.
4. Reference material which includes documentation covering changes and additions to the CSCC and its operating systems, equipment manuals, drawings, procedures, and other reference documents relating to the operation of the CSCC.

#### H.8 PROCUREMENT AUTHORITY (201-39.5202-3) (OCT 90 FIRMR)

This acquisition is being conducted under a specific acquisition delegation of GSA's exclusive procurement authority for FIP resources. The specific GSA DPA case number is KMA-92-0354.

#### H.9 CONTRACTOR EMPLOYEE'S SECURITY CLEARANCE (LaRC 52.204-90) (AUG 1992)

By virtue of their particular work assignment, certain Contractor employees, as identified by the Government, will be required to have security clearances granted in accordance with DOD 5220.22M, "Department of Defense Industrial Security Manual for the Safeguarding of Classified Information, or to have a favorable National Agency Check (NAC). Requests for NAC's will be processed by the Langley Research Center Security Office; forms to initiate these may be obtained from the Security Office. Personnel security clearances will be granted by the Department of Defense.

Within 10 working days after an employee has been identified as requiring a security clearance or an NAC, the Contractor shall present to the Contracting Officer evidence that a request for clearance has been submitted to the Defense Industrial Security Clearance Office (DISCO). If the clearance for an employee



has not been issued within 120 calendar days of the submittal, the Contractor may be required to remove the employee from the contract.

H.10 AUTOMATED INFORMATION SECURITY (AIS) PROGRAM/EMPLOYEE NATIONAL AGENCY CHECK (NAC) AND USER AGREEMENT EXECUTION (LaRC 52.239-90) (MAY 1991)

A. Work to be performed under this contract requires access to ADP equipment and processing areas. Therefore, the Contractor shall comply with the requirements of NASA's Automated Information Security Program. This program is separate and distinct from security programs for safeguarding classified information. Prior to performing any work in restricted-access computer rooms or accessing NASA ADPE (either remotely or on-site at LaRC), all Contractor employees must have a favorable NAC completed. The Contractor shall submit a properly executed NASA Form 531 (NF 531), Name Check Request, to the LaRC Security Officer, Mail Stop 182, for each Contractor employee who will work in restricted access computer rooms and/or access NASA ADPE. In addition, each such employee is required to be fingerprinted at the LaRC Badge and Pass Office, Building 1228, or by any authorized agency or department utilizing Fingerprint Card FD-258. Approximately 75 days are required to complete the NAC after receipt of the NF 531 and FD-258. The NAC is not required if an employee has a Secret or higher clearance. When it is necessary for an employee to perform any work in restricted access computer rooms prior to completion of the NAC, the employee may be escorted while at the site by an individual who has a favorable NAC or a higher level of investigation favorably adjudicated, or a Secret or higher clearance, or as otherwise approved by the Security Officer. Employees may access NASA ADP equipment prior to completion of the NAC only as approved by the LaRC Security Officer on a case-by-case basis.

B. The Contractor shall insure that all Contractor personnel execute a user agreement, Form No. ACD N-865, Responsibilities of Users of the NASA/LaRC Central Scientific Computer Complex, and any other forms that may be required by the Government prior to having access to NASA ADP resources. Unauthorized access to and/or use of LaRC computing systems is a violation of law and punishable under the provisions of 18 USC 1029, 18 USC 1030, and other applicable statutes. For compliance with Center Computer security policy, the Contractor shall promptly notify the Contracting Officer's Technical Representative (COTR) when an authorized user employee no longer requires computer access.

H.11 OBSERVATION OF REGULATIONS AND IDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LaRC 52.212-104) (MAR 1992)

A. Observation of Regulations--In performance of that part of the contract work which may be performed at Langley Research Center or other Government installation, the Contractor shall require its employees to observe the rules and regulations as prescribed by the authorities at Langley Research Center or other installation.

B. Identification Badges--At all times while on LaRC property, the Contractor shall require its employees, subcontractors and agents to wear badges which will be issued by the NASA Contract Badge and Pass Office, located at

1 Langley Boulevard (Building No. 1228). Badges shall be issued only between the hours of 6:30 a.m. and 4:30 p.m., Monday through Friday. Contractors will be held accountable for these badges, and may be required to validate outstanding badges on an annual basis with the NASA LaRC Security Office. Immediately after employee termination or contract completion, badges shall be returned to the NASA Contract Badge and Pass Office.

H.12 INCORPORATION OF SECTION K OF THE PROPOSAL BY REFERENCE  
(LaRC 52.215-107) (MAR 1989)

Pursuant to FAR 15.406-1(b), the completed Section K of the proposal dated is hereby incorporated herein by reference.

H.13 SUBCONTRACTING PLAN (LaRC 52.219-91) (JUN 1988)\*

The approved Contractor plan for subcontracting with small business and small disadvantaged business concerns is attached hereto as Exhibit E and is hereby made a part of this contract.

H.14 EVIDENCE OF INSURANCE (LaRC 52.228-93) (MAR 1989)

The Contractor shall submit evidence of the insurance coverage, required by the NASA Clause 18-52.228-75 in Section I entitled "Minimum Insurance Coverage" (i.e., a Certificate of Insurance or other confirmation), to the Contracting Officer prior to performing under this contract. In the event the Government exercises its options to extend the term of the contract, the Contractor shall also present such evidence to the Contracting Officer prior to commencement of performance under the extension.

H.15 VIRGINIA AND LOCAL SALES TAXES (LaRC 52.229-92) (APR 1992)

To perform this contract, the Contractor must be knowledgeable of relevant state and local taxes when making purchases of tangible personal property. The Contractor shall refrain from paying nonapplicable taxes or taxes where an exemption exists, but shall pay applicable taxes that are reimbursable pursuant to FAR 31.205-41, Taxes. Even though title to property purchased under this contract may pass to the Government and the price is reimbursable under contract cost principles, such transactions do not in themselves provide tax immunity to the Contractor. Therefore, within 30 days after the effective date of this contract, the Contractor shall request from the Virginia State Tax Commission a ruling on any tax exemptions that may be applicable to purchases made under this contract. The Contractor shall provide all facts relevant to the situation and shall pursue an interpretation of the law that is most favorable to both the Contractor and the Government.

\*Not applicable to Small Business.

H.16 WAGE DETERMINATIONS AND FRINGE BENEFITS (LaRC 52.237-90)  
(NOV 1990)

The Register of Wage Determinations and Fringe Benefits, Number 78-1030, Rev. 22, Exhibit F, dated August 8, 1992, lists the wage rate and fringe benefits for designated labor classifications which shall be the minimum paid under this contract. See Exhibit F for a copy of this wage determination. This determination constitutes the "attachment" as referred to in paragraph (a), Compensation, of the Section I clause entitled "Service Contract Act of 1965."

H.17 CONSENT TO SUBCONTRACT\*

Notwithstanding the provisions of FAR 52.244-2, Subcontracts (Cost Reimbursement and Letter Contracts) (JUL 1985) Alternate I (APR 1985), the Contractor shall obtain the Contracting Officer's consent before award of a subcontract exceeding \$25,000.

H.18 ADVANCE AGREEMENT ON SYSTEMS MAINTENANCE PRICES

The prices for performing systems maintenance services in accordance with Section C.4, CSCC Systems Maintenance, of the SOW are set forth in Appendix A of Exhibit A. These prices include all costs and profit of the actual business entity performing the hands-on work.

The monthly charge for each Contract Line Item Number (CLIN) includes coverage for the specified status (hours of coverage and response time) as defined in C.4.1 of the SOW. The Basic Monthly Maintenance Charge (BMMC) for hardware and environmental control systems set forth in Appendix A of Exhibit A is the monthly maintenance charge for on-site (LaRC) coverage with 10 minutes response time from 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding Government Holidays; response time for all other times shall not exceed 2 hours. The monthly charge and BMMC for each CLIN includes all costs associated with the service; i.e., parts, travel, materials, F.O.B. Destination, within consignee's premises.

The Government may require a change in maintenance status for hardware and environmental control systems CLINs over the contract term. In the event of a change, the monthly charge for a CLIN may be modified by multiplying the BMMC by a variable percentage associated with the maintenance coverage addressed in Section C.4.1 of the SOW and in accordance with the following conversion schedule:

<u>Status</u>	<u>Percentage of BMMC</u>
1	
2	
3	
4	
5	

\*If the Contractor has an approved purchasing system, this clause may be deleted.

The Contractor agrees that the monthly charge for each CLIN shall not exceed the fixed price set forth in Appendix A, the current General Administration Services Schedule (GSA) contract price, or the current commercial price list, whichever is lower. The Contractor shall furnish with each invoice for systems maintenance a statement certifying that the lowest price has been charged.

Notwithstanding the provisions of the Section I clause entitled "Allowable Cost and Payment," the Contractor shall not be reimbursed for any costs and profit exceeding the lowest applicable price noted above. Any costs that are not reimbursed due to the ceiling shall be deemed unallowable costs.

## H.19 OPTIONS

### A. Priced Options/Extended Services

Pursuant to the Section I clause entitled "Option to Extend the Term of the Contract (MAR 1989)," and FAR 37.111, the Contractor hereby grants to the Government options to extend the term of the contract for one two year period, one three year period, and six one-month periods. The first and second options periods are to be exercisable by issuance of a unilateral modification no later than 30 calendar days prior to the expiration of the contract. The third through eighth option periods are to be exercisable by issuance of a unilateral modification prior to the expiration of the contract. Upon exercise of such option(s) by the Government, the following items will be increased by the amounts specified below for each option period.

Item	First Option Period	Second Option Period	Third Option Period	Fourth Option Period	Fifth Option Period	Sixth Option Period	Seventh Option Period	Eighth Option Period
Period of Performance (Ref. F.3)	24 months	36 months	1 month	1 month	1 month	1 month	1 month	1 month
Level of Effort (Ref. B.2)	647,500 hours	971,250 hours	26,563 hours	26,563 hours	26,563 hours	26,563 hours	26,563 hours	26,563 hours
Estimated Cost Ref. B.3)	\$	\$	\$	\$	\$	\$	\$	\$
Award Fee (Ref. B.3)	\$	\$						
Fixed Fee (Ref. B.3)			\$	\$	\$	\$	\$	\$

	<u>First Option Period</u>	<u>Second Option Period</u>
Award Fee Availability (Ref. B.3)		
8/1/95 - 1/31/96	\$	
2/1/96 - 7/31/96	\$	
8/1/96 - 1/31/97	\$	
2/1/97 - 7/31/97	\$	
8/1/97 - 1/31/98		\$
2/1/98 - 7/31/98		\$
8/1/98 - 1/31/99		\$
2/1/99 - 7/31/99		\$
8/1/99 - 1/31/2000		\$
2/1/2000 - 7/31/2000		\$

**B. PRICED OPTION - ADDITIONAL LEVEL OF EFFORT**

1. The Contractor hereby grants to the Government options to increase the contract level of effort by the amounts specified below for each period. The Government's options may be exercised once or multiple times in minimum amounts of 1,875 hours of effort. Such options are to be exercisable by issuance of a unilateral modification.

	<u>Level of Effort (Ref. B.2)</u>
Initial Contract Period	178,125 hours
First Option Period	288,750 hours
Second Option Period	660,000 hours
Third Option Period	20,000 hours
Fourth Option Period	20,000 hours
Fifth Option Period	20,000 hours
Sixth Option Period	20,000 hours
Seventh Option Period	20,000 hours
Eighth Option Period	20,000 hours

2. When any increment of the above option is exercised, the contract cost and fee set forth in B.3, Estimated Cost, Award Fee and Fixed Fee will be increased using the appropriate rates set forth below:

		<u>Rate Per Hour</u>
Initial Period	Cost	\$
	Award Fee	\$
First Option	Cost	\$
	Award Fee	\$
Second Option	Cost	\$
	Award Fee	\$
Third Option	Cost	\$
	Fixed Fee	\$
Fourth Option	Cost	\$
	Fixed Fee	\$

Fifth Option	Cost	\$
	Fixed Fee	\$
Sixth Option	Cost	\$
	Fixed Fee	\$
Seventh Option	Cost	\$
	Fixed Fee	\$
Eighth Option	Cost	\$
	Fixed Fee	\$

3. Increases in the award fee will be allocated to the applicable award fee schedule period.

#### H.20 SYSTEMS MAINTENANCE PRICE POOL FOR SECTION C.4 OF THE STATEMENT OF WORK

In accordance with the Changes clause of this contract the Government may change Exhibit A, Appendix A, to add or delete items or change the specified maintenance status for any item. In order to effect these changes, estimated price increases have been included in the GSA Delegation of Procurement (DPA) Authority (Ref. H.8).

The available pool for these changes is \$35,000,000 for seven and one half years.

### PART II - CONTRACT CLAUSES

#### SECTION I - CONTRACT CLAUSES

##### I.1 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2) (JUN 1988)

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.

##### I.2 The following contract clauses are incorporated by reference:

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

#### CLAUSE NUMBER

#### TITLE AND DATE

52.202-1	Definitions (SEP 1991)
52.203-1	Officials Not to Benefit (APR 1984)
52.203-3	Gratuities (APR 1984)
52.203-5	Covenant Against Contingent Fees (APR 1984)
52.203-6	Restrictions on Subcontractor Sales to the Government (JUL 1985)
52.203-7	Anti-Kickback Procedures (OCT 1988)
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (SEP 1990)

52.204-2 Security Requirements (APR 1984)  
 52.209-6 Protecting the Government's Interest when Subcontracting with  
 Contractors Debarred, Suspended, or Proposed for Debarment  
 (JUN 1991)  
 52.210-5 New Material (APR 1984)  
 52.212-8 Defense Priority and Allocation Requirements (MAY 1986)  
 52.215-1 Examination of Records by Comptroller General (APR 1984)  
 52.215-2 Audit - Negotiation (DEC 1989)  
 52.215-22 Price Reduction for Defective Cost or Pricing Data (JAN 1991)  
 52.215-24 Subcontractor Cost or Pricing Data (DEC 1991)  
 52.215-27 Termination of Defined Benefit Pension Plans (SEP 1989)  
 52.215-33 Order of Precedence (JAN 1986)  
 52.215-39 Reversion or Adjustment of Plans for Postretirement  
 Benefits Other Than Pensions (JUL 1991)  
 52.216-7 Allowable Cost and Payment (JUL 1991)  
 52.216-8 Fixed Fee (APR 1984)  
 52.219-8 Utilization of Small Business Concerns and Small Disadvantaged  
 Business Concerns (FEB 1990)  
 52.219-9 Small Business and Small Disadvantaged Business Subcontracting  
 Plan (JAN 1991)  
 52.219-13 Utilization of Women-Owned Small Businesses (AUG 1986)  
 52.219-16 Liquidated Damages - Small Business Subcontracting Plan  
 (AUG 1989)  
 52.220-3 Utilization of Labor Surplus Area Concerns (APR 1984)  
 52.220-4 Labor Surplus Area Subcontracting Program (APR 1984)  
 52.222-1 Notice to the Government of Labor Disputes (APR 1984)  
 52.222-3 Convict Labor (APR 1984)  
 52.222-18 Notification of Employee Rights Concerning Payment of  
 Union Dues or Fees (MAY 1992)  
 52.222-26 Equal Opportunity (APR 1984)  
 52.222-28 Equal Opportunity Preaward Clearance of Subcontracts  
 (APR 1984)  
 52.222-35 Affirmative Action for Special Disabled and Vietnam Era  
 Veterans (APR 1984)  
 52.222-36 Affirmative Action for Handicapped Workers (APR 1984)  
 52.223-2 Clean Air and Water (APR 1984)  
 52.225-3 Buy American Act - Supplies (JAN 1989)  
 52.225-11 Restrictions on Certain Foreign Purchases (APR 1991)  
 52.227-1 Authorization and Consent (APR 1984)  
 52.227-2 Notice and Assistance Regarding Patent and Copyright  
 Infringement (APR 1984)  
 52.227-11 Patent Rights - Retention by the Contractor (Short Form)  
 (JUN 1989)--as modified by NASA FAR Supplement  
 18-52.227-11  
 52.227-14 Rights in Data - General (JUN 1987) -- as modified by NASA  
 FAR Supplement 18-52.227-14  
 52.227-19 Commercial Computer Software - Restricted Rights (JUN 1987)--  
 as modified by 18-52.227-19  
 52.228-7 Insurance - Liability to Third Persons (APR 1984)  
 52.230-~~5~~ Administration of Cost Accounting Standards (SEP 1987)  
 52.232-9 Limitation on Withholding of Payments (APR 1984)  
 52.232-17 Interest (JAN 1991)



52.232-22	Limitation of Funds (APR 1984)--as modified by NASA FAR Supplement 18-32.705-2
52.232-23	Assignment of Claims (JAN 1986)
52.232-28	Electronic Funds Transfer Payment Methods (APR 1989)--as modified by NASA FAR Supplement 18-32.908
52.233-1	Disputes (DEC 1991) Alternate I (DEC 1991)
52.233-3	Protest After Award (AUG 1989) Alternate I (JUN 1985)
52.237-2	Protection of Government Buildings, Equipment and Vegetation (APR 1984)
52.237-3	Continuity of Services (JAN 1991)
52.242-1	Notice of Intent to Disallow Costs (APR 1984)
52.243-2	Changes - Cost-Reimbursement (AUG 1987) Alternate II (APR 1984)
52.244-2	Subcontracts (Cost-Reimbursement and Letter Contracts) (JUL 1985) Alternate I (APR 1985)
52.244-5	Competition in Subcontracting (APR 1984)
52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) (JAN 1986)
52.246-25	Limitation of Liability - Services (APR 1984)
52.248-1	Value Engineering (MAR 1989)
52.249-6	Termination (Cost-Reimbursement) (MAY 1986)
52.251-1	Government Supply Sources (APR 1984)
52.252-6	Authorized Deviations in Clauses (APR 1984)
52.253-1	Computer Generated Forms (JAN 1991)

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE AND DATE</u>
18-52.204-71	NASA Contractor Financial Management Reporting (DEC 1988)
18-52.204-76	Security Requirements for Unclassified Automated Information Resources (JUN 1990)
18-52.219-74	Use of Rural Area Small Businesses (SEP 1990)
18-52.223-70	Safety and Health (DEC 1988)
18-52.227-70	New Technology (APR 1988)
18-52.227-71	Requests for Waiver of Rights to Inventions (APR 1984)
18-52.227-84	Patent Rights Clauses (DEC 1989)
18-52.237-70	Emergency Evacuation Procedures (DEC 1988)
18-52.242-72	Observance of Legal Holidays (SEP 1989)
18-52.245-71	Installation-Provided Government Property (MAR 1989) Alternate I (MAR 1989)
18-52.252-70	Compliance with NASA FAR Supplement (MAR 1989)

#### I.3 CLAUSES IN FULL TEXT

The clauses listed below follow in full text:

52.203-9	Requirement for Certificate of Procurement Integrity - Modification (NOV 1990)
52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JAN 1990)

52.215-26	Integrity of Unit Prices (APR 1991)
52.217-9	Option to Extend the Term of the Contract (MAR 1989)
52.222-2	Payment for Overtime Premiums (JUL 1990)
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation (MAR 1986)
52.222-20	Walsh-Healy Public Contracts Act (APR 1984)
52.222-37	Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era (JAN 1989)
52.222-41	Service Contract Act of 1965, as Amended (MAY 1989)
52.223-6	Drug-Free Workplace (JUL 1990)
CASB-2	Cost Accounting Standards ( <del>APR</del> 1992)
52.232-25	Prompt Payment (APR 1989)
52.242-13	Bankruptcy (APR 1991)
18-52.204-70	Report on NASA Subcontracts (DEC 1988)
18-52.204-75	Security Classification Requirements (SEP 1989)
18-52.204-78	Security Plan for Unclassified Automated Information Resources (JAN 1992)
18-52.209-71	Limitation of Future Contracting (DEC 1988)
18-52.216-76	Award Fee (DEC 1988)
18-52.219-76	NASA Small Disadvantaged Business Goal (JUL 1991)
18-52.228-75	Minimum Insurance Coverage (OCT 1988)
18-52.245-70	Acquisition of Centrally Reportable Equipment (MAR 1989)
18-52.245-73	Financial Reporting of Government-Owned/Contractor-Held Property (MAR 1989)

I.4 REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION  
(FAR 52.203-9) (NOV 1990)

- (a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.
- (b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the contracting officer in connection with the execution of any modification of this contract.
- (c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION (NOV 1990)

(1) I, \_\_\_\_\_,  
[Name of certifier]

am the officer or employee responsible for the preparation of this modification proposal and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended\* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement

(contract and modification number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of \_\_\_\_\_

[Name of Offeror]

who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity--Modification (Continuation Sheet), ENTER NONE IF NONE EXIST) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
[Signature of the officer or employee responsible for the modification proposal and date]

\_\_\_\_\_  
[Typed name of the officer or employee responsible for the modification proposal]

\*Subsections 27(a), (b), and (d) are effective on December 1, 1990.  
Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(d) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to suspension of Section 27 (i.e., prior to December 1, 1989), the contractor shall ensure that an individual who has so certified is notified that Section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the Contractor.

(e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

I.5 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS  
(FAR 52.203-12) (JAN 1990)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.
- (3) A special Government employee, as defined in section 202, title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action -

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of -

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to

influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iii) Disclosure.

(A) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(B) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes -

(1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(C) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(D) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(iv) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(v) Penalties.

(A) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(B) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(vi) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions.

#### I.6 INTEGRITY OF UNIT PRICES (FAR 52.215-26) (APR 1991)

(a) Any proposal submitted for the negotiation of prices for items of supplies shall distribute costs within contracts on a basis that ensures that unit prices are in proportion to the items' base cost (e.g., manufacturing or acquisition costs). Any method of distributing costs to line items that distorts unit prices shall not be used. For example, distributing costs equally among line items is not acceptable except when there is little or no variation in base cost. Nothing in this paragraph requires submission of cost or pricing data not otherwise required by law or regulation.

(b) The requirement in paragraph (a) of this clause does not apply to any contract or subcontract item of supply for which the unit price is, or is based on, an established catalog or market price for a commercial item sold in substantial quantities to the general public. A price is based on a catalog or market price only if the item being purchased is sufficiently similar to the catalog or market price commercial item to ensure that any difference in price can be identified and justified without resort to cost analysis.

(c) The Offeror/Contractor shall also identify those supplies which it will not manufacture or to which it will not contribute significant value when requested by the Contracting Officer. The information shall not be required for commercial items sold in substantial quantities to the general public when the price is, or is based on, established catalog or market prices.

(d) The Contractor shall insert the substance of this clause, less paragraph (c), in all subcontracts.

#### I.7 OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9) (MAR 1989)

(a) The Government may extend the term of this contract by written notice to the Contractor within the current contract period of performance; provided, that the Government shall give 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 provision.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed seven and one-half years.

#### I.8 PAYMENT FOR OVERTIME PREMIUMS (FAR 52.222-2) (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed zero 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.

#### I.9 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION (FAR 52.222-4) (MAR 1986)

(a) Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics (see Federal Acquisition Regulation (FAR) 22.300) shall require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in paragraph (a) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions set forth in paragraph (a) of this clause in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in paragraph (a) of this clause.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same Prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same Prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.

(d) Payrolls and basic records. (1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of 3 years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit such representatives to interview employees during working hours on the job.

(e) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the provisions set forth in paragraphs (a) through (e) of this clause and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the provisions set forth in paragraphs (a) through (e) of this clause.

#### I.10 WALSH-HEALY PUBLIC CONTRACTS ACT (FAR 52.222-20) (APR 1984)

If this contract is for the manufacture or furnishing of materials, supplies, articles or equipment in an amount that exceeds or may exceed \$10,000, and is subject to the Walsh-Healy Public Contracts Act, as amended (41 U.S.C. 35-45), the following terms and conditions apply:

(a) All representations and stipulations required by the Act and regulations issued by the Secretary of Labor (41 CFR Chapter 50) are incorporated by reference. These representations and stipulations are subject to all applicable rulings and interpretations of the Secretary of Labor that are now, or may hereafter, be in effect.

(b) All employees whose work relates to this contract shall be paid not less than the minimum wage prescribed by regulations issued by the Secretary of Labor (41 CFR 50-202.2). Learners, student learners, apprentices, and handicapped workers may be employed at less than the prescribed minimum wage (see 41 CFR 50-202.3) to the same extent that such employment is permitted under Section 14 of Fair Labor Standards Act (41 U.S.C. 40).

#### I.11 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (FAR 52.222-37) (JAN 1988)

(a) The contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) Subcontracts. The contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

#### I.12 SERVICE CONTRACT ACT OF 1965, AS AMENDED (FAR 52.222-41) (MAY 1989)

(a) **Definitions.** "Act," as used in this clause, means the Service Contract Act of 1965, as amended (41 U.S.C. 351, et seq.).

"Contractor," as used in this clause or in any subcontract, shall be deemed to refer to the subcontractor, except in the term "Government Prime Contractor."

"Service employee," as used in this clause, means any person engaged in the performance of this contract other than any person employed in a bona fide executive, administrative, or professional capacity, as these terms are defined in Part 541 of Title 29, Code of Federal Regulations, as revised. It includes all such persons regardless of any contractual relationship that may be alleged to exist between a Contractor or subcontractor and such persons.

(b) **Applicability.** This contract is subject to the following provisions and to all other applicable provisions of the Act and regulations of the Secretary of Labor (29 CFR Part 4). This clause does not apply to contracts or subcontracts administratively exempted by the Secretary of Labor or exempted by 41 U.S.C. 356, as interpreted in Subpart C of 29 CFR Part 4.

(c) **Compensation.**

(1) Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.

(2) (i) If a wage determination is attached to this contract, the Contractor shall classify any class of service employee which is not listed

therein and which is to be employed under this contract (i.e., the work to be performed is not performed by any classification listed in the wage determination) so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed class of employees shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in this paragraph (c).

(ii) This conforming procedure shall be initiated by the Contractor prior to the performance of contract work by the unlisted class of employee. The Contractor shall submit Standard Form (SF) 1444, Request For Authorization of Additional Classification and Rate, to the Contracting Officer no later than 30 days after the unlisted class of employee performs any contract work. The Contracting Officer shall review the proposed classification and rate and promptly submit the completed SF 1444 (which must include information regarding the agreement or disagreement of the employees' authorized representatives or the employees themselves together with the agency recommendation), and all pertinent information to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor. The Wage and Hour Division will approve, modify, or disapprove the action or render a final determination in the event of disagreement within 30 days of receipt or will notify the Contracting Officer within 30 days of receipt that additional time is necessary.

(iii) The final determination of the conformance action by the Wage and Hour Division shall be transmitted to the Contracting Officer who shall promptly notify the Contractor of the action taken. Each affected employee shall be furnished by the Contractor with a written copy of such determination or it shall be posted as a part of the wage determination.

(iv) (A) The process of establishing wage and fringe benefit rates that bear a reasonable relationship to those listed in a wage determination cannot be reduced to any single formula. The approach used may vary from wage determination to wage determination depending on the circumstances. Standard wage and salary administration practices which rank various job classifications by pay grade pursuant to point schemes or other job factors may, for example, be relied upon. Guidance may also be obtained from the way different jobs are rated under Federal pay systems (Federal Wage Board Pay System and the General Schedule) or from other wage determinations issued in the same locality. Basic to the establishment of any conformable wage rate(s) is the concept that a pay relationship should be maintained between job classifications based on the skill required and the duties performed.

(B) In the case of a contract modification, an exercise of an option, or extension of an existing contract, or in any other case where a Contractor succeeds a contract under which the classification in question was previously conformed pursuant to paragraph (c) of this clause, a new conformed wage rate and fringe benefits may be assigned to the conformed classification by indexing (i.e., adjusting) the previous conformed rate and fringe benefits by an amount equal to the average (mean) percentage increase (or decrease, where appropriate) between the wages and fringe benefits specified for all classifications to be used on the contract which are listed in the current wage determination, and those specified for the corresponding classifications in the previously applicable wage determination. Where conforming actions are accomplished in accordance with this paragraph prior to the performance of

contract work by the unlisted class of employees, the Contractor shall advise the Contracting Officer of the action taken but the other procedures in subdivision (c)(ii) of this clause need not be followed.

(C) No employee engaged in performing work on this contract shall in any event be paid less than the currently applicable minimum wage specified under section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

(v) The wage rate and fringe benefits finally determined under this subparagraph (c)(2) of this clause shall be paid to all employees performing in the classification from the first day on which contract work is performed by them in the classification. Failure to pay the unlisted employees the compensation agreed upon by the interested parties and/or finally determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract.

(vi) Upon discovery of failure to comply with subparagraph (c)(2) of this clause, the Wage and Hour Division shall make a final determination of conformed classification, wage rate, and/or fringe benefits which shall be retroactive to the date such class or classes of employees commenced contract work.

(3) **Adjustment of Compensation.** If the term of this contract is more than 1 year, the minimum monetary wages and fringe benefits required to be paid or furnished thereunder to service employees under this contract shall be subject to adjustment after 1 year and not less often than once every 2 years, under wage determinations issued by the Wage and Hour Division.

(d) **Obligation to Furnish Fringe Benefits.** The Contractor or subcontractor may discharge the obligation to furnish fringe benefits specified in the attachment or determined under subparagraph (c)(2) of this clause by furnishing equivalent combinations of bona fide fringe benefits, or by making equivalent or differential cash payments, only in accordance with Subpart D of 29 CFR Part 4.

(e) **Minimum Wage.** In the absence of a minimum wage attachment for this contract, neither the Contractor nor any subcontractor under this contract shall pay any person performing work under this contract (regardless of whether the person is a service employee) less than the minimum wage specified by section 6(a)(1) of the Fair Labor Standards Act of 1938. Nothing in this clause shall relieve the Contractor or any subcontractor of any other obligation under law or contract for the payment of a higher wage to any employee.

(f) **Successor Contracts.** If this contract succeeds a contract subject to the Act under which substantially the same services were furnished in the same locality and service employees were paid wages and fringe benefits provided for in a collective bargaining agreement, in the absence of the minimum wage attachment for this contract setting forth such collectively bargained wage rates and fringe benefits, neither the Contractor nor any subcontractor under this contract shall pay any service employee performing any of the contract work (regardless of whether or not such employee was employed under the predecessor contract), less than the wages and fringe benefits provided for in such collective bargaining agreement, to which such employee would have been entitled if employed under the predecessor contract, including accrued wages and fringe benefits and any prospective increases in wages and fringe benefits provided for under such agreement. No Contractor or subcontractor under this contract may be relieved of the foregoing obligation unless the limitations of 29 CFR 4.1b(b) apply or unless the Secretary of Labor or the Secretary's authorized representative finds, after a hearing as provided in 29 CFR 4.10 that the wages and/or fringe benefits provided

for in such agreement are substantially at variance with those which prevail for services of a character similar in the locality, or determines, as provided in 29 CFR 4.11, that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations. Where it is found in accordance with the review procedures provided in 29 CFR 4.10 and/or 4.11 and Parts 6 and 8 that some or all of the wages and/or fringe benefits contained in a predecessor Contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a character similar in the locality, and/or that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations, the Department will issue a new or revised wage determination setting forth the applicable wage rates and fringe benefits. Such determination shall be made part of the contract or subcontract, in accordance with the decision of the Administrator, the Administrative Law Judge, or the Board of Service Contract Appeals, as the case may be, irrespective of whether such issuance occurs prior to or after the award of a contract or subcontract (53 Comp. Gen. 401 (1973)). In the case of a wage determination issued solely as a result of a finding of substantial variance, such determination shall be effective as of the date of the final administrative decision.

(g) **Notification to Employees.** The Contractor and any subcontractor under this contract shall notify each service employee commencing work on this contract of the minimum monetary wage and any fringe benefits required to be paid pursuant to this contract, or shall post the wage determination attached to this contract. The poster provided by the Department of Labor (Publication WH 1313) shall be posted in a prominent and accessible place at the worksite. Failure to comply with this requirement is a violation of Section 2(a)(4) of the Act and of this contract.

(h) **Safe and Sanitary Working Conditions.** The Contractor or subcontractor shall not permit any part of the services called for by this contract to be performed in buildings or surroundings or under working conditions provided by or under the control or supervision of the Contractor or subcontractor which are unsanitary, hazardous, or dangerous to the health or safety of the service employees. The Contractor or subcontractor shall comply with the safety and health standards applied under 29 CFR Part 1925.

(i) **Records.** (1) The Contractor and each subcontractor performing work subject to the Act shall make and maintain for 3 years from the completion of the work, and make them available for inspection and transcription by authorized representatives of the Wage and Hour Division, Employment Standards Administration, a record of the following:

(i) For each employee subject to the Act -  
(A) Name and address and social security number;  
(B) Correct work classification or classifications, rate or rates of monetary wages paid and fringe benefits provided, rate or rates of payments in lieu of fringe benefits, and total daily and weekly compensation;  
(C) Daily and weekly hours worked by each employee; and  
(D) Any deductions, rebates, or refunds from the total daily or weekly compensation of each employee.

(ii) For those classes of service employees not included in any wage determination attached to this contract, wage rates or fringe benefits determined by the interested parties or by the Administrator or authorized representative, under the terms of paragraph (c) of this clause. A copy of the

report required by subdivision (c)(2)(ii) of this clause will fulfill this requirement.

(iii) Any list of the predecessor Contractor's employees which had been furnished to the Contractor as prescribed by paragraph (n) of this clause.

(2) The Contractor shall also make available a copy of this contract for inspection or transcription by authorized representatives of the Wage and Hour Division.

(3) Failure to make and maintain or to make available these records for inspection and transcription shall be a violation of the regulations and this contract, and in the case of failure to produce these records, the Contracting Officer, upon direction of the Department of Labor and notification to the Contractor, shall take action to cause suspension of any further payment or advance of funds until such violation ceases.

(4) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.

(j) **Pay Periods.** The Contractor shall unconditionally pay to each employee subject to the Act all wages due free and clear and without subsequent deduction (except as otherwise provided by law or Regulations, 29 CFR Part 4), rebate, or kickback on any account. These payments shall be made no later than one pay period following the end of the regular pay period in which the wages were earned or accrued. A pay period under this Act may not be of any duration longer than semi-monthly.

(k) **Withholding of Payment and Termination of Contract.** The Contracting Officer shall withhold or cause to be withheld from the Government Prime Contractor under this or any other Government contract with the Prime Contractor such sums as an appropriate official of the Department of Labor requests or such sums as the Contracting Officer decides may be necessary to pay underpaid employees employed by the Contractor or subcontractor. In the event of failure to pay any employees subject to the Act all or part of the wages or fringe benefits due under the Act, the Contracting Officer may, after authorization or by direction of the Department of Labor and written notification to the Contractor, take action to cause suspension of any further payment or advance of funds until such violations have ceased. Additionally, any failure to comply with the requirements of this clause may be grounds for termination of the right to proceed with the contract work. In such event, the Government may enter into other contracts or arrangements for completion of the work, charging the Contractor in default with any additional cost.

(l) **Subcontracts.** The Contractor agrees to insert this clause in all subcontracts subject to the Act.

(m) **Collective Bargaining Agreements Applicable to Service Employees.** If wages to be paid or fringe benefits to be furnished any service employees employed by the Government Prime Contractor or any subcontractor under the contract are provided for in a collective bargaining agreement which is or will be effective during any period in which the contract is being performed, the Government Prime Contractor shall report this fact to the Contracting Officer, together with full information as to the application and accrual of such wages and fringe benefits, including any prospective increases, to service employees engaged in work on the contract, and a copy of the collective bargaining agreement. Such report shall be made upon commencing performance of the contract, in the case of collective bargaining agreements effective at such time, and in the case of such agreements or provisions or amendments thereof effective at a later time during the period of

contract performance such agreements shall be reported promptly after negotiation thereof.

(n) **Seniority List.** Not less than 10 days prior to completion of any contract being performed at a Federal facility where service employees may be retained in the performance of the succeeding contract and subject to a wage determination which contains vacation or other benefit provisions based upon length of service with a Contractor (predecessor) or successor (29 CFR Part 4.173), the incumbent Prime Contractor shall furnish the Contracting Officer a certified list of the names of all service employees on the Contractor's or subcontractor's payroll during the last month of contract performance. Such list shall also contain anniversary dates of employment on the contract either with the current or predecessor Contractors of each such service employee. The Contracting Officer shall turn over such list to the successor Contractor at the commencement of the succeeding contract.

(o) **Rulings and Interpretations.** Rulings and interpretations of the Act are contained in Regulations, 29 CFR Part 4.

(p) **Contractor's Certification.**

(1) By entering into this contract, the Contractor (and officials thereof) certifies that neither it (nor he or she) nor any person or firm who has substantial interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of the sanctions imposed under section 5 of the Act.

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract under section 5 of the Act.

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(q) **Variations, Tolerances, and Exemptions Involving Employment.**

Notwithstanding any of the provisions in paragraphs (b) through (o) of this clause, the following employees may be employed in accordance with the following variations, tolerances, and exemptions, which the Secretary of Labor, pursuant to section 4(b) of the Act prior to its amendment by Public L. 92-473, found to be necessary and proper in the public interest or to avoid serious impairment of the conduct of Government business.

(1) Apprentices, student-learners, and workers whose earning capacity is impaired by age, physical or mental deficiency, or injury may be employed at wages lower than the minimum wages otherwise required by section 2(a)(1) or 2(b)(1) of the Act without diminishing any fringe benefits or cash payments in lieu thereof required under section 2(a)(2) of the Act, in accordance with the conditions and procedures prescribed for the employment of apprentices, student-learners, handicapped persons, and handicapped clients of sheltered workshops under Section 14 of the Fair Labor Standards Act of 1938, in the regulations issued by the Administrator (29 CFR Parts 520, 521, 524, and 525).

(2) The Administrator will issue certificates under the Act for the employment of apprentices, student-learners, handicapped persons, or handicapped clients of sheltered workshops not subject to the Fair Labor Standards Act of 1938, or subject to different minimum rates of pay under the two acts, authorizing appropriate rates of minimum wages (but without changing requirements concerning fringe benefits or supplementary cash payments in lieu thereof), applying procedures prescribed by the applicable regulations issued under the Fair Labor Standards Act of 1938 (29 CFR Parts 520, 521, 524, and 525).

(3) The Administrator will also withdraw, annul, or cancel such certificates in accordance with the regulations in 29 CFR Parts 525 and 528.



(r) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with a State Apprenticeship Agency which is recognized by the U.S. Department of Labor, or if no such recognized agency exists in a State, under a program registered with the Bureau of Apprenticeship and Training, Employment and Training Administration, U.S. Department of Labor. Any employee who is not registered as an apprentice in an approved program shall be paid the wage rate and fringe benefits contained in the applicable wage determination for the journeyman classification of work actually performed. The wage rates paid apprentices shall not be less than the wage rate for their level of progress set forth in the registered program, expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination. The allowable ratio of apprentices to journeymen employed on the contract work in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program.

(s) **Tips.** An employee engaged in an occupation in which the employee customarily and regularly receives more than \$30 a month in tips may have the amount of tips credited by the employer against the minimum wage required by section 2(a)(1) or section 2(b)(1) of the Act, in accordance with section 3(m) of the Fair Labor Standards Act and Regulations 29 CFR Part 531. However, that the amount of credit shall not exceed \$1.34 per hour beginning January 1, 1981. To use this provision -

(1) The employer must inform tipped employees about this tip credit allowance before the credit is utilized;

(2) The employees must be allowed to retain all tips (individually or through a pooling arrangement and regardless of whether the employer elects to take a credit for tips received);

(3) The employer must be able to show by records that the employee receives at least the applicable Service Contract Act minimum wage through the combination of direct wages and tip credit; and

(4) The use of such tip credit must have been permitted under any predecessor collective bargaining agreement applicable by virtue of section 4(c) of the Act.

(t) **Disputes Concerning Labor Standards.** The U.S. Department of Labor has set forth in 29 CFR Parts 4, 6, and 8 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

#### I.13 DRUG-FREE WORKPLACE (FAR 52.223-6) (JUL 1990)

(a) **Definitions.** As used in this clause,

"Controlled substance" means a controlled substance in Schedules I through V of Section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/Contractor that has no more than one employee including the offeror/Contractor.

(b) The Contractor, if other than an individual, shall - within 30 calendar days after award (unless a longer period is agreed to in writing for contracts of 30 calendar days or more performance duration); or as soon as possible for contracts of less than 30 calendar days performance duration -

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about -

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee

assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will -

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 calendar days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 calendar days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

#### I.14 COST ACCOUNTING STANDARDS (CASB-2) (APR 1992)

(a) Unless the contract is exempt under 9903.201-1 and 9903.201-2, the provisions of 9903 are incorporated herein by reference and the Contractor in connection with this contract, shall -

(1) (CAS-covered Contracts Only) By submission of a Disclosure Statement, disclose in writing the Contractor's cost accounting practices as required by 9903.202-1 through 9903.202-5 including methods of distinguishing direct costs from indirect costs and the basis used for allocating indirect costs. The practices disclosed for this contract shall be the same as the practices currently disclosed and applied on all other contracts and subcontracts being performed by the Contractor and which contain a Cost Accounting Standards (CAS) clause. If the Contractor has notified the Contracting Officer that the Disclosure Statement contains trade secrets and commercial or financial information which is privileged and confidential, the Disclosure Statement shall be protected and shall not be released outside of the Government.

(2) Follow consistently the Contractor's cost accounting practices in accumulating and reporting contract performance cost data concerning this contract. If any change in cost accounting practices is made for the purposes of any contract or subcontract subject to CAS requirements, the change must be applied prospectively to this contract, and the Disclosure Statement must be amended accordingly. If the contract price or cost allowance of this contract is affected by such changes, adjustment shall be made in accordance with subparagraph (a)(4) or (a)(5) of this clause, as appropriate.

(3) Comply with all CAS, including any modifications and interpretations indicated thereto contained in part 9904, in effect on the date of award of this contract or, if the Contractor has submitted cost or pricing data, on the date of final agreement on price as shown on the Contractor's signed certificate of current cost or pricing data. The Contractor shall also comply with any CAS (or modifications to CAS) which hereafter become applicable to a contract or subcontract of the Contractor. Such compliance shall be required prospectively from the date of applicability to such contract or subcontract.

(4) (i) Agree to an equitable adjustment as provided in the Changes clause of this contract if the contract cost is affected by a change which, pursuant to subparagraph (a)(3) of this clause, the Contractor is required to make to the Contractor's established cost accounting practices.

(ii) Negotiate with the Contracting Officer to determine the terms and conditions under which a change may be made to a cost accounting practice, other than a change made under other provisions of subparagraph (a)(4) of this clause;

provided, that no agreement may be made under this provision that will increase costs paid by the United States.

(iii) When the parties agree to a change to a cost accounting practice, other than a change under subdivision (a)(4)(i) of this clause, negotiate an equitable adjustment as provided in the Changes clause of this contract.

(5) Agree to an adjustment of the contract price or cost allowance, as appropriate, if the Contractor or a subcontractor fails to comply with an applicable Cost Accounting Standard or to follow any cost accounting practice consistently and such failure results in any increased costs paid by the United States. Such adjustment shall provide for recovery of the increased costs to the United States together with interest thereon computed at the annual rate established under section 6621 of Internal Revenue Code of 1936 (26 U.S.C. 6621) for such period, from the time the payment by the United States was made to the time the adjustment is effected. In no case shall the Government recover costs greater than the increased cost to the Government, in the aggregate, on the relevant contracts subject to the price adjustment, unless the Contractor made a change in its cost accounting practices of which it was aware or should have been aware at the time of price negotiations and which it failed to disclose to the Government.

(b) If the parties fail to agree whether the Contractor or a subcontractor has complied with an applicable CAS in part 9904 or a CAS rule or regulation in Part 9903 and as to any cost adjustment demanded by the United States, such failure to agree will constitute a dispute under the Contract Disputes Act (41 U.S.C. 601).

(c) The Contractor shall permit any authorized representatives of the Government to examine and make copies of any documents, papers, or records relating to compliance with the requirements of this clause.

(d) The Contractor shall include in all negotiated subcontracts which the Contractor enters into, the substance of this clause, except paragraph (b), and shall require such inclusion in all other subcontracts, of any tier, including the obligation to comply with all CAS in effect on the subcontractor's award date or if the subcontractor has submitted cost or pricing data, on the date of final agreement on price as shown on the subcontractor's signed Certificate of Current Cost or Pricing Data. This requirement shall apply only to negotiated subcontracts in excess of \$500,000 where the price negotiated is not based on -

(1) Established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(2) Prices set by law or regulation, and except that the requirement shall not apply to negotiated subcontracts otherwise exempt from the requirement to include a CAS clause as specified in 9903.201-1.

#### I.15 PROMPT PAYMENT (FAR 52.232-25) (APR 1989)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. Definitions of pertinent terms are set forth in 32.902. All days referred to in this clause are calendar days, unless otherwise specified. The term "foreign vendor" means an incorporated concern not incorporated in the United States, or an unincorporated concern having its principal place of business outside the United States.

(a) Invoice Payments.

(1) For purposes of this clause, "invoice payment" means a Government disbursement of monies to a Contractor under a contract or other authorization for supplies or services accepted by the Government. This includes payments for partial deliveries that have been accepted by the Government and final cost or fee payments where amounts owed have been settled between the Government and the Contractor.

(2) Except as indicated in subparagraph (a)(3) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(i) The 30th day after the designated billing office has received a proper invoice from the Contractor.

(ii) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement. However, if the designated billing office fails to annotate the invoice with the actual date of receipt, the invoice payment due date shall be deemed to be the 30th day after the date the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(3) The due date on contracts for meat and meat food products, contracts for perishable agricultural commodities, contracts for dairy products, edible fats or oils, and food products prepared from edible fats or oils, and contracts not requiring submission of an invoice shall be as follows:

(i) The due date for meat and meat food products, as defined in Section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)) and further defined in Pub. L. 98-181 to include any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, will be as close as possible to, but not later than, the 7th day after product delivery.

(ii) The due date for perishable agricultural commodities, as defined in Section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(44)), will be as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(iii) The due date for dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, will be as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received.

(4) An invoice is the Contractor's bill or written request for payment under the contract for supplies delivered or services performed. An invoice shall be prepared and submitted to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(4)(i) through (a)(4)(viii) of this clause.

If the invoice does not comply with these requirements, then the Contractor will be notified of the defect within 7 days after receipt of the invoice at the designated billing office (3 days for meat and meat food products and 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils).

Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor in the manner described in subparagraph (a)(6) of this clause.

- (i) Name and address of the Contractor.
- (ii) Invoice date.
- (iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).
- (iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.
- (v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.
- (vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).
- (vii) Name (where practicable), title, phone number and mailing address of person to be notified in event of a defective invoice.
- (viii) Any other information or documentation required by other requirements of the contract (such as evidence of shipment).

(5) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(5)(i) through (a)(5)(iii) of this clause are met, if applicable. An interest penalty shall not be paid on contracts awarded to foreign vendors outside the United States for work performed outside the United States.

- (i) A proper invoice was received by the designated billing office.
- (ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.
- (iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(6) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority.

This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice payment amount and be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in paragraph (a)(4) of this clause, then the due date on the corrected invoice will be adjusted by subtracting the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties, if requested by the Contractor.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance.

The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat and meat food products and 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils).

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1.00 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(7) An interest penalty shall also be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(6) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(8) If this contract was awarded on or after October 1, 1989, a penalty amount, calculated in accordance with regulations issued by the Office of Management and Budget, shall be paid in addition to the interest penalty amount if the Contractor -

(i) Is owed an interest penalty;

(ii) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(iii) Makes a written demand, not later than 40 days after the date the invoice amount is paid, that the agency pay such a penalty.

(b) Contract Financing Payments.

(1) For purposes of this clause, "contract financing payment" means a Government disbursement of monies to a Contractor under a contract clause or other authorization prior to acceptance of supplies or services by the Government. Contract financing payments include advance payments, progress payments based on cost under the clause at 52.232-16, Progress Payments, progress payments based on a percentage or stage of completion (32.102(e)(1)) other than those made under the

clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, or the clause at 52.232-10, Payments Under Fixed-Price Architect-Engineer Contracts, and interim payments on cost type contracts.

(2) For contracts that provide for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the 30th day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(3) For advance payments, loans, or other arrangements that do not involve recurrent submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(4) Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

#### I.16 BANKRUPTCY (FAR 52.242-13) (APR 1991)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

#### I.17 REPORT ON NASA SUBCONTRACTS (NASA 18-52.204-70) (DEC 1988)

(a) The Contractor shall submit information on NASA Form 667 to the National Aeronautics and Space Administration (Code HM-1), Washington, DC 20546, substantially as follows with respect to each subcontract or subcontract modification exceeding \$10,000 as soon as possible after its execution:

(1) The name and address of the prime Contractor and the NASA prime contract number.

(2) The name and address of the subcontractor.

(3) Whether the subcontractor is a large or small business concern and/or a minority business concern.

(4) Whether the type of effort being performed involves research and development.

(5) A brief description of the subcontract work.

(6) The amount of the subcontract.

(7) The principal location where the subcontract work is to be performed, if known.

(b) The Contractor and its subcontractors will submit negative reports annually, if applicable, on each prime contract and first-tier subcontract subject to this



reporting requirement. These negative reports shall be submitted not later than October 31 for the 12-month period ending September 30th of each year. The negative reporting shall be continued until the contract or subcontract has been physically completed and the National Aeronautics and Space Administration (Code HM-1), Washington, DC 20546, so notified by the Contractor or subcontractor.

(c) "Subcontract," as used in this clause, means procurement in excess of \$10,000 by the Contractor or first-tier subcontractor of articles, materials, or services for performing this contract, except purchases, regardless of amount, of stock items, materials, or services that cannot be specifically identified with this contract.

(d) "Research and development," as used in this clause, means basic and applied research, and design and development of prototypes and processes to (1) pursue a planned search for new knowledge, with or without reference to a specific application, (2) apply existing knowledge in the creation of new products or processes, or (3) apply existing knowledge in the improvement or modification of present products and processes. It excludes subcontracts for the purchase of standard commercial items and services.

(e) The Contractor shall -

(1) Insert the provisions of paragraphs (a), (b), (c), and (d) above in each subcontract over \$50,000;

(2) Instruct its subcontractors to submit their reports directly to the National Aeronautics and Space Administration (Code HM-1), Washington, DC 20546; and

(3) Provide its subcontractors with the number of the NASA prime contract.

#### I.18 SECURITY CLASSIFICATION REQUIREMENTS (NASA 18-52.204-75) (SEP 1989)

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of Secret. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Exhibit G.

#### I.19 SECURITY PLAN FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 18-52.204-78) (JAN 1992) (NASA/FAR SUPPLEMENT)

In addition to complying with any functional and technical security requirements set forth in the Schedule and the clauses of this contract, the Contractor shall comply with the Unclassified Automated Information Resources Security Plan submitted pursuant to provision 18-52.204-77, Submission of Security Plan For Unclassified Automated Information Resources, as approved by the Contracting Officer.

#### I.20 LIMITATION OF FUTURE CONTRACTING (NASA 18-52.209-71) (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of all prospective offerors is invited to FAR Subpart 9.5--Organizational Conflicts of Interest.

(b) The nature of this conflict is participation in system design reviews with the Government and other Contractor representatives to define operational improvements and plan their implementation, and access to other companies proprietary data. The Contractor shall advise the Contracting Officer of any

perceived potential organizational conflict of interest of any work prior to execution of that effort. Upon being so informed, or if the Contracting Officer independently identifies a potential organizational conflict of interest, the Contracting Officer shall determine which of the following is in the best interest of the Government and so advise the Contractor:

- (1) the Contractor shall perform as directed; or
- (2) the Contractor shall not perform the work and the work shall be obtained by the Government from another source.

(c) The restrictions upon future contracting are as follows:

(1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.

(2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

#### I.21 AWARD FEE (NASA 18-52.216-76) (DEC 1991)

(a) The Government shall pay the Contractor for performing this contract such base fee, if any, and such additional fee as may be awarded, as provided in the Schedule.

(b) Payment of the base fee and award fee shall be made as specified in the Schedule; provided that, after payment of 85 percent of the base fee and potential award fee, the Contracting Officer may withhold further payment of the base fee and award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total base fee and potential award fee or \$100,000, whichever is less.

(c) Award fee determinations made by the Government under this contract are not subject to the Disputes clause.

#### I.22 NASA SMALL DISADVANTAGED BUSINESS GOAL (NASA 18-52.219-76) (JUL 1991)

(a) Definitions.

"Historically Black Colleges and Universities," as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2 and listed therein.

"Minority educational institutions," as used in this clause, means institutions meeting the criteria established in 34 CFR 607.2 by the Secretary of Education.

"Small disadvantaged business concern," as used in this clause, means a small business concern owned or controlled by individuals who are both socially and economically disadvantaged (within the meaning of section 8(a)(5) and (6) of the Small Business Act (15 U.S.C. 637 (a)(5) and (6)). For purposes of this clause, socially and economically disadvantaged individuals shall be deemed to include women.

(b) The NASA Administrator is required to ensure, to the fullest extent possible, that at least 8% of the total value of prime and subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained, is made available to small business concerns or other organizations owned or controlled by socially and economically disadvantaged individuals (including women), Historically Black Colleges and Universities, and minority educational institutions.

(c) The Contractor hereby agrees to assist NASA in achieving this goal by using its best efforts to award subcontracts to small disadvantaged business concerns, Historically Black Colleges and Universities, and minority educational institutions, as defined in this clause, to the fullest extent consistent with efficient contract performance.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as small disadvantaged business concerns, Historically Black Colleges and Universities, and minority educational institutions.

#### I.23 MINIMUM INSURANCE COVERAGE (NASA 18-52.228-75) (OCT 1988)

The Contractor shall obtain and maintain insurance coverage as follows for the performance of this contract:

(a) Worker's compensation and employer's liability insurance as required by applicable Federal and State workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when contract operations are so commingled with the Contractor's commercial operations that it would not be practical. The employer's liability coverage shall be at least \$100,000, except in States with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

(b) Comprehensive general (bodily injury) liability insurance of at least \$500,000 per occurrence.

(c) Motor vehicle liability insurance written on the comprehensive form of policy which provides for bodily injury and property damage liability covering the operation of all motor vehicles used in connection with performing the contract. Policies covering motor vehicles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury liability and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

(d) Comprehensive general and motor vehicle liability policies shall contain a provision worded as follows:

"The insurance company waives any right of subrogation against the United States of America which may arise by reason of any payment under the policy."

(e) When aircraft are used in connection with performing the contract, aircraft public and passenger liability insurance of at least \$200,000 per person and \$500,000 per occurrence for bodily injury, other than passenger liability, and \$200,000 per occurrence for property damage. Coverage for passenger liability bodily injury shall be at least \$200,000 multiplied by the number of seats or passengers, whichever is greater.

I.24 ACQUISITION OF CENTRALLY REPORTABLE EQUIPMENT (NASA 18-52.245-70)  
(MAR 1989)

(a) "Centrally reportable equipment," as used in this clause, means plant equipment, special test equipment (including components), special tooling and non-flight space property (including ground support equipment) (1) generally commercially available and used as a separate item or as a component of a system, (2) having an acquisition cost of \$1,000 or more (unless a lower threshold is specified elsewhere in this contract), and (3) is identifiable by a manufacturer and model number.

(b) (1) Before acquiring (including acquiring by fabrication) any item of centrally reportable equipment under this contract (unless for incorporation into flight-qualified or flight-monitoring deliverable end items), the Contractor shall provide to the Contracting Officer, at the earliest possible date, a description of the item sufficiently detailed to enable screening of existing Government inventories. (2) For this purpose, the Contractor shall (i) prepare a separate DD Form 1419, DOD Industrial Plant Equipment Requisition for each item of centrally reportable equipment to be acquired and (ii) forward it through the Contracting Officer to the NASA Equipment Management System (NEMS) Coordinator at the cognizant NASA installation at least 30 days in advance of the date the Contractor intends to acquire or begin fabricating the item. If a certificate of nonavailability is not received within that period, the Contractor may proceed to acquire the item, subject to any other applicable provisions of this contract.

Instructions for preparing the DD Form 1419 are contained in NASA FAR Supplement 18-45.7103. The same data may be provided in an alternate format when requesting other than Defense Industrial Plant Equipment Center (DIPEC) controlled items. (3) Upon receiving the item on the DD Form 1419 (regardless of whether it is Contractor-acquired or Government-furnished), the Contractor shall prepare and submit a DD Form 1342 or equivalent data, in accordance with NASA FAR Supplement 18-45.505-670.

I.25 FINANCIAL REPORTING OF GOVERNMENT-OWNED/CONTRACTOR-HELD PROPERTY  
(NASA 18-52.245-73) (MAR 1989)

(a) The Contractor shall prepare and submit annually a NASA Form 1018, Report of Government-Owned/Contractor-Held Property, in accordance with 18-45.505-14 and the instructions on the form and in Section 18-45.7101 of the NASA FAR Supplement, except that the reporting of space hardware shall be required only as directed in clause 18-52.245-78, Space Hardware Reporting, if applicable.

(b) If administration of this contract has been delegated to the Department of Defense, the original and three copies of NASA Form 1018 shall be submitted through the DOD Property Administrator to the NASA office identified below. If the contract is administered by NASA, the forms shall be submitted directly to the following NASA office:

NASA, Langley Research Center  
Attn: Industrial Property Office, M/S 377  
Hampton, VA 23681-0001

(c) The annual reporting period shall be from July 1 of each year to June 30 of the following year.

(d) The Contractor agrees to insert the reporting requirement in all first-tier subcontracts, except that the requirement shall provide for the submission of the subcontractors' reports to the Contractor, not to the Government. The Contractor shall require the subcontractors' reports to be submitted in sufficient time to meet the reporting date in paragraph (c) above.

(e) The Contractor's report shall consist of a consolidation of the subcontractors' reports and the Contractor's own report.

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

SECTION J - LIST OF ATTACHMENTS

- Exhibit A Statement of Work, dated October 23, 1992, 45 pages.
- Exhibit B Contract Documentation Requirements, 7 pages
- Exhibit C Government-Furnished Property, 4 pages
- Exhibit D Installation-Provided Government Property, 15 pages
- Exhibit E Subcontracting Plan\*
- Exhibit F Register of Wage Determination and Fringe Benefits, 6 pages
- Exhibit G Contract Security Classification Specification, DD Form 254,  
2 pages

The following are located after the last section of this solicitation:

- Attachment 1 Certificate of Current Cost or Pricing Data, Form PROC./P-281,  
May 1986, 1 page
- Attachment 2 Contract Pricing Proposal Cover Sheet, Standard Form 1411,  
July 1987 with instructions, 4 pages
- Attachment 3 FAR Provision 52.203-8, Requirement for Certificate of Procurement  
Integrity (NOV 1990) Alternate I (SEP 1990), 2 pages
- Attachment 4 Claim for Exemption from Submission of Certified Cost or Pricing  
Data. Standard Form 1412, October 1993, with instructions,  
1 page
- Attachment 5 Cost Proposal Forms, A-F, 16 pages
- Attachment 6 Government Estimated Staffing and Minimum Position  
Qualifications, 21 pages
- Attachment 7 Key Personnel Requirements, 2 pages
- Attachment 8 Bidder's Library Information, 8 pages
- Attachment 9 Description of the Central Scientific Computing Complex, 10 pages
- Attachment 10 Description of the Communications Network, 4 pages
- Attachment 11 Nature of Research Computing at LaRC, 6 pages
- Attachment 12 Distributed Computing and Data Reduction Systems Currently  
Supported, 1 page
- Attachment 13 Technical Questions, 4 pages
- Attachment 14 Phase-In Schedule, 1 page

\*Not applicable to Small Businesses.

# STATEMENT OF WORK

SCIENTIFIC COMPUTING OPERATIONS, MAINTENANCE,  
AND COMMUNICATION (SCOMAC) SERVICES

1-41-1100.1015  
EXHIBIT A

OCTOBER 23, 1992

**NASA** — **LANGLEY RESEARCH CENTER** —

HAMPTON, VA

23681-0001

## **Table of Contents**

### **C.1 - INTRODUCTION/BACKGROUND**

### **C.2 - SCOPE OF CONTRACT AND GENERAL REQUIREMENTS**

#### **C.2.1 - SCOPE**

C.2.1.1 - CSCC Operation

C.2.1.2 - CSCC Systems Maintenance

C.2.1.3 - Communications Systems

C.2.1.4 - LaRC Distributed Computing and Data  
Reduction Support

#### **C.2.2 - GENERAL REQUIREMENTS**

C.2.2.1 - Operating Hours

C.2.2.2 - Performance Criteria

C.2.2.3 - Courier Service

### **C.3 - CSCC OPERATION**

#### **C.3.1 - CSCC EQUIPMENT OPERATION**

#### **C.3.2 - OPERATING SYSTEMS SUPPORT**

#### **C.3.3 - FACILITY MANAGEMENT SUPPORT**

C.3.3.1 - Access Control System Data Base  
Management Support

C.3.3.2 - Environmental System Monitoring Support

C.3.3.3 - Facility Management Documentation Support

### **C.4 - CSCC SYSTEMS MAINTENANCE**

#### **C.4.1 - MAINTENANCE COVERAGE**

#### **C.4.2 - POINT OF NOTIFICATION**

#### **C.4.3 - PREVENTIVE MAINTENANCE**

#### **C.4.4 - SPARE PARTS**

#### **C.4.5 - FIELD CHANGE ORDERS**

#### **C.4.6 - CONTROLWARE**

#### **C.4.7 - SYSTEM SOFTWARE**

#### **C.4.8 - MAINTENANCE DOCUMENTATION**



**C.5 - COMMUNICATION NETWORKS**

- C.5.1 - CORRECTIVE AND PREVENTIVE MAINTENANCE
- C.5.2 - INSTALLATION AND RELOCATION OF NETWORK EQUIPMENT
- C.5.3 - INSTALLATION AND REPAIR OF NETWORK CABLING
- C.5.4 - SYSTEMS SUPPORT
- C.5.5 - ADMINISTRATIVE AND OPERATIONS SUPPORT
- C.5.6 - USER SERVICES

**C.6 - LaRC DISTRIBUTED COMPUTING AND DATA REDUCTION SUPPORT**

- C.6.1 - DISTRIBUTED SYSTEM SUPPORT
- C.6.2 - DATA REDUCTION SUPPORT

**C.7 - NEW TECHNOLOGY SUPPORT**

**C.8 - DOCUMENTATION**

APPENDIX A

APPENDIX B

**STATEMENT OF WORK  
FOR  
SCIENTIFIC COMPUTING OPERATIONS, MAINTENANCE,  
AND COMMUNICATIONS (SCOMAC) SERVICES**

**C.1 - INTRODUCTION/BACKGROUND**

The Analysis and Computation Division (ACD) is one of four divisions in the Electronics Directorate of the Langley Research Center (LaRC). The mission of ACD is to provide comprehensive central computational services and Center-wide communication and networking services for all research and development activities at the Center. ACD has a civil service staff of approximately 110 employees.

To accomplish its mission, ACD manages and operates the Central Scientific Computing Complex (CSCC), a large and comprehensive configuration of computing systems and auxiliary devices located in building 1268, 1268A, and 1268B. Included in the CSCC are several special-purpose equipment laboratories and test areas. The complex is operated on an open-shop basis for scientists, engineers, and other technical personnel to perform analytical studies, experimental data reduction, and real time simulations. ACD also provides and maintains Center-wide networks for voice, data, and video communications, and provides limited systems support to computing and data reduction facilities distributed throughout the Center.

The capabilities of the CSCC and the Center-wide communication networks are used by all segments of the LaRC research community. The availability and reliability of these systems is vital to the progress of the Center's activities and the accomplishment of its mission. The goal is 100 percent availability and reliability of all systems at all times.

ACD depends upon several support service and maintenance contracts to perform many of its critical functions. The Statement of Work (SOW) is for a contract to provide a major part of these services and maintenance for the next seven and a half years.

The object of this contract is for ACD to obtain support services to operate and maintain most of the CSCC and all Center-wide voice, data, and video communications networks; and to provide system administration support to specified distributed computing and data reduction systems. This contract will be administered, technically, by ACD, but support may be provided to other organizations as requirements develop.

The services required by this contract represent a consolidation of services that are currently being provided under several different contracts. The tasks listed herein which are being performed under contracts that will terminate after the start date of this contract will be incorporated into this contract as those contracts end; thus the transition of work into this contract will occur in several phases. The Contractor shall do all things necessary to minimize the disruption of services during phase-in of new tasks.

## **C.2 - SCOPE OF CONTRACT AND GENERAL REQUIREMENTS**

### **C.2.1 - SCOPE**

The Contractor shall furnish all qualified personnel, material, and equipment (other than that provided by the Government) required to provide the services in the general task areas: CSCC operations, systems maintenance, Center-wide communications systems support, and system administration of LaRC distributed computing and data reduction systems.

#### **C.2.1.1 - CSCC Operation**

The Contractor shall provide for the operation of the computing and data handling equipment within the CSCC. The operational requirements are delineated in Section C.3 of this Statement of Work.

The Contractor shall provide computer operating system support involving operational analysis, user validation, resource accounting, operations program support, systems software support, operating system testing, quality assurance, and procedure documentation. These requirements are more specifically described in Section C.3 of this Statement of Work.

The Contractor shall provide for analysis of the performance of both hardware and software systems as covered in Section C.3.

The Contractor shall provide facility management support for the building 1268 complex. These requirements are more specifically described in Section C.3.3 of this Statement of Work.

#### **C.2.1.2 - CSCC Systems Maintenance**

The Contractor shall maintain the CSCC equipment and operating system software delineated in Appendix A. The associated system environmental protection and power equipment (e.g., dew point monitors, 400 Hz Motor-Generator sets, and condensing units) listed in Appendix A are considered part of the CSCC. In addition, equipment to be maintained shall include interconnecting signal cables needed for the CSCC. This includes all signal cables that are an integral portion of the equipment in Appendix A and power cables and mating connectors provided with the equipment. These requirements are delineated in Section C.4 of this Statement of Work. Signal cables connecting equipment in Appendix A with equipment not listed in Appendix A are maintained as part of the Communications Systems described in Section C.5.

#### **C.2.1.3 - Communications Systems**

The Contractor shall provide engineering, installation, operation, and maintenance of all communications networks hardware and software that support Center-wide voice, data, and video communications as described in Section C.5.

**C.2.1.4 - LaRC Distributed Computing and Data Reduction Support**

The Contractor shall provide support for LaRC distributed computing systems that are used throughout the Center by the LaRC research staff to provide a decentralized computational or data reduction capability. This support involves system administration, system management, system operations, programming, and procedure documentation. These requirements are more specifically described in Section C.6.

**C.2.2 - GENERAL REQUIREMENTS**

**C.2.2.1 - Operating Hours**

The Contractor shall provide support of the CSCC and Center-wide communications networks on a continuous basis (24 hours/day, 7 days/week, including all Government holidays). Weekend and holiday operations may not be required at times, whereupon advance notice will be provided to the Contractor.

Government Operating Shifts - A regular work day (typically Monday through Friday) consists of three shifts in each 24-hour period defined as follows:

- First            07:30 a.m. - 04:00 p.m.
- Second        03:30 p.m. - Midnight
- Third          11:30 p.m. - 07:30 a.m.

Contractor Services Hours - The following table shows the normal distribution of the services required by this Statement of Work.

<u>SERVICE</u>	<u>FIRST</u>	<u>SECOND</u>	<u>THIRD</u>	<u>WEEKEND HOLIDAY</u>
Equipment Operation	X	X	X	X
Computer Operating System Support	X	(1)	(1)	(1)
Maintenance		(2)	(2)	(2)(2)
Communications Support	X	(3)	(3)	(3)
Distributed System Support	X	(4)	(4)	(4)

- X Regularly Staffed.
- (1) Activity frequently required for systems development and testing.
- (2) Coverage according to C.4.1.
- (3) Remote call-in for system verification and follow-up maintenance.
- (4) Personnel rescheduled from first shift to meet special research testing requirements.

### **C.2.2.2 - Performance Criteria**

The performance goal under this contract is to assure maximum availability and reliability of the CSCC computing and communication systems. Two criteria that are used in determining the effectiveness of system performance by the Contractor are the number of malfunctions for the system and the downtime.

#### **Malfunction**

This is defined as any condition occurring during the use of a system which will cause an interruption in the processing or reduce the overall production effectiveness.

#### **Downtime**

Downtime is time during which an item is inoperable due to a malfunction. A malfunction on one item which causes other items to be inoperable, or non-usable, shall result in downtime accounted against those items also. Downtime shall apply from the time that a malfunction occurs until the time when the item is returned to production use.

Depending upon the severity of the malfunction or the need to delay remedial maintenance, it may be necessary to defer the start of remedial maintenance or to suspend maintenance and use any item(s) in a degraded mode. Any such deferred use time shall not be charged to downtime.

Downtime which occurs during the Principal Period of Maintenance (PPM) (reference C.4.1) will continue to accrue until the item is returned to acceptable operating condition or maintenance is deferred. Extensions of Preventive Maintenance (reference Section C.4.6) beyond the scheduled period shall be classified as downtime.

For the purposes of computing downtime and determining the frequency of interruptions to service, malfunctions are excluded which are directly attributable to: (1) facility problems; (2) hardware/software problems which have been defined, corrected, and tested, but, at the Government's option, not installed into production operation; (3) Government-provided materials; or (4) Original Equipment Manufacturer (OEM) design problems. It shall be incumbent upon the Contractor to provide sufficient evidence to support any contention that a malfunction resulted from any of the excluded causes.

Any item listed in Appendix A which is used by the Contractor to repair or check out any other item shall be charged downtime while under such use.

- Assembly and distribution of CSCC documentation.
- Generation of information and recommendations for management reporting and improved operational efficiency.
- Updating of procedures to account for improvements and changes in the operating systems.
- Management of a magnetic tape library (central and remote) which shall include methods for control, accountability, and use of magnetic tapes.
- Operation of magnetic tape evaluation equipment, inspection and monitoring of the evaluation methods and procedures, and monitoring of magnetic tape quality by recording evaluation data and analysis of error statistics.
- Management of file storage systems which shall include provisions for error analysis and correction, file distribution control, and utilization reporting and accountability. Additional provisions shall include permanent file archiving, backup, and recovery operations.
- Maintenance of a proper level of supplies (paper, chemicals, magnetic tape, film).
- Review and verification of all system malfunction reports generated at the CSCC. Additional requirements in this area involve report generation and data base management.

### **C.3.2 - OPERATING SYSTEMS SUPPORT**

The requirements described in this part of the Statement of Work are in the areas of systems software support and computer operations support. This work requires close coordination with the Government and other contractors.

The Contractor shall provide support which shall include, but is not limited to, the following:

- Participate in system design reviews with the Government and other contractor representatives to define operational improvements and plan their implementation.
- Participate in software engineering methodology reviews.
- Generate operating systems to be used in production operations. The generated system shall be installed after Government approval and on a schedule mutually agreed to by the Government and the Contractor.

- Transition non-standard system software into the production system. Non-standard system software is defined as all system software installed in the system which is not part of the standard system supplied by the software vendor. This non-standard system software includes Advanced Real-Time Simulation Subsystem (ARTSS) subsystem software and other local modifications which enhance the operability, usability, reliability, and performance of the standard system software.
- Document the generation of all functional production systems.
- Analyze the system software and make recommendations for software modifications that improve performance and provide enhancements that would be beneficial to operations and systems personnel and applications users.
- Provide specific test programs to be used in quality assurance and testing of both computer hardware systems and supporting system software.
- Provide, implement, and maintain a structured approach and a complete lifecycle methodology for all software activities.
- Identify, develop, and implement programs which provide improvements to the systems software and its various specialized areas, such as graphics, on-line computing, real-time simulation, interactive graphics subsystems, and the LaRC local area network (LaRCNET).
- Identify, develop, and implement computer programs which support the operation and management of the CSCC.
- Ensure operational capability of production software through systems upgrades and equipment changes.
- Provide software support for the communications link between CSCC computers and LaRCNET.
- Consult with users on referred problems related to the operating systems, job handling procedures, programming languages, programming techniques, user validation, and resource accounting.
- Provide consultation on the system, covering such areas as: input/output drivers, system intercommunication drivers, system schedulers, system monitors, interactive and remote job processors, compilers, assemblers, loaders, communication protocols, utilities, accounting, validation, and system generation procedures.
- Identify, develop, and implement computer programs to establish and maintain a data base using the various system dayfile history and accounting features for the following purposes:

1. Provide daily job validation criteria.
  2. Obtain computer resource use and accounting information.
  3. Provide periodic (daily, weekly, or other as required) statistics, reports, and plots of systems use and performance.
  4. Provide users organizational representatives and query capability to retrieve current accounting and validation information.
- Provide the daily processing and analysis support required to establish, use, and maintain the data base for the purposes given above.
  - Interact daily with user organization representatives and provide responses to their requests.
  - Perform quality assurance and testing of the operating system, special subsystems, and hardware equipment.
  - Perform on-the-spot consultation and analysis when computer malfunctions occur.
  - Review, analyze, and classify malfunctions, and document them using a software program report (SPR). The SPRs shall be maintained in a data base accessible by the Government.
  - Develop special purpose test programs and/or procedures to aid in the analysis and isolation of malfunctions; these programs and/or procedures are written for the purpose of duplicating these malfunctions during scheduled periods of system test time. These programs and/or procedures shall also be used to verify corrective action.
  - Perform corrective action (e.g., corrective code, a procedure, documentation, etc.) when required. If the corrective action requires a modification to the current system, the Contractor shall generate a modified version of the current system containing the correction.
  - Review, analyze, and document (if required) vendor-supplied corrective code. The Contractor shall describe to the Government the corrective code and apprise the Government of its impact on system operations and the applications users.
  - Prepare appropriate system software documentation for all modifications made to the system software. The documentation shall conform to the Contractor's software engineering methodology.
  - Interpret operating system requirements for operations staff through preparation of operational procedure memoranda and provision of specialized training sessions.
  - Provide support for hardware reconfigurations, power up/down, or for other purposes as required by the Government.



- Assemble audio and video animations using complex digital editor, digital video recorders, analog components, paint package, character generator and special effects devices, and perform other duties required to produce video presentations of scientific data.
- Configure, install, and operate video devices used to produce video presentations of scientific data; analyze malfunctions and resolve problems involving digital and analog components and composite systems.

### **C.3.3 - FACILITY MANAGEMENT SUPPORT**

The Contractor shall provide facility management support for the Building 1268 Complex at LaRC. The required work in this area will primarily consist of:

1. Access control system data base management support.
2. Environmental system monitoring support.
3. Facility management documentation support.

#### **C.3.3.1 - Access Control System Data Base Management Support**

The Contractor shall manage and use the access control system. This shall include, but is not limited to, the following:

- Program the Access Control System.
- Issue and track card keys.
- Perform periodic system backup to save system update data.
- Provide system use reports monthly and as requested.

#### **C.3.3.2 - Environmental System Monitoring Support**

The Contractor shall manage and use the Environmental Monitoring System. This shall include, but is not limited to, the following:

- Operate the facility environmental monitoring system.
- Provide monthly reports documenting environmental conditions of equipment areas.

### **C.3.3.3 - Facility Management Documentation Support**

The Contractor shall manage and use the Facility Management Documentation System. This shall include, but is not limited to, the following:

- Operate the Facility Management Documentation System.
- Maintain current layout drawings of all equipment areas.
- Document proposed equipment area configurations.
- Maintain current list of all equipment located on each drawing.
- Update and maintain data base.

### **C.4 - CSCC SYSTEMS MAINTENANCE**

The Contractor shall maintain the CSCC equipment and operating system software listed in Appendix A. The associated system environmental protection and power equipment (e.g., dew point monitors, 400 Hz Motor-Generator sets, and condensing units) listed in Appendix A are considered part of the CSCC. In addition, equipment to be maintained shall include interconnecting signal cables needed for the CSCC. This includes all signal cables that are an integral portion of the equipment in Appendix A and power cables and mating connectors provided with the equipment.

All preventive and remedial maintenance shall be performed using parts and procedures that are at least equal to OEM recommendations.

The Contractor shall develop and implement an organized remedial and preventive maintenance system that is designed to minimize equipment repair downtime and frequency of equipment breakdowns. The Contractor shall, through analysis of maintenance records and other data, assess the performance of the maintenance system, identify important performance factors, report to the Government on the system's performance, and identify and implement improvements.

The Contractor shall document all system malfunctions on a systems malfunction report. A system malfunction report contains a variety of information, including description of the problem and its fix, identification of the item on which the malfunction occurred, and pertinent times such as that of notification, arrival, deferment, etc.

The Contractor shall provide support for the removal of equipment listed in Appendix A from the CSCC. This support will consist of disconnecting all signal and electrical power cables, removing signal cables, and preparing the equipment for shipment.

The Contractor shall provide maintenance of the CSCC on a continuous basis (24 hours/day, 7 days/week, including all Government holidays). Weekend and holiday operations may not be required at times, whereupon advance notice will be provided to the Contractor.

### C.4.1 - MAINTENANCE COVERAGE

The items requiring maintenance under this contract have been designated with a particular status value based on their criticality. The status value is defined by the combined Principal Period of Maintenance (PPM) and associated response time as follows:

<u>STATUS</u>	<u>PPM</u>	<u>RESPONSE TIME</u>	
		<u>PPM</u>	<u>NON-PPM</u>
1	0000-2400	10 minutes	2 hours
2	0800-2400	10 minutes	2 hours
3	0800-1700	10 minutes	2 hours
4	0800-1700	2 hours	N/A
5	On-Call	2 hours	2 hours

The PPM is applicable Monday through Friday, with the exception of Government holidays. Maintenance coverage for all equipment during the weekends and holidays shall be provided in accordance with Status 5 requirements. If coverage other than Status 5 is required during weekends and holidays, the Government will provide advance notice to the Contractor, and the associated labor for such coverage shall be provided in accordance with Section C.3.

Response time is the elapsed time from notification of a malfunction to the Contractor's point of contact and the arrival of a technically-qualified contract employee at the site of the malfunction.

### C.4.2 - POINT OF NOTIFICATION

The Contractor and Government, by mutual agreement, shall establish a point or points of contact for sending and receiving notifications that remedial maintenance is required. The Contractor shall establish arrangements to enable his maintenance representative to receive such notifications readily and promptly. The procedure for notification, transmittal, and receipt mutually agreed upon shall be documented and strictly followed until altered by mutual agreement.

Failure of the Contractor's established point of contact (such as an "answering service") to forward messages shall not be considered cause beyond the Contractor's control.

### C.4.3 - PREVENTIVE MAINTENANCE

The Contractor may perform preventive maintenance for the items listed in Appendix A. The Contractor shall ensure that preventive maintenance is scheduled in a manner mutually agreeable to the Government and Contractor that minimizes the impact on production schedules and/or overall system performance.

#### **C.4.4 - SPARE PARTS**

The Contractor shall maintain a local inventory of spare and repair parts sufficient to maintain the equipment properly and efficiently. Time required to obtain a part in order to repair the equipment or otherwise keep it in good operating condition shall be charged to remedial maintenance unless the Government elects to defer maintenance.

The quantity and types of parts to be maintained locally shall be based on the recommendations by the OEM. Only new standard parts or those of equal quality shall be used in maintenance services. Replaced parts become the property of the Contractor.

#### **C.4.5 - FIELD CHANGE ORDERS**

The Contractor shall be responsible for the installation and maintenance of Field Change Orders (FCOs) recommended by the OEM.

#### **C.4.6 - CONTROLWARE**

Controlware used in any of the devices of Appendix A shall be the responsibility of the Contractor. Controlware is subject to the conditions for maintenance coverage as set forth in Section C.4.1. The Contractor shall provide controlware updates, including installing field changes recommended by the OEM.

#### **C.4.7 - SYSTEM SOFTWARE**

The Contractor shall notify the Government of the availability of enhancements and successor products.

The Contractor shall provide to the Government successor versions of the current Government licensed and installed system software. This shall include corrective code, updates, and enhancements to the system software listed in Appendix A. The Government will be responsible for purchasing all initial or renewal software licensing agreements.

The Contractor shall provide, on machine-readable media, source code, if available, for all software products for which the Government has obtained source code licenses. The source code must be readily accessible by Government and other contractor personnel.

#### **C.4.8 - MAINTENANCE DOCUMENTATION**

All equipment and maintenance manuals necessary to perform maintenance shall be obtained, filed, and kept updated by the Contractor. This documentation shall be maintained by the Contractor for the life of the contract.

The Contractor shall acquire and maintain copies of manufacturer's bulletins that are available concerning the items under maintenance.

EXHIBIT E

SUBCONTRACTING PLAN  
(To be incorporated at contract award).

The Contractor shall provide to the Government current and successor versions of software systems identified in Appendix A. Updates of these manuals shall be provided for each revision of the software systems.

The Contractor shall provide Certificates of Maintainability upon request.

## **C.5 - COMMUNICATION NETWORKS**

This section of the Statement of Work defines the requirements for services to support Center-wide communication networks at LaRC.

There are three major Center-wide communication networks at the LaRC: (1) the LaRC Computer Network (LaRCNET), providing high-speed data communication among the Center's computing resources; (2) the LaRC Telecommunications System (LaTS), providing local telephone service and low-speed interactive data communication; and (3) the LaRC Video Network (LaRCVIN), providing video conferencing and local distribution of internal and external video transmissions. These networks connect computers, telephones, and video equipment located throughout LaRC

The Contractor shall provide the administration, engineering, maintenance, and operations support of LaRC communication systems and networks.

Specific items of equipment can be expected to change as new technology becomes available. Also, quantities of equipment can be expected to increase as the networks grow in size. The Contractor shall respond to such changes and growth, and assume operational and maintenance responsibility for new equipment as it is implemented.

The Contractor shall purchase network hardware and software required to maintain and expand the LaRC communication networks. This includes test equipment, all hardware and software required to expand and upgrade the networks, and hardware required to replace failed equipment and maintain adequate spare parts inventories.

### **C.5.1 - CORRECTIVE AND PREVENTIVE MAINTENANCE**

The Contractor shall provide corrective and preventive maintenance on a continuous basis (24 hours/day, 7 days/week, including all Government holidays) for all network hardware including: (1) LaRCNET computer interfaces and infrastructure (including transceivers, receivers, repeaters, bridges, routers, and gateways); (2) LaTS, the Government-owned integrated voice/data switching system, including telephones, modems, and associated equipment; and (3) LaRCVIN broadband distribution system including taps, splitters, amplifiers, and all head-end equipment. The Contractor shall provide maintenance services for Uninterruptible Power Supply (UPS) power systems and diesel generators used for backup power for the networks.

### **C.5.2 - INSTALLATION AND RELOCATION OF NETWORK EQUIPMENT**

The Contractor shall provide installation and relocation, as required, of all network equipment including: (1) LaRCNET computer network interfaces, including network software on personal computer and workstations, and LaRCNET infrastructure, including transceivers, repeaters, bridges, routers, and gateways; (2) LaTS equipment, including telephones and modems; and (3) LaRCVIN equipment, including taps and receivers. All equipment shall be lab tested prior to installation in the network.

### **C.5.3 - INSTALLATION AND REPAIR OF NETWORK CABLING**

The Contractor shall provide installation, diagnosis, and repair of all network cabling and connectors including twisted-pair, coax, and fiber used for intrabuilding and interbuilding communication. Cable shall be tested before installation and the results documented.

### **C.5.4 - SYSTEMS SUPPORT**

The Contractor shall provide engineering and systems analysis support to: (1) evaluate new network technologies, equipment, and software for application in the LaRC environment; (2) integrate new technologies, equipment, and software within the LaRC environment; (3) diagnose and resolve complex communication problems requiring specialized test equipment and knowledge; and, (4) design, develop, and implement custom hardware and software, as required, to accommodate special applications and to facilitate network maintenance.

### **C.5.5 - ADMINISTRATIVE AND OPERATIONS SUPPORT**

The Contractor shall manage the day-to-day operation of the LaRC communication networks, including maintenance of equipment and parts inventories and network configuration data bases. This support shall include data base administration, logging and monitoring of network traffic, traffic analysis, and the generation of equipment utilization reports, network drawings/documentation, and periodic field surveys of network equipment.

### **C.5.6 - USER SERVICES**

The Contractor shall provide user services to: (1) interface with the user community to define requirements, generate service requests, and provide for additions, relocations, and changes to the network facilities; (2) install network configuration changes to accommodate user requirements; (3) answer user questions and serve as the user interface for network problems; and, (4) operate the LaRC video conference facility including planning and scheduling of conferences.

### **C.6 - LaRC DISTRIBUTED COMPUTING AND DATA REDUCTION SUPPORT**

In addition to the mainframe computers of the CSCC, a number of distributed computing systems and data reduction systems are housed in various facilities throughout LaRC. Many of

these systems require support in the form of system administration, operation, programming, and documentation. This section defines the requirements for services to be provided by the Contractor on designated LaRC distributed systems.

### **C.6.1 - DISTRIBUTED SYSTEM SUPPORT**

The Contractor shall provide system management services for LaRC distributed computer systems including, but not limited to, the following:

- Manage user accounts and files including the addition/removal of users, backup/restoration of files, and disk space accounting.
- Maintain system files and software including system file backup/restoration, utilization and performance accounting, software installation and upgrade, software problem identification and correction, and security monitoring.
- Develop and maintain local software documentation including procedures and restrictions on using software packages.
- Stay abreast of technology advancements.
- Participate in the planning, ordering, and installation of new hardware. Schedule and monitor hardware repairs.
- Develop policies and procedures that promote optimal use of system resources.

### **C.6.2 - DATA REDUCTION SUPPORT**

The Contractor shall provide data reduction support for various research facilities located at LaRC. This support includes the development, modification, and improvement of application programs for data acquisition, data presentation, and data analysis, that execute on the various LaRC distributed systems. Often, this support is required in conjunction with distributed systems support and shall include, but is not limited to, the following:

- Develop scientific computer programs for data acquisition and data reduction in support of wind tunnel, environmental, and flight research experiments.
- Consult with LaRC researchers in the preparation of technical memoranda defining computer systems and recommending procedures to increase efficiency and capability.
- Develop translators to provide information exchange between dissimilar platforms.
- Develop real-time software subsystems to allow control of laboratory tests.
- Prepare graphical presentations for both steady state and frequency analysis research data.



- Perform distributed systems analysis for computer systems located in research facilities at LaRC.

### **C.7 - NEW TECHNOLOGY SUPPORT**

The Contractor shall provide new technology support which shall include, but is not limited to, the following:

- On an on-going basis, analyze technology trends and provide recommendations to be used in the Government's long-range planning process.
- Provide recommendations for continuously improving the day-to-day operation.

### **C.8 - DOCUMENTATION**

The Contractor shall prepare and maintain complete and comprehensive records for software programs, equipment operation, and equipment maintenance. Some documentation has been specified in previous sections. Additional documentation requirements shall include, but are not limited to, the following:

- **Operational Procedures**--The Contractor shall prepare, revise, and maintain documents for inclusion in the Operating Procedures Manual for equipment which is operated under this contract.
- **User Information**--The Contractor shall prepare material for inclusion in the CSCC user documentation. Examples of material to be provided are documentation of library subroutines, modifications to job submittal procedures, and other reference material related to the use of the computing and data handling equipment.
- **Performance Statistics**--The Contractor shall compile and summarize data in weekly reports which document the performance of CSCC equipment operations. Examples are reports of utilization, job work load, equipment malfunctions, and throughput and turnaround time for processed jobs.
- **Computer Programs**--As part of assigned programming work orders, the Contractor shall provide the program documentation for computer programs which are developed under the contract.
- **Configuration Drawings**--The Contractor shall maintain and update configuration drawings of the CSCC systems maintained under this contract. Plotting systems of the Complex will be made available to the Contractor as an aid in producing and revising the drawings, which shall become the property of the Government. As part of the configuration drawings, the Contractor shall update and maintain power panel schedules for those power panels used for the equipment in Appendix A.

APPENDIX A, PART 1  
COMPUTER HARDWARE ITEMS

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1000	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1001	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1002	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1003	IOP-001	MULTIBUS IO PROCESSOR	CONVEX	080993	3												
1004	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1005	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1006	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1007	MCM-200	MEMORY CONTROL MODULE	CONVEX	080993	3												
1008	ULT-201C	ULTRANET CONNECTION	CONVEX	080993	3												
1009	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993	3												
1010	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993	3												
1011	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993	3												
1012	ULT-201C	ULTRANET CONNECTION	CONVEX	080993	3												
1013	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993	3												
1014	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1015	IOP-001	MULTIBUS IO PROCESSOR	CONVEX	080993	3												
1016	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1017	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1018	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1019	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												
1020	MEM-200	32 MB MEMORY MODULE	CONVEX	080993	3												

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST								
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG	
1021	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1022	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1023	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1024	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1025	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1026	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1027	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1028	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3									
1029	2S/4-128	SUPER COMPUTER	CRAY	080993	2									
1030		RESERVED		TBD										
1031	HSX-1/C2	HIGH SPEED CHANNEL	CRAY	080993	2									
1032	DC-3	DISK CONTROLLER	CRAY	080993	2									
1033	DC-3	DISK CONTROLLER	CRAY	080993	2									
1034	DC-3	DISK CONTROLLER	CRAY	080993	2									
1035	DC-3	DISK CONTROLLER	CRAY	080993	2									
1036	DC-3	DISK CONTROLLER	CRAY	080993	2									
1037	DC-3	DISK CONTROLLER	CRAY	080993	2									
1038	DC-3	DISK CONTROLLER	CRAY	080993	2									
1039	DC-3	DISK CONTROLLER	CRAY	080993	2									
1040	DS-40R	DISK STORAGE	CRAY	080993	2									
1041	DS-40R	SUBSYSTEM DISK STORAGE	CRAY	080993	2									
1042		SUBSYSTEM RESERVED		TBD										
1043		RESERVED		TBD										

Appendix A, Part 1

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST												
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG					
1044	C-210-64	C2 SERIES PROC. W/64 MB MEMORY	CONVEX	080993	3													
1045	C220-128	C2 SERIES PROC. W/128 MB MEMORY	CONVEX	080993	3													
1046		RESERVED		TBD														
1047		RESERVED		TBD														
1048	MBS-004	MULTIBUS CHASSIS	CONVEX	080993	3													
1049	MBS-004	MULTIBUS CHASSIS	CONVEX	080993	3													
1050	VIOP-001	VME I/O PROCESSOR	CONVEX	080993	3													
1051	VBS-004	VME CHASSIS	CONVEX	080993	3													
1052	ACM-002	MULTIBUS ASYNE CONNECTION	CONVEX	080993	3													
1053	ACM-002	MULTIBUS ASYNE CONNECTION	CONVEX	080993	3													
1054	ETH-001	MULTIBUS ETHER- NET CONNECTION	CONVEX	080993	3													
1055	HYP-201	VME HYPERCHANEL CONNECTION	CONVEX	080993	3													
1056	PRC-001	MULTIBUS PRINT- ER CONTROLLER	CONVEX	080993	4													
1057	MTD-102	HIGH PERF. TAPE DRIVE W/MULTI-	CONVEX	080993	4													
1058	MTD-002	HIGH PERFORMAN. TAPE DRIVE	CONVEX	080993	3													
1059	MTD-002	HIGH PERFORMAN. TAPE DRIVE	CONVEX	080993	3													
1060	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1061	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1062	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1063	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1064	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1065	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1066	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													
1067	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3													

Appendix A, Part 1

MONTHLY MAINTENANCE COST

YEAR 1    YEAR 2    YEAR 3    YEAR 4    YEAR 5    YEAR 6    YEAR 7    YEAR 8

BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

MODEL/ CLIN PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1068 DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1069 DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1070 DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1071 DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1072 DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1073 RDS-001	/VME CONTROLLER REMOVEABLE DISK	CONVEX	080993	3
1074 RDS-002	CHASSIS REMOVEABLE DISK	CONVEX	080993	3
1075 DKD-314	CHASSIS 320 MB REMOV.	CONVEX	080993	3
1076 DKD-314	DISK DR./CNTRL. 320 MB REMOV.	CONVEX	080993	3
1077 DKD-214	DISK DR./CNTRL. 320 MB REMOVE-	CONVEX	080993	3
1078 DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1079 DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1080 DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1081 DKD-215	ABLE DRIVE SPU REMOVEABLE	CONVEX	080993	3
1082 DKD-215	DRIVE SPU REMOVEABLE	CONVEX	080993	3
1083 DKD-214S	DRIVE 320 MB REMOVE.	CONVEX	080993	3
1084 DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1085 DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1086 DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1087 DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1088 DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1089 DKD-215S	DRIVE (ADDITL) SPU REMOVEABLE	CONVEX	080993	3
1090 DKD-215S	DRIVE (ADDITL) SPU REMOVEABLE	CONVEX	080993	3

Appendix A, Part 1

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1091	DKD-215S	SPU REMOVEABLE DRIVE (ADDITL)	CONVEX	080993	3												
1092	DKD-215S	SPU REMOVEABLE DRIVE (ADDITL)	CONVEX	080993	3												
1093	EXP-101	EXPANSION CABINET	CONVEX	080993	3												
1094	EXP-101	EXPANSION CABINET	CONVEX	080993	3												
1095	EXP-101	EXPANSION CABINET	CONVEX	080993	3												
1096	SP-047	HIGH SPEED PRINTER	CONVEX	080993	3												
1097	VIOP-001	VME I/O PROCESSOR	CONVEX	080993	3												
1098	VBS-004	VME CHASSIS	CONVEX	080993	3												
1099	ACM-002	MULTIBUS ASYNC CONNECTION	CONVEX	080993	3												
1100	ACM-002	MULTIBUS ASYNC CONNECTION	CONVEX	080993	3												
1101	ETH-001	MULTIBUS ETHER- NET CONNECTION	CONVEX	080993	3												
1102	HYP-201	VME HYPERCHANNEL CONNECTIONS	CONVEX	080993	4												
1103	PRC-001	MULTIBUS PRINT- ER CONTROLLER	CONVEX	080993	4												
1104	MTD-102	HIGH PERF. TAPE DRIVE W/MULTI-	CONVEX	080993	4												
1105	DKD-308	DISK DRIVE LGIG /VME CONTROLLER	CONVEX	080993	3												
1106	RDS-001	REMOVEABLE DISK CHASSIS	CONVEX	080993	3												
1107	EXP-101	EXPANSION CAB- INET	CONVEX	080993	3												
1108	SP-047	HIGH SPEED PRINTER	CONVEX	080993	3												
1109	A130	NSC TO CRAY ADAPTER	NSC	080993	3												
1110	A130	NSC TO CRAY ADAPTOR	NSC	080993	3												
1111	A130	NSC TO CRAY ADAPTOR	NSC	080993	3												
1112	A130	NSC TO CRAY ADAPTOR	NSC	080993	3												
1113	A400	NSC TO CONVEX ADAPTER	NSC	080993	3												
1114	A400	NSC TO CONVEX	NSC	080993	3												

Appendix A, Part 1

MODEL/ CLIN PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST													
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG						
1115 A400	ADAPTER NSC TO CONVEX	NSC	080993	3														
1116 A400	NSC TO SUN ADAPTER	NSC	080993	3														
1117 AT50	50 MBYTE TRUNK	NSC	080993	3														
1118 AT50	50 MBYTE TRUNK	NSC	080993	3														
1119 AT50	50 MBYTE TRUNK	NSC	080993	3														
1120 AT50	50 MBYTE TRUNK	NSC	080993	3														
1121 AT50	50 MBYTE TRUNK	NSC	080993	3														
1122 AT50	50 MBYTE TRUNK	NSC	080993	3														
1123 AT50	50 MBYTE TRUNK	NSC	080993	3														
1124 AT50	50 MBYTE TRUNK	NSC	080993	3														
1125 T50A	COAX CABLE	NSC	080993	3														
1126 GATEWAY	SUN SYSTEM	SUN	080993	3														
1127 GATEWAY-CONS	SUN SYSTEM	SUN	080993	3														
1128 AC-1	CABINET	NSC	080993	3														
1129 AC-1	CABINET	NSC	080993	3														
1130 AC-1	CABINET	NSC	080993	3														
1131 AC-1	CABINET	NSC	080993	3														
1132 2010	HUB 1000 SERIES	ULTRA	080993	3														
1133 3010	HSX ADAPTER	ULTRA	080993	3														
1134 2000	NETWORK MANAGER	ULTRA	080993	3														
1135 9010-005	FIBER CABLES	ULTRA	080993	3														
1136 3210	SUN VME CARD	ULTRA	080993	3														
1137 3210-92	SUN VME CARD	ULTRA	080993	3														

Appendix A, Part 1

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST														
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG							
1138 3110	CONVEX VME CARD	ULTRA	080993	3															
1139 3110-91	CONVEX VME CARD	ULTRA	080993	3															
1140 5000	FRAME BUFFER CARD	ULTRA	080993	3															
1141 5900-10	SONY COLORED MONITOR	ULTRA	080993	3															
1142 9000-003	RGB CABLE SET	ULTRA	080993	3															
1143 9005-023	RG 59 COAX CABLE SET	ULTRA	080993	3															
1144 3210-82	SUN VME CARD	ULTRA	080993	3															
1145 Y-MP 8/8128	SUPER COMPUTER	CRAY	080993	1															
1146 DS4R	DISK SUBSYSTEM	CRAY	080993	1															
1147 DS4R	DISK SUBSYSTEM	CRAY	080993	1															
1148 DCU-5	DISK CONTROL UNIT (MODULES)	CRAY	080993	1															
1149 DCU-5	DISK CONTROL UNIT (MODULES)	CRAY	080993	1															
1150 BM-8C	BUFFER MEM 4MG	CRAY	080993	3															
1151 HIPPI	HIGH PERF. PAR- ALLEL INTERFACE	CRAY	080993	3															
1152 BMC-5	BLOCK MUX CHANNEL	CRAY	080993	3															
1153 FEI-3S	FRONT END INTERFACE	CRAY	080993	3															
1154 LSP-4	LOSP CHANNEL	CRAY	080993	3															
1155 4480M20	TAPE CONTROL UNIT	STK	080993	1															
1156 4480M20	TAPE CONTROL UNIT	STK	080993	1															
1157 FC4411	FEATURE CODE	STK	080993	1															
1158 FC4411	FEATURE CODE	STK	080993	1															
1159 FC4412	FEATURE CODE	STK	080993	1															
1160 FC4412	FEATURE CODE	STK	080993	1															
1161 4480M22	CD CARTRIDGE	STK	080993	1															



Appendix A, Part 1

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST									
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG		
1162 4480M22	DRIVE CD CARTRIDGE	STK	080993	1										
1163 FC4411	DRIVE FEATURE CODE	STK	080993	1										
1164 FC4411	FEATURE CODE	STK	080993	1										
1165 FC4412	FEATURE CODE	STK	080993	1										
1166 FC4412	FEATURE CODE	STK	080993	1										
1167 4410-001	LIBRARY STORAGE MODULE	STK	080993	1										
1168 4411-001	LIBRARY CONTROL UNIT	STK	080993	1										
1169 4430-002	LIBRARY MANAGE- MENT UNIT	STK	080993	1										
1170 4440-001	LIBRARY SERVER	STK	080993	1										
1171 FC3211	FEATURES CODE	STK	080993	1										
1172 FC3211	FEATURE CODE	STK	080993	1										
1173 FC4442	FEATURE CODE	STK	080993	1										
1174 FC4442	FEATURE CODE	STK	080993	1										
1175 2010	HUB 1000 SERIES	ULTRA	080993	3										
1176 U3030-01	HIPPI UPGRADE KIT	ULTRA	080993	3										
1177 4010	LINK ADAPTER	ULTRA	080993	3										
1178 4900-01	TRANSCEIVER	ULTRA	080993	3										
1179 4900-01	TRANSCEIVER	ULTRA	080993	3										
1180 4900-01	TRANSCEIVER	ULTRA	080993	3										
1181 4900-01	TRANSCEIVER	ULTRA	080993	3										
1182 4900-01	TRANSCEIVER	ULTRA	080993	3										
1183 4900-01	TRANSCEIVER	ULTRA	080993	3										
1184 4900-01	TRANSCEIVER	ULTRA	080993	3										

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1185	4900-01	TRANSCEIVER	ULTRA	080993	3												
1186	9007-023	COAX SET	ULTRA	080993	3												
1187	9007-023	COAX SET	ULTRA	080993	3												
1188	9007-023	COAX SET	ULTRA	080993	3												
1189	9007-023	COAX SET	ULTRA	080993	3												
1190		RESERVED		TBD													
1191		RESERVED		TBD													
1192		RESERVED		TBD													
1193	DS-41	DISK SUBSYSTEM	CRAY	080993	3												
1194	DS-41	DISK SUBSYSTEM	CRAY	080993	3												
1195	DCU-5	DISK CONTROL UNIT (MODULES)	CRAY	080993	1												
1196	DCU-5	DISK CONTROL UNIT (MODULES)	CRAY	080993	1												
1197	CC545	DISPLAY CONSOLE STATION	CDC	092893	3												
1198	667-3	MAG TAPE TRANS- PORT	CDC	092893	5												
1199	669-3	MAG TAPE TRANS- PORT	CDC	092893	5												
1200	669-3	MAG TAPE TRANS- PORT	CDC	092893	5												
1201	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1202	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1203	7021-22	MAG TAPE CONTROL LLER + CONTROLW	CDC	092893	5												
1204	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												
1205	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												
1206	844-41	DISK STORAGE UNIT	CDC	092893	3												
1207	844-41	DISK STORAGE UNIT	CDC	092893	3												
1208	844-41	DISK STORAGE	CDC	092893	3												

Appendix A, Part 1

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1209	844-41	UNIT DISK STORAGE	CDC	092893	3												
1210	380-170	UNIT CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3												
1211	380-170	CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3												
1212	380-170	CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3												
1213	7154-2	MASS STORAGE CONTROLLER INCLUDED MULTI ACCESS CONTROLLER OPT	CDC	092893	3												
1214	7154-2	MASS STORAGE CONTROLLER INCLUDED MULTI ACCESS CONTROLLER OPT	CDC	092893	3												
1215	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1216	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1217	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1218	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1219	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1220	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												
1221	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												

Appendix A, Part 1

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST								
						YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	
1222	M862	MASSTOR STORAGE CONTROLLER INCL. 2ND CYBER CHANNEL ACCESS & MICRO-CODE	MASSTOR SY	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1223	M862	MASSTOR STORAGE CONTROLLER INCLUDES 2ND CYBER CHANNEL ACCESS & MICRO- CODE	MASSTOR SY	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1224	M862	MASSTOR STORAGE CONTROLLER INCLUDES 2ND CYBER CHANNEL ACCESS & MICRO- CODE	MASSTOR SY	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1225	M861	MASSTOR STORAGE MODULE INCLUDES 2ND DATA RECORDING DEVICE	MASSTOR SY	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1226	M861	MASSTOR STORAGE MODULE INCLUDES 2ND DATA RECORDING DEVICE	MASSTOR SY	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1227	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER SUPPLY	CDC	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1228	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER SUPPLY	CDC	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1229	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER	CDC	092893	3	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST												
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG					
1230	65206-2	SUPPLY FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3													
1231	65206-2	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3													
1232	65206-2	CONTROLWARE FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3													
1233	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5													
1234	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5													
1235	679-7	ATS TAPE TRANS- PORT	CDC	092893	5													
1236	679-7	ATS TAPE TRANS- PORT	CDC	092893	5													
1237	553-1	REMOTE PRINT ST ATION	CDC	092893	3													
1238	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5													
1239		ATS CONTROLLER W/MATRIX	CDC	092893	5													
1240	556-1	REMOTE PRINT STATION	CDC	092893	3													
1241	556-1	REMOTE PRINT STATION	CDC	092893	3													
1242	180-860A	CY180-860 MAINF FRAME & FEATURES INCLUDES 2000K MEM., 20 PPUS, 24 I/O CHANNEL PERFORMANCE OPTION, COOLING, POWER	CDC	092893	3													
1243	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3													
1244	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3													
1245	895-1	DISK STORAGE UNIT	CDC	092893	3													
1246	895-2	DISK STORAGE UNIT	CDC	092893	3													

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1247	895-1	DISK STORAGE UNIT	CDC	092893	3												
1248	895-2	DISK STORAGE UNIT	CDC	092893	3												
1249	18002-1	DISPLAY CONSOLE STATION	CDC	092893	3												
1250	18001-1	DATA CHANNEL CONVERTER	CDC	092893	3												
1251	180-860A	CY180-860 MAINF FRAME & FEATURES INCLUDES 8 MWDS MEM., 20 PPUS, 24 I/O CHANNEL PERFORMANCE OPTION, COOLING, POWER	CDC	092893	3												
1252	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3												
1253	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3												
1254	895-1	DISK STORAGE UNIT	CDC	092893	3												
1255	895-2	DISK STORAGE UNIT	CDC	092893	3												
1256	895-1	DISK STORAGE UNIT	CDC	092893	3												
1257	895-2	DISK STORAGE UNIT	CDC	092893	3												
1258	18001-1	DATA CHANNEL CONVERTER	CDC	092893	3												
1259	895-1	DISK STORAGE UNIT	CDC	092893	3												
1260	895-2	DISK STORAGE UNIT	CDC	092893	3												
1261	895-1	DISK STORAGE UNIT	CDC	092893	3												
1262	895-2	DISK STORAGE UNIT	CDC	092893	3												
1263	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1264	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1265	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1266	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1267	895-2	DISK STORAGE	CDC	092893	3												

Appendix A, Part 1

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST									
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG		
1268 895-2	UNIT DISK STORAGE	CDC	092893	3										
1269 679-7	UNIT ATS TAPE TRANS- PORT	CDC	092893	5										
1270 679-7	UNIT ATS TAPE TRANS- PORT	CDC	092893	5										
1271 895-2	UNIT DISK STORAGE	CDC	092893	3										
1272 895-2	UNIT DISK STORAGE	CDC	092893	3										
1273 2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3										
1274 2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER- FACE, 1MB MEM- ORY OPTION	CDC	092893	3										
1275 9715-515	UNIT (EMC2) DISK STORAGE	CDC	092893	3										
1276 2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3										
1277 2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3										
1278 2601-5	UNIT DEVICE INTER- FACE CABINET	CDC	092893	3										

Appendix A, Part 1

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST									
					YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8		
					BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG	BMMC/CHRG
1279 2601-5	ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3										
1280 2601-5	DEVICE INTER- FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER- FACE, 1MB MEM- ORY OPTION	CDC	092893	3										
1281 2601-5	DEVICE INTER- FACE CABINET ASSEMBLY WITH ASYNC/SYNC, TERMINAL DEVICE INTERFACE, 1MB MEMORY OPTION	CDC	092893	3										
1282 2601-5	DEVICE INTER- FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER- FACE, 1MB MEM- ORY OPTION	CDC	092893	3										
1283 LCN	LCN 50 MEGABIT TRUNKS (3)	CDC	092893	3										
1284 3800-1021	ACCUMULATOR EXP IBM	IBM	100193	5										
1285 3800-1021	ACCUMULATOR EXP IBM	IBM	100193	5										
1286 9335-A01	DASD DISK DRIVE IBM	IBM	100193	5										
1287 3800-006	LASER PRINTER IBM	IBM	100193	5										



Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1288	3800-1010	ACCUMULATOR	IBM	100193	5												
1289	3800-006	LASER PRINTER	IBM	100193	5												
1290	3430-A01	TAPE DRIVE	IBM	100193	5												
1291	3800-1010	ACCUMULATOR	IBM	100193	5												
1292	9335-B01	DASD DISK DRIVE	IBM	100193	5												
1293	9309-002	POWER SUPPLY RACK	IBM	100193	5												
1294	9335-B01	DASD DISK DRIVE	IBM	100193	5												
1295	9335-A01	DASD DISK DRIVE	IBM	100193	5												
1296	9375-060	COMPUTER	IBM	100193	5												
1297	9309-002	POWER SUPPLY RACK	IBM	100193	5												
1298	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1299	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1300	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1301	DKD-316	760MB REMOVE.	CONVEX	121894	3												
1302	DKD-316	DISK W/CONTROL. 760MB REMOVE.	CONVEX	121894	3												
1303	ACM-201	DISK W/CONTROL. VME ASYNC. CONTROLLER	CONVEX	121894	3												
1304	ACM-201	VME ASYNC. CONTROLLER	CONVEX	121894	3												
1305	DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3												
1306	VBS-003	VME BUS CHASSIS	CONVEX	121894	3												
1307	RDS-002	REMOVE.DIS CHA- SIS 3 DATA SLOT	CONVEX	121894	3												
1308	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												
1309	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												
1310	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												

Appendix A, Part 1

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST									
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG		
1311 C3840-0000	3800 SERIES PROCESSOR	CONVEX	121894	3										
1312 PUG-3800	ADD.3800 SERIES PROCESSOR	CONVEX	121894	3										
1313 EXP-101	EXPANSION CAB- INET	CONVEX	121894	3										
1314 PXP-3800-CC	3800 SERIES PRO CESSOR CABINET	CONVEX	121894	3										
1315 IUG-3800	3800 SERIES I/O PORT UPGRADE	CONVEX	121894	3										
1316 VBS-004	VMB BUS CHASIS	CONVEX	121894	3										
1317 VBS-004	VMB BUS CHASIS	CONVEX	121894	3										
1318 IDC-001	INTEGRATED DISK CONTROLLER	CONVEX	121894	3										
1319 EXP-101	EXPANSION CAB- INET	CONVEX	121894	3										
1320 VBS-004	VMB BUS CHASIS	CONVEX	121894	3										
1321 MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3										
1322 VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3										
1323 VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3										
1324 VBS-004	VMB BUS CHASIS	CONVEX	121894	3										
1325 MTD-002	HIGH PERF. TAPE DRIVE	CONVEX	121894	3										
1326 DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3										
1327 DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3										
1328 EXP-105	HIGH PERFOR- EXPAN. CABINET	CONVEX	121894	3										
1329 VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3										
1330 DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3										
1331 DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3										
1332 VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3										
1333 VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3										
1334 ACM-201	VME ASYNC.	CONVEX	121894	3										

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1    YEAR 2    YEAR 3    YEAR 4    YEAR 5    YEAR 6    YEAR 7    YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1335	ACM-201	CONTROLLER VME ASYNC.	CONVEX	121894	3
1336	ACM-201	CONTROLLER VME ASYNC.	CONVEX	121894	3
1337	ETH-201	CONTROLLER VME ETHERNET	CONVEX	121894	3
1338	PRT-001	CONTROLLER LINE PRINTER	CONVEX	121894	3
1339	SP-043	HIGH SPEED PRINTER	CONVEX	121894	3
1340	2140	ARTS INTERFACE	KINETIC SY	121894	3
1341	2140	ARTS INTERFACE	KINETIC SY	121894	3
1342	2140	ARTS INTERFACE	KINETIC SY	121894	3
1343	2140	ARTS INTERFACE	KINETIC SY	121894	3
1344	C230-256	C2 SERIES PROC- CESORS W/256 MB	CONVEX	121894	3
1345		RESERVED		TBD	
1346		RESERVED		TBD	
1347	DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3
1348	DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3
1349	DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3
1350	DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3
1351	EXP-101	EXPANSION CAB- INET	CONVEX	121894	3
1352	MTC-201	MAGNETIC TAPE CONTROLLER	CONVEX	121894	3
1353	MTD-204	MEDIUM PERFORM. TAPE DRIV	CONVEX	121894	3
1354	VIOP-001	VME IO PROCESSOR	CONVEX	121894	3
1355	VBS-004	VME BUS CHASSIS	CONVEX	121894	3
1356	VBS-004	VME BUS CHASSIS	CONVEX	121894	3
1357	ETH-201	VME ETHERNET CONNECTION	CONVEX	121894	3

## Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST												
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG					
1358	ACM-202	VME ASYNC CONTROLLER	CONVEX	121894	3													
1359	PRT-001	LINE PRINTER	CONVEX	121894	3													
1360	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3													
1361	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3													
1362	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3													
1363	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3													
1364	PIA-002	PBUS INTERFACE ADAPTER	CONVEX	121894	3													
1365	EXP-101	EXPANSION CAB- INET	CONVEX	121894	3													
1366	2140	ARTS INTERFACE	KINETIC SY	121894	3													
1367	2140	ARTS INTERFACE	KINETIC SY	121894	3													
1368	RS 6000/560	RISC WORKSTAT. HIPPI & SCSI	IBM	TBD	3													
1369		OPTICAL DISK JUKEBOX	DOCUMENT I	TBD	3													
1370	8500	8MM TAPE DRIVE	FXABYTE	TBD	3													
1371	6091-10	COLOR MONITOR	IBM	TBD	3													
1372	7210-001	OPTICAL DISK CD-ROM	IBM	TBD	3													
1373	RS6000/320H	RISC WORKSTAT.	IBM	TBD	3													
1374	RS6000/560	RISC WORKSTAT.	IBM	TBD	3													
1375	8508	B/W MONITOR	IBM	TBD	3													
1376	9610	9-TRACK TAPE DR IVE	KENNEDY	TBD	3													
1377	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3													
1378	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3													
1379	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3													
1380	NCR 6292	DISK ARRAY SYSTEM	NCR	TBD	3													
1381	NCR 6292	DISK ARRAY	NCR	TBD	3													

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1382	SA-H212-D	SYSTEM DISK SUBSYSTEM	FUJITSU	TBD	3
1383	HP-730	HP WORKSTATION- DATABASE SERVER	HP	TBD	3
1384	MLB	4MM DAT TAPE DRIVE	HP	TBD	3
1385	A1097A	MONITOR	HP	TBD	3
1386	TXM-3201A1	CD-ROM DRIVE	HP	TBD	3
1387	4781	SCSI TAPE CONTROL UNIT	STK	TBD	1
1388	4781M22	CARTRIDGE TAPE DRIVE	STK	TBD	1
1389	4480	TAPE CONTROL UNIT	STK	TBD	1
1390	4480M24	CARTRIDGE TAPE DRIVE	STK	TBD	1
1391	4480	TAPE CONTROL UN IT	STK	TBD	1
1392	4480M24	CARTRIDGE TAPE DRIVE	STK	TBD	1
1393	4410	LIBRARY STORAGE MODULE	STK	TBD	1
1394	4411	LIBRARY CONTROL UNIT	STK	TBD	1
1395	9570	DISK ARRAY - 10 GIGABYTE	IBM	TBD	3
1396	PS32-8	HIPPI SWITCH	NETWORK SY	TBD	3
1397	VIOP-001	VME IO PROCESSOR	CONVEX	121894	3

Total Number Of Hardware Items 388

The cost for the partial months of:

08/08/93 - 08/31/93  
 09/29/93 - 09/30/93  
 12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

APPENDIX A, PART 2  
COMPUTER SOFTWARE ITEMS

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	YEAR 1 CHRG	YEAR 2 CHRG	MONTHLY MAINTENANCE				YEAR 7 CHRG	YEAR 8 CHRG	
								YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG			
6000	CXW-002-200	XWINDOWS SOFT- WARE	CONVEX	080993	N/A									
6001	AVS-001-200	CONVEX AVS SOFTWARE	CONVEX	080993	N/A									
6002	CXA-001-200	XWINDOWS DEBUG- ER & PROFILER	CONVEX	080993	N/A									
6003	CAC-001-200	CONVEX APPLI- CATION COMPILER	CONVEX	080993	N/A									
6004		UNICOS	CRAY	080993	N/A									
6005		CFT77	CRAY	080993	N/A									
6006		RESERVED		TBD										
6007		PASCAL	CRAY	080993	N/A									
6008		C	CRAY	080993	N/A									
6009		CAL	CRAY	080993	N/A									
6010	TCP/IP	NETWORK PROTO- COL SOFTWARE		080993	N/A									
6011	NFS	NETWORK FILE SERVER	CRAY	080993	N/A									
6012	NET-001-200	CONVEX INTERNET SERVICES	CONVEX	080993	N/A									
6013	NET-001-200	CONVEX INTERNET SERVICES	CONVEX	080993	N/A									
6014	CFT-001-200	CONVEX FORTRAN COMPILER	CONVEX	080993	N/A									
6015	CFT-001-200	CONVEX FORTRAN COMPILER	CONVEX	080993	N/A									
6016	LIB-001-200	VEC LIB	CONVEX	080993	N/A									
6017	LIB-001-200	VEC LIB	CONVEX	080993	N/A									
6018	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	080993	N/A									
6019	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	080993	N/A									
6020	EMA001-200	EMAX C3 SERIES	CONVEX	080993	N/A									

Appendix A, Part 2

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE											
						YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG				
6021	NFS-001-200	NETWORK FILE SYSTEM	CONVEX	080993	N/A												
6022	NFS-001-200	NETWORK FILE SYSTEM	CONVEX	080993	N/A												
6023	UNG-100-200	CONVEX OS	CONVEX	080993	N/A												
6024	3/160 OS	SUN OPERATING SYSTEM	SUN	080993	N/A												
6025	3/160 OS	SUN OPERATING SYSTEM	SUN	080993	N/A												
6026		UNICOS SOCKET LIB	ULTRA	080993	N/A												
6027		UNICOS BERK UTILITY	ULTRA	080993	N/A												
6028		UNICOS UGRAF	ULTRA	080993	N/A												
6029		CONVEX SOCKETS	ULTRA	080993	N/A												
6030		CONVEX BERK UTILITY	ULTRA	080993	N/A												
6031		CONVEX UGRAF	ULTRA	080993	N/A												
6032		SUN 3 SOCKETS	SUN	080993	N/A												
6033		SUN 3 BERK UTILITY	SUN	080993	N/A												
6034		CRAY OS DRIVER	ULTRA	080993	N/A												
6035		CONVEX OS DRIVER	ULTRA	080993	N/A												
6036		SUN OS DRIVER	ULTRA	080993	N/A												
6037		RESERVED		TBD													
6038		RESERVED		TBD													
6039	1190-V01	VM SOFTWARE	STC	080993	N/A												
6040	STC 1190-V10	ACSL5 UNIX	STC	080993	N/A												
6041	S1100-01	CRAY Y-MP ULTRA NET SOFTWARE	ULTRA	080993	N/A												
6042		CRAY ATTACH	SUN	080993	N/A												
6043	D860-01	NETWORK OPER- ATING SYSTEM	CDC	092893	N/A												

Appendix A, Part 2

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE											
						YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG				
6044	D860-02	MAINT PKG UNDER NOS 2	CDC	092893	N/A												
6045	D860-03	MULTI-MFRAME MOD UNDER NOS 2	CDC	092893	N/A												
6046	D860-05	TRACER UNDER NOS 2	CDC	092893	N/A												
6047	D860-10	NETWK ACC METH-OD UNDER NOS 2	CDC	092893	N/A												
6048	D860-11	INTERACTIVE FAC UNDER NOS 2	CDC	092893	N/A												
6049	D860-12	REMOTE BATCH FAC UNDER NOS 2	CDC	092893	N/A												
6050	D860-15	CYBER CROSS SYS UNDER NOS 2	CDC	092893	N/A												
6051	D860-150	NOS ON-LINE MAN UNDER NOS 2	CDC	092893	N/A												
6052	D860-20	FORTTRAN UNDER NOS 2	CDC	092893	N/A												
6053	D860-24	BASIC INTERACTI VE UNDER NOS 2	CDC	092893	N/A												
6054	D860-250	CYBL 170 CDE GNTR UNDER NOS 2	CDC	092893	N/A												
6055	D860-252	NOS CONTEXT UNDER NOS 2	CDC	092893	N/A												
6056	D860-28	XEDIT 3 UNDER NOS 2	CDC	092893	N/A												
6057	D860-29	CYBER INTER DE-BUG UNDER NOS 2	CDC	092893	N/A												
6058	D860-33	SORT/MERG UNDER NOS 2	CDC	092893	N/A												
6059	D860-34	PASCAL 170 UNDER NOS 2	CDC	092893	N/A												
6060	D860-37	FULL SCREEN EDI TOR UNDER NOS 2	CDC	092893	N/A												
6061	D860-907	PTF/QTF XFER RAC UNDER NOS 2	CDC	092893	N/A												
6062	D860-908	RHF ACCESS METH ODS UNDER NOS 2	CDC	092893	N/A												
6063	D860-94	MASS STORE EXTID UNDER NOS 2	CDC	092893	N/A												
6064	H860-22	FORTTRAN EXT TS UNDER NOS 2	CDC	092893	N/A												
6065	H860-32	FORTTRAN 4/5 AID S UNDER NOS 2	CDC	092893	N/A												
6066	N225-01	COMM CONTRL PRG UNDER NOS 2	CDC	092893	N/A												
6067	N261-01	CDCNET UNDER	CDC	092893	N/A												



Appendix A, Part 2

MODEL/ PRODUCT DESCRIPTION ITEM TRANSITION DATE ST YEAR 1 CHRG YEAR 2 CHRG YEAR 3 CHRG YEAR 4 CHRG YEAR 5 CHRG YEAR 6 CHRG YEAR 7 CHRG YEAR 8 CHRG

MONTHLY MAINTENANCE

CLIN	MODEL/ PRODUCT	DESCRIPTION	ITEM	OEM	TRANSITION DATE	ST	YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG
6068	D860P-351	NOS 2 TERMINAL CLUS- TER FACILITY		CDC	092893	N/A								
6069	N261-22	CDCNET TCP/IP, TELNET, FTP		CDC	092893	N/A								
6070	K14B918	ICEM-CFD PACK- AGE, OPTION 1 INCLUDES IGES, DESIGN DRAFTING CURVES & SUR- FACES, NURBS, MULCAD, PADAMM		CDC	092893	N/A								
6071	K14B-900	ICEM-CFD PACK- AGE GEOMETRY SUBSET INCLUDES DESIGN DRAFTING CURVES & SUR- FACES, NURBS		CDC	092893	N/A								
6072	K14B-920	ICEM-GPL		CDC	092893	N/A								
6073	ADA-001-200	ADA COMPILER			121894	N/A								
6074	NFS-001-200	NETWORKING FILE SYSTEM		CONVEX	121894	N/A								
6075	CXW-002-200	CXWINDOWS SOFT.		CONVEX	121894	N/A								
6076	NET-001-3800	CONVEX INTERNET SERVICES		CONVEX	121894	N/A								
6077	UNG-202-3800	CONVEX OS (32 USERS)		CONVEX	121894	N/A								
6078		ARTS INTERFACE SOFT. DRIVER		CONVEX	121894	N/A								
6079	NFS-001-3800	NETWORK FILE SYSTEM		CONVEX	121894	N/A								
6080	UXE-001-3800	UXE REAL TIME OS		CONVEX	121894	N/A								
6081	CXW-002-3800	CXWINDOWS OS		CONVEX	121894	N/A								
6082	CFT-001-3800	CONVEX FORTRAN COMPILER		CONVEX	121894	N/A								
6083	UNG-202-200	CONVEX OS (32 USERS)		CONVEX	121894	N/A								
6084	NET-001-200	CONVEX INTERNET SERVICES SOFT.		CONVEX	121894	N/A								
6085	CFT-001-200	CONVEX FORTRAN COMPILER		CONVEX	121894	N/A								

Appendix A, Part 2

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE											
						YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG				
6086	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	121894	N/A												
6087	UNG-100-200	CONVEX OS CODE	CONVEX	121894	N/A												
6088	CXB-001-200	CONVEX BATCH PROCESSING	CONVEX	121894	N/A												
6089	UDD-001-200	USER WRITTEN DEVICE DRIVER	CONVEX	121894	N/A												
6090	HCR-999	HCR PASCAL	HCR	121894	N/A												
6091		ARTS INTERFACE SOFTWARE DRIVER	CONVEX	121894	N/A												
6092	UXE-001	UXE REAL-TIME OPERATING SYS.	CONVEX	121894	N/A												
6093	DM	DATA MIGRATION	CRAY	080993	N/A												
6094	CXB-001-200	CXBATCH	CONVEX	080993	N/A												
6095	CXB-001-200	CXBATCH	CONVEX	080993	N/A												
6096	CXB-001-3800	CXBATCH	CONVEX	TBD	N/A												
6097	CTB-001-200	TOOLBOX	CONVEX	080993	N/A												
6098	CTB-001-200	TOOLBOX	CONVEX	080993	N/A												
6099	CSS-001-200	SHARE	CONVEX	080993	N/A												
6100	ADA-001-200	ADA	CONVEX	121894	N/A												
6101	CSD-004-3800	CONSULTANT	CONVEX	TBD	N/A												

Total Number Of Software Items 99

The cost for the partial months of:

08/08/93 - 08/31/93  
09/29/93 - 09/30/93  
12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

APPENDIX A, PART 3  
 ENVIRONMENTAL SUPPORT EQUIPMENT

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	MONTHLY MAINTENANCE												
					ST*	YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
8000	MG	KATO MOTOR GENERATOR		080993													
8001	PDU	POWER DISTRI- BUTION UNIT		080993													
8002	HEU	HEAT EXCHANGE UNIT		080993													
8003	RCU-3	REFRIGERATION CONDENSING UNIT		080993													
8004	RESERVOIR	COOLANT RESERVOIR		080993													
8005	MG	KATO MOTOR GENERATOR		080993													
8006	MG	KATO MOTOR GENERATOR		080993													
8007	MG	KATO MOTOR GENERATOR		080993													
8008	SPOD	SUPPORT HEAT EXCHANGES POD		080993													
8009	MPOD	MASTER HEAT EXCHANGER POD		080993													
8010	EOC	EMERGENCY OFF CONTROL		092893													
8011	EOC	EMERGENCY OFF CONTROL		092893													
8012	EOC	EMERGENCY OFF CONTROL		092893													
8013	MGC23	MG CONTROLLER		092893													
8014	CPC	COMPUTER POWER CONTROL		092893													
8015	MG23	MOTOR GEN SET 40KVA		092893													
8016	MG3	MOTOR GEN SET 40KVA		092893													
8017	MGC3	MG CONTROLLER		092893													
8018	TPS	TERMINATOR POWER SUPPLY		092893													
8019	TPS18	TERMINATOR POWER SUPPLY		092893													
8020	MG5	MOTOR GEN SET		092893													

Appendix A, Part 3

MONTHLY MAINTENANCE

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG
8021	MGC5	40KVA HORIZ MG CONTROLLER		092893									
8022	MG21	MOTOR GEN SET 40KVA		092893									
8023	MGC21	MG CONTROLLER		092893									
8024	MG28	MOTOR GEN SET 40KVA		092893									
8025	MGC28	MG CONTROLLER		092893									
8026	SPM	SYSTEM POWER MONITOR		092893									
8027	CWU	CHILLED WATER UNIT		092893									
8028	EOC	EMERGENCY OFF CONTROL		092893									
8029	TPS40	TERMINATOR		092893									
8030	EOC	POWER SUPPLY EMERGENCY OFF CONTROL		092893									
8031	MG22	MOTOR GEN SET 40KVA		092893									
8032	MGC22	MG CONTROLLER		092893									
8033	CWU	CHILLED WATER UNIT		092893									
8034	SPM	SYSTEM POWER MONITOR		092893									

Total Number Of Environmental Items 35

The cost for the partial months of:

- 08/08/93 - 08/31/93
- 09/29/93 - 09/30/93
- 12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

\* Status requirements for environmental equipment are based on supported hardware equipment (part 1).

## APPENDIX B

## Acronyms

ACD	Analysis and Computation Division
ACS	Access Control System
ADPE	Automated Data Processing Equipment
ARTSS	Advanced Real-Time Simulation Subsystem
ATM	Asynchronous Transfer Mode
BAFO	Best And Final Offer
BMMC	Basic Monthly Maintenance Charge
CAD	Computer Aided Design
CBX	Computerized Branch Exchange
CDDI	Copper Distributed Data Interface
CLIN	Contract Line Item Number
CSCC	Central Scientific Computing Complex
DCM	Division Computing Manager
DPA	Delegation of Procurement Authority
DVAL	Data Visualization and Animation Laboratory
EMS	Environmental Monitoring System
FAR	Federal Acquisition Regulation
FCO	Field Change Order
FDDI	Fiber Distributed Data Interface
FMR	Facility Malfunction Report
F.O.B.	Free on Board
FSCS	Flight Simulation Computing Subsystem
FTS	Federal Telecommunications System
GDCM	Graphic Data Center Manager
GEOLAB	Geometry Laboratory
GFE	Government Furnished Equipment
HVAC	Heating, Ventilation, and Cooling
Hz	Hertz
IPGP	Installation Provided Government Property
LCN	Loosely Coupled Network
LaRC	Langley Research Center
LaRCNET	LaRC Local Area Network
LaRCVIN	LaRC Video Network
LaTS	LaRC Telecommunications System
M-G	Motor-Generator
MPP	Massively Parallel Processor
NAS	Numerical Aerodynamic Simulator
NCS	NOS Computing Subsystem
NFS	NASA FAR Supplement
NOS	Network Operating System
NQS	Network Queueing System
OAS	Optical Archival System

OCO	Operations Control Office
OEM	Original Equipment Manufacturer
OPM	Operational Procedure Memorandum
PSCN	Program Support Communications Network
PM	Preventive Maintenance
PPM	Principle Period of Maintenance
RFP	Request For Proposal
SCOMAC	Scientific Computing, Operations, Maintenance, and Communications Services
SEB	Source Evaluation Board
SMDS	Switched Multi-Megabit Data Service
SMR	System Malfunction Report
SNS	Supercomputing Network Subsystem
SOW	Statement Of Work
SPR	Software Program Report
SSO	Source Selection Official
ST	Status
SVS	Scientific Visualization System
UPS	Uninterruptible Power Supply
WORM	Write-Once-Read-Many

**EXHIBIT B**  
**CONTRACT DOCUMENTATION REQUIREMENTS**

EXHIBIT B - CONTRACT DOCUMENTATION REQUIREMENTS

## I. DOCUMENTATION PREPARATION/SUBMISSION INSTRUCTIONS

A. Financial Management Reports--The Contractor shall comply with the Section I clause of this contract entitled "NASA Contractor Financial Management Reporting" by monthly submission of NASA Form 533M. The form shall be prepared and submitted in accordance with the instructions set forth on the reverse side of the form and NASA Handbook "Procedures for Contractor Reporting of Correlated Cost and Performance Data" (NHB 9501.2) as further definitized below.

1. Due not later than the 10th operating day following the close of the Contractor's accounting month being reported.

2. Columns 7.b. and d. shall be completed using the time-phased financial baseline plan approved as part of the Management and Operations Plan.

3. Columns 8.a. and b. shall be completed using estimates (forecasts) for the succeeding two months.

4. Minimum reporting categories:

To be negotiated

5. Each 533M shall include a narrative explanation for monthly variances exceeding 10 percent between planned hours and dollars and actual hours and dollars for each reporting category.

B. Quarterly Financial Management Report--The Contractor shall submit a quarterly financial report detailed by categories specified in A.4 above on NASA Form 533Q at times and in accordance with the instructions contained on the reverse side of the form.

C. Management and Operations Plan--Within 30 calendar days after contract award, the Contractor shall submit for the Contracting Officer's approval a comprehensive Management and Operations Plan containing, as a minimum, the following:

1. Continuing Plan--Detailed plans for maintaining competent staffing at each organizational level. These plans shall include the methods to be employed in accommodating fluctuating workloads, for backup arrangements to accommodate personnel absences, for personnel training and for recruiting replacements and additional personnel. Include management policies which contribute to employee retention, morale, and productivity, such as career development, fringe benefits, leave, salary, employee recognition, and recognizing and correcting morale problems.

2. Technical Operations Plan--Plans for organizing, assigning resources, and performing each task area outlined in the Statement of Work; tracking and controlling the work; recognizing and reporting technical problems and schedule slippages and follow-up on reported problems. In addition, include a brief description of: the proposed method of controlling actual versus planned costs;



procurement functions to be performed at the Contractor's facility/home office; your purchasing practices and procedures; plans for selecting, monitoring and administering any proposed subcontract effort; and plans for maintaining operational status of Contractor-furnished Items and Government-furnished Equipment.

3. Contractor's Facility--Location, general description, and interior layout of the facility, including lease and/or purchase agreements, the method planned for maintaining full operational capability of the facility.

4. Organization--An organization chart and narrative describing the proposed organization, Contractor/Government interfaces, lines of authority within the organization, and responsibilities and authority of the Key Personnel including a discussion of the proposed managerial authority, autonomy and relationship with the "home office," if applicable.

5. Financial Baseline Plan--A time-phased financial baseline plan, detailing by month how you plan to incur cost for the period, shall be submitted for the initial contract period (24 months). Financial baseline plans for each of the remaining option periods (except for the six one-month option periods) shall be submitted within 10 days of the effective date of the option being exercised. Financial baseline plan revisions resulting from the exercise of priced option hours shall be submitted 10 days following the effective date of the option being exercised. This plan shall include the periods by the cost categories specified in Paragraph A.4 above. The total estimated cost and level of effort reflected in the baseline plans must equal the contract values for the total contract period.

The Management and Operations Plan shall be updated as required during the contract performance by submission of revised pages for approval of the Contracting Officer.

D. Safety and Health Plan--Within 30 calendar days after the effective date of the contract, the Contractor shall submit a detailed safety and health plan showing how the Contractor intends to protect the life, health, and well being of NASA and Contractor employees as well as property and equipment. This plan, as approved by the Contracting Officer, shall be in accordance with NASA FAR Supplement 18-52.223-73 and should contain, as a minimum, the following:

1. Points of Contact and Responsibility - Organizational flow chart and description of responsibilities of each employee in your organization for safety.

2. Employee Safety Training, Certification and Programs - Detailed information on type of training required, parties responsible for certification, and outline of applicable regulations. Detail company programs which emphasize personal safety and motivated employees to be safety conscious.

3. LaRC Safety Policies/Procedures - Recognition of applicable LaRC safety policies and procedures such as Langley Handbook 1710.10, LaRC Red Tag System.

4. Accident Investigation and Reporting - Procedures for investigating and reporting accidents/incidents including immediate notification to the NASA LaRC Safety Manager of all injuries and damage to equipment or facilities.

5. Hazardous Operations -

(a) Description of hazardous operations involved in contract performance.

(b) Plans for apprising employees of all hazards to which they may be exposed.

(c) Proper conditions and precautions for safe use and exposure to hazardous operations. Include recognition of LHB 1710.12, Potentially Hazardous Materials.

6. Equipment Inspection/Repair - Procedures for equipment safety inspection and repair.

7. Other Safety Considerations - Any other safety considerations unique to your operation.

E. Quarterly Accident/Injury Report--The Contractor shall submit a Quarterly Accident/Injury Report within 10 days after the end of each quarter.

F. Monthly Progress Report--The Contractor shall submit a monthly progress report summarizing work progress, manpower utilization for assigned work orders, and material expenditures. This report shall be submitted within 10 days following the end of the reporting period.

G. Monthly Staffing Report--The Contractor shall submit a monthly report listing the staffing for that month for each organizational task area.

H. Quarterly Overtime Utilization Report--The Contractor shall submit a summary of overtime utilization by task area with an explanation for the use. This report shall be submitted within 10 days following the end of the quarter.

I. Conformable Wage Rate Agreement--Within 15 days after the effective date of the contract, the Contractor shall submit a report confirming conformable wage rate agreement as this subject is addressed in the Section I clause entitled "Service Contract Act of 1965," for those individuals employed by the Contractor who are covered by the Service Contract Act, but are not listed in Exhibit F.

J. Collective Bargaining Agreements--The Contractor shall provide the Contracting Officer with copies of any collective bargaining agreements, and amendments thereto, which arise during the course of the contract and which apply to Contractor employees assigned to the contract.

K. Report of Government-Owned/Contractor Held Property (NASA FORM 1018)--The Contractor shall submit the NASA Form 1018 no later than July 31 of each year in accordance with the Section I clause entitled "Financial Reporting of Government-owned/Contractor-held Property."

L. Documentation for Transferring Property to the Government

In accordance with the Installation-Provided Government Property clause of this contract, accountability for that property which is acquired for the Government under this contract shall be passed to the Government using the following procedure:

The transfer of accountability shall be initiated by the Contractor submitting a Requisition and Invoice/Shipping Document, DD Form 1149, accompanied by a copy of the Contractor's applicable purchasing and receipt document for the property. The Contractor shall insert both the Contractor's Subcontract/ Purchase Order number and the Government contract number on the DD Form 1149 under the "Federal Stock Number, Description, and Coding of Material and/or Services" block. For purchases of supplies and materials, this document shall be submitted within 30 days after the end of each calendar-year quarter (that is, not later than January 30, April 30, July 30, and October 30). For equipment purchases, this document shall be submitted within five workdays after acceptance of each item of equipment by the Contractor. Receipt by the Contractor of a copy of the DD Form 1149 signed by the Government relieves the Contractor of accountability for the property specified on that form.

M. Subcontracting Reports--The Contractor shall submit Standard Form 294, Subcontracting Report for Individual Contracts, Standard Form 295, Summary Subcontractor Report, and NASA Form 667, Report on NASA Subcontracts, in accordance with the instructions on the reverse of the form.

In addition to the instructions on the reverse of the SF 294, the Contractor is required to report awards to Women-Owned (W-0) businesses, Historically Black Colleges and Universities (HBCUs), and other Minority Educational Institutions (MEIs). This information shall be detailed in Block 18 as follows:

Subcontract awards to non-minority W-0 businesses this reporting period: \$\_\_\_\_\_

Subcontract awards to HBCUs and/or MEIs this reporting period: \$\_\_\_\_\_.

The total subcontract dollars to W-0 businesses, HBCUs, and MEIs shall be included in Block 16.

N. Award Fee Self-Evaluation Report--Within 10 working days after the conclusion of each award fee evaluation period, the Contractor shall submit a report that summarizes the major work accomplishments and analyzes actual versus planned costs and hours. The summary of the major work accomplishments should include sufficient detail to identify the work and explain the Contractor's accomplishments. This summary should also address the overall performance of the various elements of the Central Scientific Computing Complex (CSCC) and reflect Contractor performance in CSCC operation, and maintenance, communications, and distributed computing and data reduction system area. Employee turnover figures should be included as well. The analyses of actual versus planned costs and hours should address each of the categories described in the Financial Management Reports section of this Exhibit. This analysis shall be for the award fee

evaluation period only, and shall consist of only total contract values (not for each work order). A narrative explanation for each significant variance shall also be included.

O. Skill Mix and Wage Report--Within 30 calendar days after the effective date of this contract, the Contractor shall furnish to the Government a skill mix and wage report that includes company position titles and current hourly rates. Unless new or additional, any company job titles that differ from the Government job titles specified in Attachments 6 and 7 of the RFP shall be cross-referenced to the Government job titles.

Within 30 calendar days after the end of each contract year, the Contractor shall furnish to the Government a follow-up report that includes the foregoing information plus the percentage (if any) each labor rate has escalated since the last report, an explanation by position of those escalations which exceed (\*) percent since the last report, and the amount of cash awards or bonuses (if any).

P. Miscellaneous Documentation--The Contractor shall provide additional documentation as specified in Section C.8 - Documentation of the Statement of Work.

II. DOCUMENT DISTRIBUTION REQUIREMENTS--ALTERNATE I (LaRC 52.210-96)  
(JUN 1988)

A. Unless otherwise specified elsewhere in this contract, reports and other documentation shall be submitted F.O.B. destination as specified below, addressed as follows:

National Aeronautics and Space Administration  
Langley Research Center  
Attn: \_\_\_\_\_, Mail Stop \_\_\_\_\_  
Contract NAS1-  
Hampton, VA 23681-0001

B. The following letter codes designate the recipients of reports and other documentation which are required to be delivered prepaid to Langley Research Center by the Contractor:

A--Contract Specialist, Mail Stop 126

B--Contracting Officer Technical Representative, Mail Stop

C--New Technology Representative, Mail Stop 200

D--Cost Accounting, Mail Stop 135

E--Safety Manager, Mail Stop 429

F--Industry Relations Office, Mail Stop 105

\*To be negotiated

G--Programs and Resources Division, Mail Stop 104

H--Patent Counsel, Mail Stop 143

I--Industrial Property Office, Mail Stop 377

J--According to instructions on form

C. The following are the distribution requirements for reports and other documentation required with the numeral following the letter code specifying the number of copies to be provided:

<u>DOCUMENT</u>	<u>LETTER CODE AND DISTRIBUTION</u>
Financial Management Report (NASA Forms 533M and 533Q)	A-1, B-2, D-2, F-1, G-1
Management and Operations Plan and Revisions	A-1, B-6
Safety and Health Plan and Revisions	A-1, B-2, E-1
Monthly Progress Report	A-1, B-10
Quarterly Accident/Injury Report	A-1, B-1, E-1
Monthly Staffing Report	A-1, B-4
Quarterly Overtime Utilization Report	A-1, B-6
Conformable Wage Rate Agreement	A-1, B-1, F-1
New Technology Report	C-1, H-1
Patent Rights Report	C-1, H-1
Collective Bargaining Agreement	A-1, B-1, F-1
Report of Government-Owned/Contractor Held Property (NASA Form 1018)	A-1, B-3, I-4
Subcontracting Report for Individual Contracts (Standard Form 294)	A-1
Summary Subcontractor Report (Standard Form 295)	A-1, J
Report on NASA Subcontracts (NASA Form 667)	A-1, J
Requisition and Invoice/Shipping Document (DD Form 1149)	I-1

Skill Mix and Wage Report

A-1

Award Fee Self-Evaluation Report

A-1, B-1

D. When the Contract Administrator (A) is not designated above to receive a copy of a report or document, the Contractor shall furnish a copy of the report/document transmittal letter to the Contract Administrator. The Contractor shall also furnish a copy of the transmittal letter and a copy of each Financial Management Report to the delegated Administrative Contracting Officer of the cognizant DoD (or other agency) contract administrative services component.

EXHIBIT C

GOVERNMENT-FURNISHED PROPERTY

## GOVERNMENT FURNISHED PROPERTY

The following items will be furnished to the Contractor on or about August 9, 1993.

DESCRIPTION	QTY	U/I	TOTAL VALUE
AUDIOVISUAL CART, 2 SHELF	1	EA	228.00
BEEPER, MOTOROLA	10	EA	1,120.00
BLACKBOARD, 2 X 3 FT	1	EA	19.90
BLACKBOARD, 3 X 4 FT	2	EA	35.95
BLACKBOARD, 3 X 5 FT	6	EA	194.86
BLACKBOARD 4 X 6 FT	4	EA	261.14
BOOKCASE, 2 SHELF	9	EA	372.88
BOOKCASE, 3 SHELF	22	EA	2,015.86
BOOKCASE, 4 SHELF	2	EA	208.00
BOOKCASE, WALNUT, 3 SECTIONS	1	EA	290.25
BULLETIN BOARD, 1-1/2 X 2 FT	1	EA	11.90
BULLETIN BOARD, 2 X 3 FT	40	EA	390.93
BULLETIN BOARD, 3 X 4 FT	4	EA	69.25
CABINET, STORAGE, 2 DR	2	EA	138.90
CABINET, 2 UNITS	1	EA	333.68
CALCULATOR, POCKET, SCIENTIFIC, RADIO SHACK	1	EA	24.96
CALCULATOR, DESK TOP W/ TAPE	3	EA	185.97
CAMERA, POLAROID AE100 W/FLASH	1	EA	143.75
CARD CAGE, KEITHLEY 500A, S/N 481430	1	EA	2,774.00
CART, 3 SHELF	1	EA	105.00
CHAIR, SWIEVEL W/ARMS	18	EA	1,644.43
CHAIR, CONFERENCE	42	EA	2,558.26
CHAIR, EXECUTIVE	4	EA	1,540.00
CHAIR, FOLDING	4	EA	47.68
CHAIR, SIDE	7	EA	854.60
CHAIR, STENO	14	EA	1,921.61
DISCO SYS., M/N ASM/232EM, S/N A1288Y329	1	EA	9,920.00
CLOCK, WALL	4	EA	83.00
COMPUTER, DFI, S/N 91110821	1	EA	1,326.00
COMPUTER, DFI, S/N 91110824	1	EA	1,326.00
COMPUTER, GATEWAY 2000, 33C, S/N 343835	1	EA	2,995.00
COMPUTER, HD 386-25, S/N 016386	1	EA	1,430.00
COMPUTER, IBM 5170, S/N 01205235170	1	EA	5,362.00
COMPUTER, IC, M/N IC386, S/N 903836	1	EA	1,530.00
COMPUTER, NEWPORT NMI 286, S/N NMI5145	1	EA	1,375.00
COMPUTER, SAMSUNG XT, NO S/N VISIBLE	1	EA	628.00
COMPUTER, SUN 47B, S/N 221M2967	1	EA	8,566.00
COMPUTER, MICROSERVE 286, S/N 61208161	1	EA	2,155.00
COMPUTER, SUN SPARCSTATION #147, S/N 114F1383	1	EA	5,937.00
COMPUTER, BELTRON PC/XT	1	EA	907.00
COMPUTER, BELTRON PC/XT	1	EA	907.00
COMPUTER, BELTRON PC/XT	1	EA	907.00
COMPUTER, CONSOLE, BELTRON 8088	1	EA	1,120.00
COMPUTER, DELL SYSTEM 325, S/N08J9C	1	EA	4,427.00
COMPUTER, PC/AT, I.C. COMPUTERS, S/N 19428	1	EA	2,000.00
COMPUTER, PC/AT, I.C. COMPUTERS, S/N 19458	1	EA	2,000.00
COMPUTER, PC/AT, MAGITRONIC S/N 8800521	1	EA	1,157.30
COMPUTER, PC/AT, MAGITRONIC S/N 8800898	1	EA	1,157.30
COMPUTER, PC/XT, CHEUNG LABS, S/N 260531	1	EA	800.00



COMPUTER CONSOLE, BELTRON 8088	1	EA	1,120.00
COMPUTER CONSOLE, BELTRON 8088	1	EA	1,120.00
COMPUTER DIGITAL VT220, S/N TA15624	1	EA	770.00
COMPUTER, MICROSERVE X/TURBO, S/N 7704151	1	EA	750.00
COMPUTER, MICROSERVE X/TURBO, S/N 7704158	1	EA	750.00
COMPUTER, MICROSERVE X/TURBO, S/N 7704160	1	EA	750.00
COMPUTER, MICROSERVE X/TURBO, S/N 7704161	1	EA	750.00
COMPUTER, PC/AT, EVEREX 1800A, S/N BN25254	1	EA	2,327.00
CREDENZA, 2 DOOR	1	EA	259.20
DATA, RACK	1	EA	93.60
DESK, SINGLE PEDESTAL, WOOD	1	EA	80.00
DESK, W/RETURN	1	EA	718.00
DISK DRIVE, CDC 94171, S/N 2341	1	EA	4,177.00
DISK DRIVE, CDROM, M/N 411, S/N 12565011	1	EA	556.00
DISK DRIVE, CDROM, M/N 411, S/N 12565017	1	EA	556.00
DISK DRIVE, IPC, SUN, S/N 123F2319	1	EA	3,592.00
DISK DRIVE, TOTAL TEC SYSTEMS, S/N 36767	1	EA	4,883.00
DISPLAY, AMAZING 8484EX, S/N KAM1H01405	1	EA	
DISPLAY, CASPER TE5154, S/N 89017247	1	EA	399.00
DISPLAY, GATEWAY FMV1448, S/N T9797333	1	EA	395.00
DISPLAY, SAMSUNG DVM4963, S/N 10201291	1	EA	318.00
DISPLAY, SUN GDM1962B, S/N 9214DX0730	1	EA	400.00
DISPLAY, CORDATA, S/N 1092201320	1	EA	469.00
DISPLAY, CORDATA, S/N 1092201328	1	EA	469.00
DISPLAY, CTX 5468A, S/N 14803234	1	EA	350.00
DISPLAY, IBM 5153, S/N 0163693	1	EA	470.00
DISPLAY, IMPRESSION, S/N 127310306	1	EA	400.00
DISPLAY, DELL VC-2, S/N U410019295	1	EA	539.00
DISPLAY, FOUNTAIN, S/N 617111402	1	EA	125.00
DISPLAY, FOUNTAIN, S/N 6181110057	1	EA	125.00
DISPLAY, FOUNTAIN, S/N 618111038	1	EA	125.00
DISPLAY, IMTEC 1256A, S/N 90500936	1	EA	75.00
DISPLAY, IMTEC 1256A, S/N 90500995	1	EA	75.00
DISPLAY, IMTEC 1256A, S/N 90501021	1	EA	75.00
DISPLAY, IMTEC 1256A, S/N 90503068	1	EA	75.00
DISPLAY, MAGNA. BCM5150741, S/N 51753993	1	EA	279.00
DISPLAY, MAGNA. BCM5150741, S/N 51754132	1	EA	279.00
DISPLAY, MAGNA. BCM5150741, S/N 52983656	1	EA	279.00
DISPLAY, MAGNA. CMB562074G, S/N 54346410	1	EA	279.00
DISPLAY, NEC MULTISYNC, S/N 9YM40105J	1	EA	250.00
DISPLAY, QUADRANT, M/N QC-1418	1	EA	103.00
DISPLAY, SAMSUNG, S/N 91101737	1	EA	85.00
DISPLAY, SAMSUNG MA2565, S/N 91802319	1	EA	85.00
DISPLAY, SUN GDM-1662B, S/N 9125DY0611	1	EA	3,015.00
DISPLAY, SUN MODEL M, S/N 847A20086	1	EA	1,862.60
DISPLAY TELEVIDEO 965 S/N 30B-B88120161D	1	EA	374.27
DISPLAY TELEVIDEO 965 S/N 30B-B88120268D	1	EA	374.00
DISPLAY TELEVIDEO 965 S/N 30B-B88120277D	1	EA	374.00
DISPLAY TELEVIDEO 965 S/N 30B-B88120294D	1	EA	374.00
DISPLAY, SAMSUNG EGA CM4531, S/N 0779046	1	EA	250.00
DISPLAY, SAMSUNG EGA CM4531, S/N 81503990	1	EA	250.00
DISPLAY, 19" COL, ZENITH, S/N 721-16220072	1	EA	259.97
DRAWING BOARD, EOH-I-NOOR	1	EA	30.59
FAX MACH., FUJITSU DEX170, S/N 334301165	1	EA	970.00
FILE, 16 DR	1	EA	180.00
FILE, 2 DRAWER	7	EA	664.89

FILE, 3 TIER, GREY	1	EA	175.00
FILE, 4 DRAWER	10	EA	1,745.12
FILE, 5 DRAWER	2	EA	250.00
FILE, FIRESAFE, W/LOCK, GREY, SCHWAR	1	EA	1,191.00
FOOTREST, KEYPUNCH	2	EA	21.00
HANDTRUCK	1	EA	14.95
HAYES SMARTMODEM 1200, S/N A05868023769	1	EA	348.00
HAYES SMARTMODEM 1200, S/N A05868023791	1	EA	348.00
HAYES SMARTMODEM 1200, S/N A05868023798	1	EA	348.00
HAYES SMARTMODEM 1200, S/N A05868023754	1	EA	348.00
HEATER, PORTABLE	2	EA	35.94
KEYBOARD, BELTRON	2	EA	180.00
KEYBOARD, BTC 5060, S/N 61126824	1	EA	
KEYBOARD, BTC 5060, S/N 70427586	1	EA	
KEYBOARD, DELL AT101	1	EA	75.00
KEYBOARD, GATEWAY, S/N 92117749	1	EA	99.00
KEYBOARD, IBM, S/N 262091659	1	EA	
KEYBOARD, LITEON SK0021U	2	EA	130.00
KEYBOARD, MAXI-SWITCH	6	EA	497.50
KEYBOARD, MITSUMI	4	EA	420.00
KEYBOARD, MTEK, M/N K104, S/N KB20668119	1	EA	70.00
KEYBOARD, M/N JCC-101FX, S/N 0192496	1	EA	90.00
KEYBOARD, OKI HMB-35957-14, S/N A00999	1	EA	
KEYBOARD, ORNICRON 101 KEY S/N 80818317	1	EA	105.00
KEYBOARD, SAMSUNG E0345XTAT	2	EA	300.00
KEYBOARD, SUN E03470014	3	EA	250.00
KEYBOARD, TELEVIDEO	4	EA	496.54
LAMP, DRAFTING, BRONZE, DAZOR	1	EA	62.00
OVHD PROJ., APOLLO A1-1000, S/N 7060863	1	EA	230.00
PLOTTER, 6 PEN, FACIT, S/N 92835602-01	1	EA	425.00
PODIUM, WOOD	1	EA	100.00
SOFA, 3 SEAT, TEAK	1	EA	388.00
STAPLER, ELECTRIC, BLACK SWINGLINE	1	EA	49.88
STEP LADDER, LOCKING, BALLYMORE CO.	1	EA	67.50
PRINTER, APPLE M6000, S/N CA9031EGYM6000	1	EA	3,472.00
PRINTER, BURROUGHS 9252, S/N 313971996	1	EA	1,995.00
PRINTER, DIGITAL LA50-RA, S/N TCH-1760A	1	EA	550.00
PRINTER, HP 2686A, S/N 2602J77021	1	EA	2,676.00
PRINTER, HP LASER JET, S/N 2743J70159	1	EA	1,672.00
PRINTER, LASER, HEW-PAC, S/N 2718J30239	1	EA	2,338.30
PRINTER, NEC LC890, S/N 289299734	1	EA	3,126.15
PRINTER, NEC LC890, #289265320	1	EA	3,117.00
PRINTER, NEC LC890, #289265324	1	EA	3,117.00
PRINTER, OKIDATA 182	6	EA	1,456.00
PRINTER, OKIDATA 82A, S/N 245423	1	EA	503.00
PRINTER, OKIDATA 82A, S/N 245429	1	EA	503.00
PRINTER, PANASONIC, S/N 91MAQIS5088	1	EA	315.00
PRINTER, REMOTE, CDC 556-1	1	EA	16,777.00
PRINTER, STAR MICR., S/N 350090618477	1	EA	175.00
PRINTER, STAR NX-10	3	EA	555.00
PRINTER, STAR NX-1000, S/N 310071104857	1	EA	160.00
PRINTER, STAR NX-15, S/N 250061200377	1	EA	299.95
PRINTER, STAR NX-15, S/N 250070100599	1	EA	299.95
PRINTER, STAR NX-15, S/N 250280400158	1	EA	309.95
PRINTER, STAR NX-15, S/N 250280600531	1	EA	317.94
PRINTER, TEXAS INSTR., S/N 4539710219	1	EA	1,645.00

PRINTER, TEXAS INST. P35, S/N 0639720147	1	EA	1,624.00
SCREEN, VIEWGRAPH, 7x7 FT., WALL	1	EA	151.20
SERIAL SWITCH, 5 WAY, MYTECH, SB25/5	1	EA	49.95
SHELVING, UTILITY, 4 SHELF	1	EA	24.96
SHELVING, UTILITY, 5 SHELF	1	EA	49.66
STOOL, BAR	2	EA	79.00
STOPWATCH, ADVANCE QUARTZ	1	EA	21.90
TABLE, 2 X 3 FT	1	EA	45.00
TABLE 3 X 4 FT	3	EA	330.00
TABLE	5	EA	681.95
TABLE, COFFEE, TEAK, TBI	1	EA	88.00
TABLE, FOLDING	1	EA	49.71
TABLE, TERMINAL	2	EA	470.00
TABLE, CONFERENCE	2	EA	860.00
TABLE, WOOD	1	EA	48.62
TABLE, SOFA	1	EA	78.00
TABLE SIDE BAR, TERMINAL,	1	EA	95.00
TERMINAL, TELEVIDEO SYS., S/N 93040160	1	EA	1,150.00
TERMINAL, TELEVIDEO SYS., S/N 93040129	1	EA	1,150.00
TYPEWRITER, TA600, ROYAL	1	EA	199.95
TYPEWRITER, CANON ES3, S/N W22084308	1	EA	90.00
TYPEWRITER STAND, BLACK/WALNUT, HUNT	1	EA	175.00
TYPING STAND	2	EA	48.63
VACUUM, PORT., W/ATTACH., POWERCRAFT	1	EA	45.00
VALET, FREE STANDING	4	EA	140.00
VCR W/RMT, RCA M/N VMT390, S/N 707516863	1	EA	298.00
VITALINK, M/N M25013D1U14, S/N 94773434	1	EA	11,198.33
VOLTMETER, IM-17, HEATHKIT	1	EA	29.95
WALL SHELVES, WOODEN	1	EA	12.00
WALL VALET	8	EA	209.95
WORKSTATION	3	EA	608.00

EXHIBIT D  
INSTALLATION-PROVIDED GOVERNMENT PROPERTY

ECN	DESCRIPTION MANUFACTURER	SERIAL NO MODEL NO
G073658	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	23-9840503 8530E21
G073659	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	23DYW05 8513001
G075104	COMPUTER, MICRO GATEWAY 2000	225405 486/25DXC
G076194	DISPLAY, COMPUTER CASPER T W CORP	89017247 TE5154
G076500	OPTICAL LOSS TEST SET AT&T TECHNOLOGIES GOVT SYS	61200079 938A
G076501	OPTICAL LOSS TEST SET AT&T TECHNOLOGIES GOVT SYS	61200080 938A
G076602	ATTENUATOR, OPTICAL 3M PHOTODYNE INC SUB OF	10688 19XT062T
G076603	TIME DOMAIN REFLECTOMETER TEKTRONIX INC	B025041 ADPT
G076621	PRINTER, ADP HEWLETT-PACKARD CO	2927S34752 HP222A
G076627	ANALYZER, PROTOCOL, LAN HEWLETT-PACKARD CO	2745A00649 2745A
G076628	TEST SET, FIBER OPTIC 3M PHOTODYNE INC SUB OF	10158 2230XR
G076629	EPROM PROGRAMMER BP MICROSYSTEMS	2044 EPI
G076786	VAN FORD MOTOR CO FORD PARTS	1FTDE14Y1GHA75360 AEROSTAR
G076819	ANALYZER, PROTOCOL HEWLETT-PACKARD CO	3011A02501 4972A
G076829	SCANNER, PAIR MICROTEST INC	7504 PN207
G077042	TEST INSTRUMENT PHOENIX AEROSPACE INC	504 5575

G077215	PRINTER, ADP APPLE COMPUTER INC	CA017GTT M6000
G077289	DISPLAY, COMPUTER PC'S LIMITED SEE DEL COMPUTERS MONO2	90503036
G077792	BOX, BREAKOUT HEWLETT-PACKARD CO	NONE 18140A
G077793	COMPUTER, MICRO NEC INFORMATION SYSTEMS INC	9950351HS EL2
G077794	DISPLAY UNIT LOOP	T91202889 1270A
G077795	COMPUTER, MICRO LOOP	666-016669 286/12.
G077796	DISPLAY UNIT LOOP	T91203224 1270A
G077797	COMPUTER, MICRO LOOP	666-016673 286/12
G077798	DISPLAY UNIT LOOP	T91200434 1270A
G077799	COMPUTER, MICRO LOOP	666-016675 286/12
G077800	DISPLAY UNIT LOOP	T19202558 1270A
G077801	COMPUTER, MICRO LOOP	666-016674 286/12
G077802	DISPLAY UNIT LOOP	T91200228 1270A
G077803	COMPUTER, MICRO LOOP	666-016677 286/12
G077804	DISPLAY UNIT LOOP	T91202901 1270A
G077805	COMPUTER, MICRO LOOP	666-016671 286/12
G077806	DISPLAY UNIT LOOP	T91200238 1270A
G077807	COMPUTER, MICRO LOOP	666-016672 286/12

G077808	DISPLAY UNIT LOOP	T91200478 270A
G077809	COMPUTER, MICRO LOOP	666-016670 286/12
G077810	DISPLAY UNIT LOOP	CT9001V00719 1270A
G077811	COMPUTER, MICRO LOOP	666-016696 1270A
G077812	DISPLAY UNIT LOOP	T91201894 286/12
G077813	COMPUTER, MICRO LOOP	666-016676 286/12.
G077814	COMPUTER, MICRO PACKARD BELL ELECTRONICS	C2615347 PB286
G077815	COMPUTER, MICRO GATEWAY 2000	384923 386/20
G077816	DISPLAY UNIT GATEWAY 2000	KF261353 PB286LP
G077817	RECORDER, PLAYER, AUDIO DICTAPHONE CP F-KINELOGIC CP	962751 5842
G077818	VAN FORD MOTOR CO FORD PARTS	1FTDA14U6KZC21845 AEROSTAR
G077865	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	101000624 HL6935K
0021177	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	0026707 A03BAB4961BA
0021178	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	0026757 A03BAB4961BA
0021179	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	452664 A03GAB4668AA
0021180	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	0272401 A03BAB5961CA
0021181	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	0272449 A03BAB5961CA
0021182	RECEIVER, RADIO BEEPER MOTOROLA INC AUTOMOTIVE PROD	452663 A03GAB4668AA

0021402	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	BN4BQG278K BRAVO
0021403	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	BN4BQG276X BRAVO
0021426	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	334BPS7N54 BRAVO
0021427	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	BN4BQU2RPQ BRAVO
0021428	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	BN4BQW25NW BRAVO
0021429	RECEIVER, RADIO MOTOROLA COMMUNICATIONS GROUP	BN4BQW25MC BRAVO
0021444	DISPLAY UNIT TXPORT SUB PHEONIX MICROSYSTEM	1503 1536
0021445	DISPLAY UNIT TXPORT SUB PHEONIX MICROSYSTEM	1521 1536
0053791	COMPUTER, MICRO SPERRY CP DEFENSE PRODUCTS GP	018712 500
0053792	DISPLAY, COMPUTER SPERRY CP DEFENSE PRODUCTS GP	015113 3583-03
0053794	COMPUTER, MICRO SPERRY CP DEFENSE PRODUCTS GP	018429 500
0054204	COMPUTER, MICRO COMPUADD	NONE 286
0054206	DISPLAY, COMPUTER SAMSUNG ELECTRONICS	6744210288 SM12SFA7
0054506	DISPLAY, COMPUTER SUN MICROSYSTEMS INC	810AA4856 M
0054507	DISPLAY, COMPUTER SUN MICROSYSTEMS	809AA4666 M
0055084	COMPUTER, MICRO APPLE COMPUTER INC	F8135P9 M5000
0055310	PRINTER, ADP PANASONICS	NONE KXP1091
0055311	PRINTER, ADP STAR MICRONICS	310080311329 NX1000



0055446	PRINTER, ADP INTERNATIONAL BUSINESS MACHINE	3510386 3812001
0055551	DISPLAY, COMPUTER EVEREX SYSTEMS INC	3WN03101 MN200
0055583	TERMINAL, DATA PROCESSING HEWLETT-PACKARD CO	2815A04643 C1003A
0055584	TERMINAL, DATA PROCESSING HEWLETT-PACKARD CO	2815A04643 C1003A
0055715	COMPUTER, MICRO MAY COMPUTERS CORP	68121531 INFO286
0055717	DISPLAY, COMPUTER PACKARD BELL ELECTRONICS	71226894 PB1272A
0055749	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	6016956 8580111
0056388	PRINTER/PLOTTER IOLINE CORP	P4081723 LP4000
0057281	DISPLAY UNIT SAMSUNG ELECTRONICS	8814253346 CM12SFA7
0058840	COMPUTER, MICRO SUN MICROSYSTEMS INC	841F0179 247(3/50M4)
0059405	COMPUTER, MICRO NEWPORT MICRO, INC	NMI5145 NMI286
0060513	COMPUTER, MICRO APPLE COMPUTER INC	F9088JJ MACINTOSH SE M5011
0060676	PRINTER, ADP PANASONICS	8LMARE09019 KX-P1180
0060726	DATA PROCESSING HEWLETT-PACKARD CO	2908A07057 C1003A
0060727	TERMINAL, DATA PROCESSING HEWLETT-PACKARD CO	2908A07065 C1003A
0060728	TERMINAL, DATA PROCESSING HEWLETT-PACKARD CO	2908A07071 C1003A
0061009	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	23-7162685 8530E21
0061010	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	72-0650034 8513-001

0061068	TRUCK, VAN, PANEL FORD MOTOR CO FORD PARTS	1FTDA14U7KZB69013 AEROSTAR
0061069	TRUCK, VAN, PANEL FORD MOTOR CO FORD PARTS	1FTDA14U1KZB64390 AEROSTAR
0061070	TRUCK, VAN, PANEL FORD MOTOR CO FORD PARTS	1FTDA14U4K2B64397 AEROSTAR
0061071	TRUCK, VAN, PANEL FORD MOTOR CO FORD PARTS	1FTDA14U7KZB11757 AEROSTAR
0061486	VAN, MINI FORD MOTOR CO FORD PARTS	1FTDA1402KZC21843 AEROSTAR
0061487	VAN, MINI FORD MOTOR CO FORD PARTS	VN#1FTDA1446KZC21845 MINI VAN 1989
0138642	DISPLAY UNIT NEC INFORMATION SYSTEMS INC	69C13094U JC1401P3A
0140777	COMPUTER, MICRO PC'S LIMITED SEE DEL COMPUTERS PC TURBO XT	004999
0140781	COMPUTER, MICRO PC'S LIMITED SEE DEL COMPUTERS PC112TURBO	004877
0140783	DISPLAY, COMPUTER SAMSUNG ELECTRONICS	871176190 SM12SFA7
0140909	TERMINAL, DATA PROCESSING DIGITAL EQUIPMENT CORP	HK71030099 VT220F2
0140910	PRINTER, ADP DIGITAL EQUIPMENT CORP	TCK2235A LA50RA
0141055	REFLECTOMETER LASER PRECISION CORP	8704-1622 TD9950
0141056	PLUG-IN, INTERFACE, REFLECTMTR LASER PRECISION CORP	8705-0019 TD850
0141581	COMPUTER, MICRO PC'S LIMITED SEE DEL COMPUTERS PC112	06689
0141583	DISPLAY, COMPUTER PC'S LIMITED SEE DEL COMPUTERS MO NO2	871484750
0142435	COMPUTER, MICRO STANDARD BRAND PRODUCTS	133869 TURBO
0142514	COMPUTER, MICRO COMPAQ COMPUTER CORP	1728AB1B0070 101709

0143106	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	7213673 5170-339
0143108	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	6202003 5151-001
0219781	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	6113666 5160-078
0219783	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	3597587 5151-001
0258847	TERMINAL, DATA PROCESSING TELEVIDEO CORP	86040312A PT
0280022	TERMINAL, DATA PROCESSING TELEVIDEO CORP	C271140023 925
0280023	TERMINAL, DATA PROCESSING TELEVIDEO CORP	C271140024 925
0280099	TERMINAL, DATA PROCESSING TELEVIDEO CORP	93091759 970
0280208	TERMINAL, DATA PROCESSING TELEVIDEO CORP	D280150095 PT
0282361	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	0114658 5170-099
0282471	TEST SET, MODEM LINE INTERNATIONAL DATA SCIENCES	401363 4010
0282472	TEST SET, MODEM LINE INTERNATIONAL DATA SCIENCES	401364 4010
0282622	BUFFER, PRINTER QUADRAM CORP	05961 MICROFAZER
0282649	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	0558848 5151-001
0282650	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	08746550 5153-001
0283196	PRINTER, ADP OKIDATA CORP	221651 84
0283799	COMPUTER, MICRO SPERRY CP DEFENSE PRODUCTS GP	01490 SPX
0283924	TERMINAL, DATA PROCESSING TELEVIDEO CORP	085060457A PT

0283925	TERMINAL, DATA PROCESSING TELEVIDEO CORP	D85060458A PT
0398881	TERMINAL, DATA PROCESSING LEAR SIEGLEER ELECTR INSTR DIV	3019 ADM3E
0404225	TESTER, CABLE TEKTRONIX INC	B114783 1502
0404509	TERMINAL, DATA PROCESSING TELEVIDEO CORP	73109345 925
0430609	TERMINAL, DATA PROCESSING HEWLETT-PACKARD CO	2231V26995 2621B MODIFIED
0461803	PRINTER, ADP TEKTRONIX INC	B204285 4632
0462107	TERMINAL, DATA PROCESSING LEAR SIEGLER ELECTR INSTR DIV	510601 ADM3A
0462472	TEST SET, MODEM LINE INTERNATIONAL DATA SCIENCES	90371 1200
0462514	OSCILLOSCOPE, PORTABLE TEKTRONIX INC	B014022 475A
0462550	TEST SET, MODEM LINE INTERNATIONAL DATA SCIENCES	131470 1310MODIFIED
0462551	TEST SET, MODEM LINE INTERNATIONAL DATA SCIENCES	131468 1310MODIFIED
0471856	COMPUTER, MICRO RADIO SHACK F-ALLIED RADIO	306015919 TRS80/100
0527607	PRINTER, ADP EPSON AMERICA INC	04027439 P10FC(FX286)
0533432	MICROSCOPE BAUSCH AND LOMB INC	NONE 31-22-70
0547772	DISPLAY UNIT TELEVIDEO SYSTEMS INC	18AC141140082 PT
0547773	DISPLAY UNIT TELEVIDEO SYSTEMS INC	18AC141140085 PT
0547775	DISPLAY UNIT TELEVIDEO SYSTEMS INC	18AC141140086 PT
0547998	PRINTER, ADP OKIDATA CORP	155044 MICROLINE84

0548687	TESTER, CABLE TEKTRONIX INC	R095557 1503
0548782	TERMINAL, DATA PROCESSING TELEVIDEO SYSTEMS INC	40300673 PT
0846932	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	20117 8530E21
0846934	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	23LR191 8513
0847159	COMPUTER, MICRO INTERNATIONAL BUSINESS MACHINE	20063 8530E21
0847180	COMPUTER, MICRO GATEWAY 2000	366322 2000
0847184	DISPLAY UNIT GATEWAY 2000	91949 2000SAMSUNG CM1495
0847558	DISPLAY UNIT INTERNATIONAL BUSINESS MACHINE	23WP639 8513
0847782	COMPUTER, MINI SUN MICROSYSTEMS INC	946F1973 147
0847785	DISPLAY UNIT SUN MICROSYSTEMS INC	943BM3846 M19P114
0847786	DISK DRIVE UNIT SUN MICROSYSTEMS INC	943G0657 EXP2
0847827	COMPUTER, MINI QUADRANT ENGINEERING CORP	946F2013 1418
0848531	COMPUTER, MICRO MICRO EXPRESS	R50006400 REGAL
0848532	COMPUTER, MICRO MICRO EXPRESS	1273-0860 REGAL
1083784	DISPLAY UNIT QUADRANT ENGINEERING CORP	MT9001002594 1418
1086502	COMPUTER, MICRO APPLE COMPUTER INC	F3116M23C40 MCC11FX
1086503	DISPLAY UNIT SEIKO INSTRUMENTS USA	0931866A CM1445C
1087550	COMPUTER, MICRO GATEWAY 2000	250868 486/33DXC

1087551	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	01200437 HL6935ATK
1087552	COMPUTER, MICRO GATEWAY 2000	250867 486/33DXC
1087553	DISPLAY UNIT MITSUBISHI ELECTRIC CORP	01200459 HL6935ATK
1088994	SCANNER, PAIR MICROTEST INC	PS91G000221 3910-00
1088995	SCANNER, PAIR MICROTEST INC	PS91G000225 3910-00
1089004	PRINTER, ADP BRADY W H CO	30686 BMXC
1089536	POLISHING MACHINE BUEHLER LTD	453 69-3000
1089537	ANALYZER TEKELEC INC	CFS39910055 CHAMELAN100S
1090845	ANALYZER, SIGNAL, DIGITAL WAVETEK SAN DIEGO INC	167 SAMIIID
1090846	ANALYZER, SIGNAL, DIGITAL WAVETEK SAN DIEGO INC	1433008 SAMIIID
1091371	PRINTER, ADP PANASONICS	OKMAQQF45602 KX-01124

## DESCRIPTION

CALCULATOR, CALCUL. INDUST., FRAMEMASTER  
CALCULATOR, TI-30, ADAPT., TEXAS INST.  
CALCULATOR, TI-PROGRAMMER, TEXAS INST.  
CALCULATOR, VICTOR 204  
COMPUTER, SUN 47B, S/N 20765258  
COMPUTER, BELTRON PC/XT  
COMPUTER, BELTRON PC/XT  
COMPUTER, BELTRON PC/XT, S/N 6181110110  
COMPUTER, BELTRON PC/XT, S/N 630111435  
COMPUTER, BELTRON PC/XT, S/N 630111544  
COMPUTER, DFI SYSTEM NO. 160133  
COMPUTER, DFI386 S/N 1A0373  
COMPUTER, DFI386 S/N 1A0374  
COMPUTER, DFI386 S/N 1A0375  
COMPUTER, DFI386 S/N 1A0376  
COMPUTER, DFI386 S/N 1A0377  
COMPUTER, DFI-386, S/N 92030866  
COMPUTER, DFI-486, S/N 261042  
COMPUTER, DFI-486, S/N 261043  
COMPUTER, DISP., IBM, PC/AT, S/N 98993  
COMPUTER, IC 386/25, S/N 195356  
COMPUTER, IC TOWER M/N 9PT12L, S/N 16818  
COMPUTER, IC-386, S/N 903823  
COMPUTER, IC-386, S/N 903824  
COMPUTER, IC-386, S/N 903835  
COMPUTER, MAC II CI, S/N F113503P724  
COMPUTER, MICROSERVE 286, S/N 61211015  
COMPUTER, MICROSERVE 286, S/N 61211021  
COMPUTER, MICROSERVE 286, S/N 61211023  
COMPUTER, MICROSERVE 386, S/N 68100946  
COMPUTER, MICROSERVE 386, S/N 90B001836  
COMPUTER, MICROSERVE X/TURBO, S/N 7704153  
COMPUTER, MICROSERVE X/TURBO, S/N 7704154  
COMPUTER, MICROSERVE X/TURBO, S/N 7704155  
COMPUTER, MICROSERVE X/TURBO, S/N 7704157  
COMPUTER, MICROSERVE X/TURBO, S/N 7704159  
COMPUTER, MICROSERVE X/TURBO, S/N 7704166  
COMPUTER, MICROSERVE X/TURBO, S/N 7704167  
COMPUTER, M/N DFI386, S/N 91111893  
COMPUTER, NCD88K, S/N 0192K001771  
COMPUTER, NCD88K, S/N 0192K001879  
COMPUTER, NCD88K, S/N 0192K001901  
COMPUTER, NCD88K, S/N 0192K001907  
COMPUTER, PC BRAND, S/N 890207-286/12-107  
COMPUTER, PC/AT, EVEREX 1800A, S/N BN26988  
COMPUTER, PC/AT, INFO 286, S/N 61201948  
COMPUTER, PC/AT, MAGITRONIC S/N 8800518  
COMPUTER, PC/AT, MAGITRONIC S/N 8800519  
COMPUTER, PC/AT, MAGITRONIC S/N 8800520  
COMPUTER, PC/AT, MAGITRONIC S/N 8800522

COMPUTER, PC/AT, MAGITRONIC S/N 8300523  
 COMPUTER, PC/XT, CHEUNG LABS, S/N 260532  
 COMPUTER, PRINC. ULTRA X, S/N M210900200440  
 COMPUTER, STANDARD TURBO, S/N 146443  
 COMPUTER, SUN 3/60, MDL 247, S/N 839F0823  
 COMPUTER, SUN 3/60M-4-P14 S/N 838F2327  
 COMPUTER, SUN 47B, S/N 21063592  
 COMPUTER, SUN 47B, S/N 212M0049  
 COMPUTER, SUN 47B, S/N 216M1261  
 COMPUTER, SUN SPARCSTATION 1+, S/N 038F1321  
 COMPUTER, SUN SPARCSTATION 1+, S/N 040F2592  
 COMPUTER, SUN SPARCSTATION 1+, S/N 040F2584  
 COMPUTER, SUN SPARCSTATION 1+, S/N 040F2623  
 COMPUTER, SUN SPARCSTATION 1+, S/N 042F0892  
 COMPUTER, SUN SPARCSTATION 2 147B, S/N 149F2461  
 COMPUTER, SUN SPARCSTATION #147, S/N 121F2317  
 COMPUTER, SUN U63/60C-F8, S/N 600267904  
 COMPUTER, W/MOUSE, MICROSERVE, S/N 68105723  
 COMPUTER, W/MOUSE, MICROSERVE, S/N 68105846  
 COMPUTER, W/MOUSE, SUNNYVALE, S/N MM10043  
 DISK DRIVE, CDROM, M/N 411, S/N 119G2926  
 DISK DRIVE, CDROM, M/N 411, S/N 150G1958  
 DISK DRIVE, FUJITSU F66D1T2T3, S/N J5068  
 DISK DRIVE, FUJITSU M2266SA, S/N B34817  
 DISK DRIVE, IPC, SUN, S/N 117F1820  
 DISK DRIVE, IPC, SUN, S/N 117F1821  
 DISK DRIVE, IPC, SUN, S/N 120F1380  
 DISK DRIVE, IPC, SUN, S/N 120F1382  
 DISK DRIVE, IPC, SUN, S/N 120F3278  
 DISK DRIVE, IPC, SUN, S/N 122F5133  
 DISK DRIVE, MICROPOLIS, S/N LP91021315HD3  
 DISK DRIVE, SUN, SCROM 411, S/N 207G6191  
 DISK DRIVE, ZZYZX 002, S/N 92030018  
 DISK DRIVE (2 IN CASE), CITA, S/N TJ610440 & TJ610515  
 DISPLAY, AAMAZING CM8484CX, S/N KAM1H01403  
 DISPLAY, AAMAZING CM8484CX, S/N KAM1H01838  
 DISPLAY, CM1488, PARCO, S/N 102406  
 DISPLAY, COLOR, IBM PC, S/N 0742450  
 DISPLAY, CORDATA CMC1412A, S/N 1073D00417  
 DISPLAY, CORDATA CMC1412A, S/N 1073D00456  
 DISPLAY, CORDATA CMC1412A, S/N 1073D00616  
 DISPLAY, CORDATA CMC1412A, S/N 1073E00246  
 DISPLAY, CORDATA CMC1412A, S/N 1073E00308  
 DISPLAY, CORDATRA, S/N 2044301168  
 DISPLAY, CTX, A43-14803229  
 DISPLAY, CTX, CN-10002885  
 DISPLAY, CTX, K43-15100220  
 DISPLAY, FOUNTAIN, S/N 618111110  
 DISPLAY, FOUNTAIN, S/N 630111544  
 DISPLAY, IBM 5151, S/N 6058967  
 DISPLAY, IBM 5154001, S/N 0031705  
 DISPLAY, IMTEC 1256A, S/N 90500954  
 DISPLAY, IMTEC 1256A, S/N 90501014  
 DISPLAY, IMTEC 1256A, S/N 90502159  
 DISPLAY, IMTEC 1256A, S/N 90502249  
 DISPLAY, IMTEC 1256A, S/N 90503002



DISPLAY, IMTEC 1256A, S/N 90503014  
DISPLAY, IMTEC 1256A, S/N 90503037  
DISPLAY, IMTEC 1256A, S/N 90503058  
DISPLAY, IMTEC 1256A, S/N 90503070  
DISPLAY, IMTEC 1256A, S/N 90703468  
DISPLAY, LEADING TECH. 5205, S/N 10903965  
DISPLAY, MAC W/CASE, S/N BCG95RM5119  
DISPLAY, MAGITRONICS, AMBER S/N 90801906  
DISPLAY, MAGNA. BCM5150741, S/N 51757535  
DISPLAY, MAGNA. BCM5150741, S/N 53596719  
DISPLAY, MAGNA. BCM6430741, S/N 40431990  
DISPLAY, MAGNOVOX 9CM080, S/N 62577666  
DISPLAY, MAG. MN 7BM6230746, S/N 58083705  
DISPLAY, MINI-MICRO MM1464K, S/N 90900139  
DISPLAY, MINI-MICRO MM-1468J, S/N 00900199  
DISPLAY, MITSUBISHI, S/N 911002741  
DISPLAY, MODEL C, SUN, S/N 834AR0255  
DISPLAY, M/N RE951V, S/N 11040100  
DISPLAY, NANAQ 9070U, S/N 36379021  
DISPLAY, NCD 19RP3, S/N 30215320215A6  
DISPLAY, NCD 19RP3, S/N 30221520131  
DISPLAY, NCS S-NW02, S/N 414258-194  
DISPLAY, NCS S-NW02, S/N 414258-24  
DISPLAY, NCS S-NW02, S/N 414258-52  
DISPLAY, NCS S-NW02, S/N 414258-55  
DISPLAY, NEC JC-1403HMA, S/N 02N14310K  
DISPLAY, NEC MULTISYNC, S/N 97M12744C  
DISPLAY, NEC MULTISYNC 3D, S/N 09M89702  
DISPLAY, PRINCETON GRAPHICS, S/N 00734  
DISPLAY, QUADRANT, M/N QC-1418  
DISPLAY, QUADRANT, M/N QC-1418  
DISPLAY, QUADRANT, M/N QC-1418  
DISPLAY, RELISYS RE9513, S/N 01305850  
DISPLAY, RELISYS RE9513, S/N 01309261  
DISPLAY, SAMSUNG, 10204147  
DISPLAY, SAMSUNG SM12SFA7, S/N 8731150026  
DISPLAY, SUN, S/N 828AZ0951  
DISPLAY, SUN 16" COLOR, S/N 9118DN1893  
DISPLAY, SUN 16" COLOR, S/N 9118DN2184  
DISPLAY, SUN 16" COLOR, S/N 9118DN2251  
DISPLAY, SUN 16" COLOR, S/N 9118DN2456  
DISPLAY, SUN 16" COLOR, S/N 9118DN2512  
DISPLAY, SUN 16" COLOR, S/N 921DY0892  
DISPLAY, SUN 17SMM1, S/N 037BU0043  
DISPLAY, SUN 17SMM1, S/N 038BU0051  
DISPLAY, SUN 17SMM1, S/N 038BU0333  
DISPLAY, SUN 17SMM1, S/N 038BU0560  
DISPLAY, SUN GDM-1604B15, S/N 044CR8388  
DISPLAY, SUN GDM-1962B, S/N 914DX0327  
DISPLAY, SUN GDM-1962B, S/N 9204DX1095  
DISPLAY, SUN GDM-1962B, S/N 9211DX0069  
DISPLAY, SUN MODEL M, S/N 847AZ0139  
DISPLAY, SUN MODEL M, S/N 847AZ0173  
DISPLAY, SUN M20P110, S/N 115DH2848  
DISPLAY, CORDATA, S/N 2044301133  
KEYBOARD, APPLE M0115, S/N 774161

KEYBOARD, BELTRON, S/N 512659  
KEYBOARD, BELTRON, S/N 525339  
KEYBOARD, BELTRON, S/N 525340  
KEYBOARD, CHEUNG LABS, S/N J1103  
KEYBOARD, HI-TEK RT-101+, S/N 14976120  
KEYBOARD, IBM PC/AT, S/N 270041905  
KEYBOARD, IMTEC F104, S/N K90102042  
KEYBOARD, LITE-ON, S/N K900119595  
KEYBOARD, LITE-ON, S/N K900130170  
KEYBOARD, LITE-ON, S/N K911205672  
KEYBOARD, MAC, S/N MA117365  
KEYBOARD, MAXI-SWITCH, S/N 00541710  
KEYBOARD, MAXI-SWITCH, S/N 00541715  
KEYBOARD, MAXI-SWITCH, S/N 00541716  
KEYBOARD, MAXI-SWITCH, S/N 00541730  
KEYBOARD, MAXI-SWITCH, S/N 00541735  
KEYBOARD, MAXI-SWITCH, S/N 00541884  
KEYBOARD, MAXI-SWITCH CO., S/N 00002690  
KEYBOARD, MAXI-SWITCH CO., S/N 128750  
KEYBOARD, MAXI-SWITCH CO., S/N 198569  
KEYBOARD, MITSUMI, S/N 8902090450  
KEYBOARD, MITSUMI, S/N 8902090506  
KEYBOARD, MITSUMI, S/N 8902090509  
KEYBOARD, MITSUMI, S/N 890209110  
KEYBOARD, MITSUMI, S/N 8902091106  
KEYBOARD, MITSUMI, S/N 8902091108  
KEYBOARD, MITSUMI, S/N 8902091109  
KEYBOARD, MONTEREY INTERN'L K104, KB20668117  
KEYBOARD, MONTEREY INTERN'L K104, KB20668118  
KEYBOARD, MONTEREY INTERN'L K104, KB20668120  
KEYBOARD, M/N KPO-E99YC, S/N 8811052721  
KEYBOARD, M/N SK00021U, S/N K911002153  
KEYBOARD, NCD N-97, SN SC09070  
KEYBOARD, NCD N-97, SN SC09609  
KEYBOARD, NCD N-97, SN SC09764  
KEYBOARD, NCD N-97, SN SC09771  
KEYBOARD, NCS N97, S/N SC09835  
KEYBOARD, NMB MODEL RT-101, S/N 10161300  
KEYBOARD, NORTHGATE, S/N 910404785  
KEYBOARD, ORNICRON, S/N 80303269  
KEYBOARD, ORNICRON, S/N 80818624  
KEYBOARD, ORNICRON, S/N 80819532  
KEYBOARD, SUN, S/N 9209002409  
KEYBOARD, SUN, S/N 9214000268  
KEYBOARD, SUN, S/N 9214000275  
KEYBOARD, SUN, S/N 9214000419  
KEYBOARD, SUN, S/N 9228002333  
KEYBOARD, SUN E03470014, S/N 9115004082  
KEYBOARD, SUN MICRO., S/N CIGE03470  
KEYBOARD, SUN MICRO., S/N CIGE03470  
KEYBOARD, SUN MICRO. NO S/N  
KEYBOARD, SUN MICRO. NO S/N  
KEYBOARD, SUN MICRO. NO S/N  
KEYBOARD, SUNNYVALE, S/N 07330119  
KEYBOARD, S/N E2119880  
KEYBOARD, W/MOUSE, SUN E03470014, S/N 9136002518

KEYBOARD W/MOUSE, SUN, S/N 853650  
KEYBOARD W/MOUSE, LITEON, K920113681  
KEYBOARD W/MOUSE, LITEON, K920113690  
KEYBOARD W/MOUSE, MODEL 4, S/N 2968723  
KEYBOARD W/MOUSE, M/N N97, S/N SC11540  
KEYBOARD W/MOUSE, M/N N97, S/N SC11541  
KEYBOARD W/MOUSE, NCD N97, S/N SC05391  
KEYBOARD W/MOUSE, SUN, S/N 852029  
KEYBOARD/MOUSE, LIETON, S/N 6YUSK0002  
KEYBOARD/MOUSE, LIETON, S/N K190602102  
KEYBOARD/MOUSE, LIETON, S/N K190602103  
KEYBOARD/MOUSE, LIETON, S/N K190602105  
KEYBOARD/MOUSE, LIETON, S/N K190602107  
KEYBOARD/MOUSE, SUN, S/N 9112002189  
KEYBOARD/MOUSE, SUN, S/N 9113004379  
KEYBOARD/MOUSE, SUN, S/N 9113005946  
KEYBOARD/MOUSE, SUN, S/N 9113005969  
KEYBOARD/MOUSE, SUN, S/N 9113005977  
KEYBOARD/MOUSE, SUN, S/N 9113006029  
KEYBRD., KEYTRONICS 5339, S/N 8710003584  
PRINTER, APPLE M6000, S/N CA8031ENSM6000  
PRINTER, DEC, M/N LA75-A2, S/N TY70910  
PRINTER, HP 2279A, S/N 3137563492  
PRINTER, HP LASERJET II, S/N 1353271  
PRINTER, OKIDATA 182, S/N 606B0187586  
PRINTER, OKIDATA 182, S/N 607B0211468  
PRINTER, OKIDATA 182, S/N 607B0211471  
PRINTER, OKIDATA 82A, S/N  
PRINTER, OKIDATA 82A, S/N 245417  
PRINTER, OKIDATA 82A, S/N 245422  
PRINTER, OKIDATA PAR. B232, S/N 243209  
PRINTER, PANASONIC, S/N 6LKALC39759  
PRINTER, PANASONIC, S/N ACJ5Z6KX-F10921  
PRINTER, QUME S3/TT75, S/N 562286  
PRINTER, STAR NX-10, S/N 180470401666  
PRINTER, STAR NX-10, S/N 180470401846  
PRINTER, STAR NX-1000, S/N 310018006861  
PRINTER, STAR NX-1000, S/N 310071104858  
PRINTER, TEXAS INSTR., S/N 4539710223  
PRINTER, TI MICROLASER PS35+ S/N 0639720076  
PRINTER, TI MICROLASER, S/N 1521010006  
PRINTER, TI MICROLASER PS35+, S/N 1839720392  
TAPE DRIVE, SUN EXP-2, S/N 04860648  
TAPE DRIVE, SUN, S/N 82951893  
TAPE RECORDER, SONY TCM81, S/N 2257424  
TAPE RECORDER, SONY TCM81, S/N 2297573  
TELECOPIER, HARRIS 3M, 796A6, S/N 208000  
TERMINAL, DEC, MN VT240A, SN A641101D69  
TERMINAL, TEKTRONICS 4105A, S/N B043915  
TERMINAL, TELEVIDEO 9220, S/N B86040964A  
TERMINAL TELEVIDEO SYSTEMS, S/N 93040128  
TERMINAL TELEVIDEO SYSTEMS, S/N 93040247  
TERMINAL., SELANAR 100 XL, S/N 611007302  
WORD PROCESSOR, NBI 3000, S/N 28335A  
WORD PROCESSOR VIDEO, NBI 3000, 2ND VIDEO, S/N 32187B  
X-WINDOW TERM, NCD999035902E, S/N M201309  
X-WINDOW TERM, NCD999035902E, S/N M201526

EXHIBIT F

REGISTER OF WAGE DETERMINATION AND FRINGE BENEFITS

U.S. DEPARTMENT OF LABOR  
 EMPLOYMENT STANDARDS ADMINISTRATION  
 WAGE AND HOUR DIVISION  
 WASHINGTON, D.C. 20210

REGISTER OF WAGE DETERMINATIONS UNDER  
 THE SERVICE CONTRACT ACT

By direction of *Alan L. Moss* Secretary of Labor

Alan L. Moss Division of  
 Director Wage Determinations

LOCALITY  State: Virginia Area: VA COUNTIES: HAMPTON	Wage Determination No.: 78-1030 (Rev. 22) Date: 08/08/1992				
Minimum Hourly Wage	Fringe Benefit Payments <table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">Health &amp; Welfare</td> <td style="width: 33%;">Vacation</td> <td style="width: 33%;">Holiday</td> <td style="width: 15%;">Other</td> </tr> </table>	Health & Welfare	Vacation	Holiday	Other
Health & Welfare	Vacation	Holiday	Other		

Class of Service Employees

Employed on contracts for Administrative, Clerical,  
 and Technical services at NASA Langley Research Center  
 in the above locality:

- |                         |          |
|-------------------------|----------|
| 1. Accounting Clerk I   | \$ 6.31  |
| 2. Accounting Clerk II  | \$ 7.91  |
| 3. Accounting Clerk III | \$ 8.24  |
| 4. Accounting Clerk IV  | \$ 9.99  |
| 5. File Clerk I         | \$ 5.00  |
| 6. File Clerk II        | \$ 5.54  |
| 7. File Clerk III       | \$ 6.76  |
| 8. Inventory Clerk      | \$ 5.23  |
| 9. Messenger            | \$ 5.40  |
| 10. Order Clerk I       | \$ 6.15  |
| 11. Order Clerk II      | \$ 8.06  |
| 12. Payroll Clerk       | \$ 7.28  |
| 13. Receptionist        | \$ 5.91  |
| 14. Secretary I         | \$ 7.25  |
| 15. Secretary           | \$ 8.38  |
| 16. Secretary III       | \$ 8.92  |
| 17. Secretary IV        | \$ 9.79  |
| 18. Secretary V         | \$ 10.23 |
| 19. Stenographer I      | \$ 7.34  |
| 20. Stenographer II     | \$ 8.23  |

U.S. DEPARTMENT OF LABOR  
 EMPLOYMENT STANDARDS ADMINISTRATION  
 WAGE AND HOUR DIVISION  
 WASHINGTON, D.C. 20210

REGISTER OF WAGE DETERMINATIONS UNDER  
 THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor



Alan L. Moss Division of  
 Director Wage Determinations

State: Virginia

Area: VA COUNTIES: HAMPTON

LOCALITY

Wage Determination No.: 78-1030 (Rev. 22) Date: 08/08/1992

Fringe Benefit Payments

Minimum Hourly Wage	Fringe Benefit Payments		
	Health & Welfare	Vacation	Holiday

Class of Service Employees

21. Switchboard Operator	\$	6.11			
22. Switchboard Operator- Receptionist	\$	6.41			
23. Typist I	\$	6.20			
24. Typist II	\$	7.41			
25. Word Processor I	\$	6.21			
26. Word Processor II	\$	7.70			
27. Computer Data Librarian	\$	7.18			
28. Computer Operator I	\$	7.45			
29. Computer Operator II	\$	8.74			
30. Computer Operator III	\$	10.45			
31. Computer Operator IV	\$	12.01			
32. Computer Programmer I 4/	\$	10.53			
33. Computer Programmer II 4/	\$	13.02			
34. Computer Programmer III 4/	\$	15.46			
35. Computer Systems Analyst I 4/	\$	14.13			
36. Computer Systems Analyst II 4/	\$	15.98			
37. Computer Systems Analyst III 4/	\$	18.65			
38. Key Entry Operator I	\$	6.13			
39. Key Entry Operator II	\$	7.59			
40. Peripheral Equipment Operator	\$	6.96			
41. Aircraft Mechanic	\$	12.61			
42. Aircraft Worker	\$	11.52			
43. Drafter I	\$	6.82			

U. S. DEPARTMENT OF LABOR  
 EMPLOYMENT STANDARDS ADMINISTRATION  
 WAGE AND HOUR DIVISION  
 WASHINGTON, D.C. 20210

REGISTER OF WAGE DETERMINATIONS UNDER  
 THE SERVICE CONTRACT ACT

By direction of the Secretary of Labor



Alan L. Moss Director  
 Division of Wage Determinations

LOCALITY	State: Virginia
	Area: VA COUNTIES: HAMPTON

Wage Determination No.: 78-1030 (Rev. 22) Date: 08/08/1992

Minimum Hourly Wage	Fringe Benefit Payments		
	Health & Welfare	Vacation	Holiday

Class of Service Employees	Minimum Hourly Wage	Health & Welfare	Vacation	Holiday	Other
44. Drafter II	\$ 8.50				
45. Drafter III	\$ 10.36				
46. Drafter IV	\$ 12.99				
47. Drafter V	\$ 15.80				
48. Technician I	\$ 8.00				
49. Technician II	\$ 9.91				
50. Technician III	\$ 11.93				
51. Photo Lab Technician	\$ 7.75				
52. Emergency Medical Technician 4/	\$ 9.71				
53. Registered Industrial Nurse 4/	\$ 13.00				
54. A/C Sheetmetal Mechanic	\$ 12.61				

Fringe benefits applicable to all classes of service employees engaged in contract performance: 1/ 2/ 3/

- 1/ HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans: Employer contributions costing an average of \$2.23 per hour computed on the basis of all hours worked by service employees employed on the contract.
- 2/ VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years of service. Length of service includes the whole span of continuous service with the present (successor) contractor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 4.173)
- 3/ HOLIDAYS: 10 paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the name holidays another day off with pay in accordance with a plan communicated to the employees involved.)
- 4/ The term "Service employee" does not include any employee who qualifies as an executive, administrative, or professional employee as those terms are identified in Regulations, Part 541, issued under the Fair Labor Standards Act. (See CFR, Part 541).



NOTE: The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming procedures shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. A written report of the proposed conforming action, including information regarding the agreement or disagreement of the authorized representative of the employees involved or, where there is no authorization of the representative, the employees themselves, shall be submitted by the contractor to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work. The contracting officer shall review the proposed action and promptly submit a report of the action, together with the agencies' recommendation and all pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6 (b)(2) of Regulations 29 CFR 4)

UNIFORM ALLOWANCE: If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.80 a week (or 76 cents a day); and effective April 1, 1991, the note shall be \$4.25 per week (or \$.85 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

NOTE: The duties of employees under job titles listed are those described in the Service Contract Act Directory of Occupations, Second Edition, July 1986, unless otherwise indicated. See also 29 CFR Part 4 Section 4.152.

\*\*\*\*\* OCCUPATIONS NOT INCLUDED IN THE SCA DIRECTORY OF OCCUPATIONS \*\*\*\*\*

PHOTO LAB TECHNICIAN

The photo lab technician must be able to process and evaluate the quality of the exposed rolls of aerial film, annotate the film with required identifying numbers and letters, make and process contact prints from aerial film, and make to scale project photoindexes of the mosaicked strips of aerial photography by use of a copy camera.

EXHIBIT G

CONTRACT SECURITY CLASSIFICATION SPECIFICATION

**DEPARTMENT OF DEFENSE  
CONTRACT SECURITY CLASSIFICATION SPECIFICATION**

*(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)*

1. CLASSIFICATION OF INFORMATION  
a. FACILITY SECRET b. LEVEL OF SAFEGUARDING REQUIRED

secret

b. LEVEL OF SAFEGUARDING REQUIRED

secret

<b>2. THIS SPECIFICATION IS FOR: (X and complete as applicable)</b>			<b>3. THIS SPECIFICATION IS: (X and complete as applicable)</b>		
a. PRIME CONTRACT NUMBER			X	a. ORIGINAL (Complete date in all cases)	Date (YYMMDD) 92 Jul 28
b. SUBCONTRACT NUMBER				b. REVISED (Supersedes all previous specs)	Revision No. Date (YYMMDD)
c. SOLICITATION OR OTHER NUMBER	1-41-1100.1015	Due Date (YYMMDD) 92 Aug 09		c. FINAL (Complete Item 5 in all cases)	Date (YYMMDD)

**4. IS THIS A FOLLOW-ON CONTRACT?**  YES  NO. If yes, complete the following:  
Classified material received or generated under \_\_\_\_\_ (Preceding Contract Number) is transferred to this follow-on contract

**5. IS THIS A FINAL DD FORM 2547**  YES  NO. If yes, complete the following:  
In response to the contractor's request dated \_\_\_\_\_, retention of the identified classified material is authorized for the period of \_\_\_\_\_

**6. CONTRACTOR (Include Commercial and Government Entity (CAGE) Code)**

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)
		Defense Investigative Service 2461 Eisenhower Avenue Alexandria, VA 22331

**7. SUBCONTRACTOR**

a. NAME, ADDRESS, AND ZIP CODE	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)

**8. ACTUAL PERFORMANCE**

a. LOCATION	b. CAGE CODE	c. COGNIZANT SECURITY OFFICE (Name, Address, and Zip Code)

**9. GENERAL IDENTIFICATION OF THIS PROCUREMENT**

10. THIS CONTRACT WILL REQUIRE ACCESS TO:	YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:	YES
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION		X	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	
b. RESTRICTED DATA		X	b. RECEIVE CLASSIFIED DOCUMENTS ONLY	
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION		X	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	X
d. FORMERLY RESTRICTED DATA		X	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE	
e. INTELLIGENCE INFORMATION:			e. PERFORM SERVICES ONLY	X
(1) Sensitive Compartmented Information (SCI)		X	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES	
(2) Non-SCI		X	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER	
f. SPECIAL ACCESS INFORMATION		X	h. REQUIRE A COMSEC ACCOUNT	
g. NATO INFORMATION		X	i. HAVE TEMPEST REQUIREMENTS	
h. FOREIGN GOVERNMENT INFORMATION		X	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS	
i. LIMITED DISSEMINATION INFORMATION		X	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE	
j. FOR OFFICIAL USE ONLY INFORMATION		X	l. OTHER (Specify)	
k. OTHER (Specify)				

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

Direct  Through (Specify):

N/A

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

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

Contractor will store machine listings at their facility as required. The quantity will vary, but will normally not exceed 1000 pages of printout for an overnight period. The material to be stored will involve CONFIDENTIAL material only. The contractor will have access to SECRET material but will not remove any SECRET data from the 1268 facility.

In the course of providing the data processing services, contractor activities may result in the generation of classified magnetic tape recordings and/or printed machine outputs.

Technical Project Manager:

Samuel A. McPherson  
COTR

NASA Langley Research Center  
Hampton, VA 23665-5225  
Mail Stop 157D


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

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

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

a. TYPED NAME OF CERTIFYING OFFICIAL	b. TITLE	c. TELEPHONE (Include Area Code)
Bill J. Smith	Information Security Classification Officer	(804) 864-3415

d. ADDRESS (Include Zip Code)  
NASA Langley Research Center  
Hampton, VA 23665-5225

e. SIGNATURE  


17. REQUIRED DISTRIBUTION

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

## PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORSK.1 CONTINGENT FEE REPRESENTATION AND AGREEMENT (FAR 52.203-4)  
(APR 1984)

(a) Representation. The offeror represents that, except for full-time bona fide employees working solely for the offeror, the offeror -

(NOTE: The offeror must check the appropriate boxes. For interpretation of the representation, including the term "bona fide employee", see Subpart 3.4 or the Federal Acquisition Regulation.)

(1) ( ) has, ( ) has not, employed or retained any person or company to solicit or obtain this contract; and

(2) ( ) has, ( ) has not, paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer -

(1) A completed Standard Form 119, Statement of Contingent or Other Fees, (SF 119); or

(2) A signed statement indicating that the SF 119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF 119 applies to this offer or quotation.

## K.2 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (FAR 52.203-11) (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief, that on or after December 23, 1989, -

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

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid,

to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

### K.3 TAXPAYER IDENTIFICATION (FAR 52.204-3) (SEP 1989)

#### (a) Definitions.

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

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) The offeror is required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to the reporting requirements described in 4.902(a), the failure or refusal by the offeror to furnish the information may result in a 20 percent reduction of payments otherwise due under the contract.

#### (c) Taxpayer Identification Number (TIN).

TIN: \_\_\_\_\_

TIN has been applied for.

TIN is not required because:

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

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of a Federal, state, or local government;

Other. State basis. \_\_\_\_\_

- (d) Corporate Status.
  - Corporation providing medical and health care services, or engaged in the billing and collecting of payments of such services;
  - Other corporate entity;
  - Not a corporate entity;
  - Sole proprietorship
  - Partnership
  - Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).
- (e) Common Parent.
  - Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.
  - Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

K.4 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (FAR 52.209-5) (MAY 1989)

- (a)(1) The Offeror certifies, to the best of its knowledge and belief, that -
  - (i) The Offeror and/or any of its Principals -
    - (A) Are  are not  presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
    - (B) Have  have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and
    - (C) Are  are not  presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.
  - (ii) The Offeror has  has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

- (b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification



was erroneous when submitted or has become erroneous by reason of changed circumstances.

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

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

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

#### K.5 TYPE OF BUSINESS ORGANIZATION (FAR 52.215-6) (JUL 1987)

The offeror or quoter, by checking the applicable box, represents that -

- (a) It operates as  a corporation incorporated under the laws of the State of \_\_\_\_\_,  an individual,  a partnership,  a nonprofit organization, or  a joint venture; or
- (b) If the offeror or quoter is a foreign entity, it operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation, registered for business in \_\_\_\_\_ country.

#### K.6 AUTHORIZED NEGOTIATORS (FAR 52.215-11) (APR 1984)

The offeror or quoter represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this request for proposals or quotations: (list names, titles, and telephone numbers of the authorized negotiators).

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#### K.7 PERIOD FOR ACCEPTANCE OF OFFER (FAR 52.215-19) (APR 1984)

In compliance with the solicitation, the offeror agrees, if this offer is accepted within 180 calendar days from the date specified in the solicitation for receipt of offers, to furnish any or all items on which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the Schedule.

## K.8 SMALL BUSINESS CONCERN REPRESENTATION (FAR 52.219-1) (JAN 1991)

(a) Representation. The offeror represents and certifies as part of its offer that it ( ) is, ( ) is not a small business concern and that ( ) all, ( ) not all end items to be furnished will be manufactured or produced by a small business concern in the United States, its territories or possessions, Puerto Rico, or the Trust Territory of the Pacific Islands.

(b) Definition. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in this solicitation.

(c) Notice. Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall -

- (1) be punished by imposition of fine, imprisonment, or both;
- (2) be subject to administrative remedies, including suspension and debarment; and
- (3) be ineligible for participation in programs conducted under the authority of the Act.

K.9 SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION  
(FAR 52.219-2) (FEB 1990)

(a) Representation. The offeror represents that it ( ) is, ( ) is not a small disadvantaged business concern.

(b) Definitions.

"Asian-Pacific Americans," as used in this provision, means United States citizens whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, or the Federated States of Micronesia.

"Indian tribe," as used in this provision, means any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation as defined in 13 CFR 124.100 which is recognized as eligible for the special programs and services provided by the U.S. to Indians because of their status as Indians, or which is recognized as such by the State in which such tribe, band, nation, group, or community resides.

"Native Americans," as used in this provision, means American Indians, Eskimos, Aleuts, and native Hawaiians.

"Native Hawaiian Organization," as used in this provision, means any community service organization serving Native Hawaiians in, and chartered as a not-for-profit organization by, the State of Hawaii, which is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (a) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

"Subcontinent Asian Americans," as used in this provision, means United States citizens whose origins are in India, Pakistan, Bangladesh, Sri Lanka, Bhutan, or Nepal.

(c) Qualified groups. The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other individuals found to be qualified by SBA under 13 CFR 124. The offeror shall also presume that socially and economically disadvantaged entities also include Indian tribes and Native Hawaiian Organizations.

K.10 WOMEN-OWNED SMALL BUSINESS REPRESENTATION (FAR 52.219-3)  
(APR 1984)

(a) Representation. The offeror represents that it ( ) is, ( ) is not, a women-owned small business concern.

(b) Definitions.

"Small business concern", as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned", as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

K.11 PREFERENCE FOR LABOR SURPLUS AREA CONCERNS (FAR 52.220-1)  
(APR 1984)

(a) This acquisition is not a set aside for labor surplus area (LSA) concerns. However, the offeror's status as such a concern may affect (1) entitlement to award in case of tie offers or (2) offer evaluation in accordance with the Buy American Act clause of this solicitation. In order to determine whether the offeror is entitled to a preference under (1) or (2) above, the offeror must identify, below, the LSA in which the costs to be incurred on account of manufacturing or production (by the offeror or the first-tier subcontractors) amount to more than 50 percent of the contract price.

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(b) Failure to identify the locations as specified above will preclude consideration of the offeror as an LSA concern. If the offeror is awarded a contract as an LSA concern and would not have otherwise qualified for award, the offeror shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

K.12 WALSH-HEALY PUBLIC CONTRACTS ACT REPRESENTATION (FAR 52.222-19)  
(APR 1984)

The offeror represents as a part of this offer that the offeror ( ) is, or ( ) is not, a regular dealer in, or ( ) is, or ( ) is not, a manufacturer of the supplies offered.

K.13 CERTIFICATION OF NONSEGREGATED FACILITIES (FAR 52.222-21)  
(APR 1984)

(a) "Segregated facilities", as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will -

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR  
CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

K.14 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FAR 52.222-22)  
(APR 1984)

The offeror represents that -

- (a) It ( ) has, ( ) has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;
- (b) It ( ) has, ( ) has not, filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K.15 AFFIRMATIVE ACTION COMPLIANCE (FAR 52.222-25) (APR 1984)

The offeror represents that (a) it ( ) has developed and has on file, ( ) has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it ( ) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

K.16 EXEMPTION FROM APPLICATION OF SERVICE CONTRACT ACT PROVISIONS  
(FAR 52.222-48) (MAY 1989)\*

- (a) The following certification shall be checked:

CERTIFICATION

The offeror certifies ( )/does not certify ( ): (i) The items of equipment to be serviced under this contract are commercial items which are used regularly for other than Government purposes, and are sold or traded by the Contractor in substantial quantities to the general public in the course of normal business operations; (ii) The contract services are furnished at prices which are, or are based on, established catalog or market prices for the maintenance, calibration, and/or repair of certain ADP, scientific and medical, and/or office and business equipment. An "established catalog price" is a price included in a catalog, price list schedule, or other form that is regularly maintained by the manufacturer or the Contractor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public. An "established market price" is a current price, established in the usual course of trade between buyers and sellers free to bargain, which can be substantiated from sources independent of the manufacturer or Contractor; and (iii) The Contractor utilizes the same compensation (wage and fringe benefits) plan for all service employees performing work under the contract as the Contractor uses for equivalent employees servicing the same equipment of commercial customers.

\*The offeror shall indicate what segment of the workforce, if any, is exempt from application of Service Contract Act provisions.

(b) If a negative certification is made and a Service Contract Act wage determination is not attached to the solicitation, the Contractor shall notify the Contracting Officer as soon as possible.

(c) Failure to execute the certification in paragraph (a) of this clause or to contact the Contracting Officer as required in paragraph (b) of this clause may render the bid or offer nonresponsive.

K.17 CLEAN AIR AND WATER CERTIFICATION (FAR 52.223-1) (APR 1984)

The offeror certifies that -

(a) Any facility to be used in the performance of this proposed contract ( ) is, ( ) is not, listed on the Environmental Protection Agency List of Violating Facilities;

(b) The offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

K.18 CERTIFICATION REGARDING A DRUG-FREE WORKPLACE (FAR 52.223-5)  
(JUL 1990)

(a) Definitions. As used in this provision,

"Controlled substance" means a controlled substance in Schedules I through V of Section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than minimal impact or involvement in contract performance.

"Individual" means an offeror/Contractor that has no more than one employee including the offeror/Contractor.

(b) By submission of its offer, the offeror, if other than an individual, who is making an offer that equals or exceeds \$25,000, certifies and agrees that, with respect to all employees of the offeror to be employed under a contract resulting from this solicitation, it will - no later than 30 calendar days after contract award (unless a longer period is agreed to in writing), for contracts of 30 calendar days or more performance duration, or as soon as possible for contracts

of less than 30 calendar days performance duration; but in any case, by a date prior to when performance is expected to be completed -

(1) Publish a statement notifying such employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about -

- (i) The dangers of drug abuse in the workplace;
- (ii) The Contractor's policy of maintaining a drug-free workplace;
- (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
- (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this provision;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this provision that, as a condition of continued employment on the contract resulting from this solicitation, the employee will -

- (i) Abide by the terms of the statement; and
- (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 calendar days after such conviction;

(5) Notify the Contracting Officer in writing within 10 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee; and

(6) Within 30 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

- (i) Take appropriate personnel action against such employee, up to and including termination; or
- (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this provision.

(c) By submission of its offer, the offeror, if an individual who is making an offer of any dollar value, certifies and agrees that the offeror will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of the contract resulting from this solicitation.

(d) Failure of the offeror to provide the certification required by paragraphs (b) or (c) of this provision, renders the offeror unqualified and ineligible for award. (See FAR 9.104-1(g) and 19.602-1(a)(2)(i).)

(e) In addition to other remedies available to the Government, the certification in paragraphs (b) or (c) of this provision concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

K.19 REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE (FAR 52.227-15) (JUN 1987)

(a) This solicitation sets forth the work to be performed if a contract award results, and the Government's known delivery requirements for data (as defined in FAR 27.401). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16 of the FAR, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data - General clause at 52.227-14 that is to be included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data in lieu thereof. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.

(b) As an aid in determining the Government's need to include any of the aforementioned Alternates in the clause at 52.227-14, Rights in Data - General, the offeror's response to this solicitation shall, to the extent feasible, complete the representation in paragraph (b) of this provision to either state that none of the data qualify as limited rights data or restricted computer software, or identify which of the data qualifies as limited rights data or restricted computer software. Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of such data should a contract be awarded to the offeror.

REPRESENTATION CONCERNING DATA RIGHTS

Offeror has reviewed the requirements for the delivery of data or software and states (offeror check appropriate block) -

- ( ) None of the data proposed for fulfilling such requirements qualifies as limited rights data or restricted computer software.
- ( ) Data proposed for fulfilling such requirements qualify as limited rights data or restricted computer software and are identified as follows:

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NOTE: "Limited rights data" and "Restricted computer software" are defined in the contract clause entitled "Rights in Data - General."



K.20 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION  
(CASB-1) (APR 1992)

NOTE: This notice does not apply to small businesses or foreign governments.  
This notice is in four parts, identified by Roman numerals I. through IV.  
Offerors shall examine each part and provide the requested information in  
order to determine Cost Accounting Standards (CAS) requirements applicable  
to any resultant contract.

I. *Disclosure Statement - Cost Accounting Practices and Certification*

(a) Any contract in excess of \$500,000 resulting from this solicitation, except  
contracts in which the price negotiated is based on (1) established catalog or  
market prices of commercial items sold in substantial quantities to the general  
public, or (2) prices set by law or regulation, will be subject to the  
requirements of parts 9903 and 9904, except for those contracts which are exempt  
as specified in 9903-201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a  
contract subject to the requirements of parts 9904 and 9904 must, as a condition  
of contracting, submit a Disclosure Statement as required by 9903.202. The  
Disclosure Statement must be submitted as a part of the offeror's proposal under  
this solicitation unless the offeror has already submitted a Disclosure Statement  
disclosing the practice used in connection with the pricing of this proposal. If  
an applicable Disclosure Statement has already been submitted, the offeror may  
satisfy the requirement for submission by providing the information requested in  
paragraph (c) of Part I of this provision.

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

(c) Check the appropriate box below:

(1) Certificate of Concurrent Submission of Disclosure Statement.

The offeror hereby certifies that, as a part of the offer, copies of the  
Disclosure Statement have been submitted as follows: (i) original and one copy to  
the cognizant Administrative Contracting Officer (ACO), and (ii) one copy to the  
cognizant contract auditor.

(Disclosure must be on Form Number CASB-DS-1. Forms may be obtained from  
the cognizant ACO.)

Date of Disclosure Statement \_\_\_\_\_

Name and Address of Cognizant ACO where filed \_\_\_\_\_

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

(2) Certificate of Previously Submitted Disclosure Statement.

The offeror hereby certifies that Disclosure Statement was filed as follows:

Date of Disclosure Statement \_\_\_\_\_

Name and Address of Cognizant ACO where filed \_\_\_\_\_

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

(3) Certificate of Monetary Exemption.

The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$10 million in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) Certificate of Interim Exemption.

The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) above, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraphs (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

**CAUTION:** Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$10 million or more in the current cost accounting period may not claim this exemption (4).

Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

*II. Cost Accounting Standards - Exemption for Contracts of \$500,000 or Less*

If this proposal is expected to result in the award of a contract of \$500,000 or less, the offeror shall indicate whether the exemption below is claimed. Failure to check the box below shall mean that the resultant contract is subject to CAS requirements or that the offeror elects to comply with such requirements.

The offeror hereby claims an exemption from the CAS requirements under the provisions of 9903.201-1(b)(2).

*III. Cost Accounting Standards - Eligibility for Modified Contract Coverage*

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

The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because (i) during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$10 million in awards of CAS-covered prime contracts and subcontracts, and (ii) the sum of such awards equaled less than 10 percent of total sales during that cost accounting period. The offeror further certifies that if such status changes

before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

CAUTION: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$10 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$10 million or more.

*IV. Additional Cost Accounting Standards Applicable to Existing Contracts*

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

( ) YES

( ) NO

K.21 CONTRACTS BETWEEN NASA AND FORMER NASA EMPLOYEES  
(NASA 18-52.203-70) (DEC 1988) (NASA/FAR SUPPLEMENT)

The offeror represents that he or she ( ) is, or ( ) is not, an individual who was employed by NASA during the past two (2) years, or a firm in which such an individual is a partner, principal officer, or majority shareholder or that is otherwise controlled or predominantly staffed by such individuals.

K.22 USE OF GOVERNMENT-OWNED PROPERTY (NASA 18-52.245-79) (MAR 1989)  
(NASA/FAR SUPPLEMENT)

(a) The offeror does ( ) does not ( ) intend to use in performance of any contract awarded as a result of this solicitation existing Government-owned facilities (real property or plant equipment), special test equipment, or special tooling (including any property offered by this solicitation). The offeror shall identify any offered property not intended to be used. If the offeror does intend to use any of the above items, the offeror must furnish the following information required by Federal Acquisition Regulation (FAR) 45.205(b), NASA FAR Supplement (NFS) 18-45.102-70, and NFS 18-45.104(b):

(1) Identification and quantity of each item. Include the item's acquisition cost if it is not property offered by this solicitation.

(2) For property not offered by this solicitation, identification of the Government contract under which the property is accountable and written permission for its use from the cognizant Contracting Officer.

(3) Amount of rent calculated in accordance with FAR 45.403 and the clause at FAR 52.245-9, Use and Charges, unless the property has been offered on a rent-free basis by this solicitation.

(4) The dates during which the property will be available for use, and if used in more than one contract, the amounts of respective uses in sufficient detail to support proration of the rent. This information is not required for property offered by this solicitation.

(b) The offeror does ( ) does not ( ) request additional Government provided property for use in performing any contract awarded as a result of this solicitation. If the offeror requests additional Government-provided property, the offeror must furnish -

(1) Identification of the property, quantity, and estimated acquisition cost of each item; and

(2) The offeror's written statement as prescribed by FAR 45.302-1(a)(4).  
 (c) If the offeror intends to use any Government property (paragraphs (a) or (b) above), the offer must also furnish the following:

(1) The date of the last Government review of the offeror's property control and accounting system, actions taken to correct any deficiencies found, and the name and telephone number of the cognizant property administrator.

(2) A statement that the offeror has reviewed, understands, and can comply with all property management and accounting procedures in the solicitation, FAR Subpart 45.5, and NFS Subparts 18-45.5, 18-45.70, and 18-45.71.

(3) A statement indicating whether or not the costs associated with subparagraph (2) above, including plant clearance and/or plant reconversion costs, are included in its cost proposal.

#### K.23 PAYMENT INFORMATION (LARC 52.232-98) (JUN 1988)

The following is the address to which payment must be sent, if payment is made by check.

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### SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

#### L.1 ORGANIZATIONAL CONFLICTS OF INTEREST CERTIFICATE--MARKETING CONSULTANTS (FAR 52.209-7) (NOV 1991)

(a) Definitions.

(1) "Marketing consultant" means any independent contractor who furnishes advice, information, direction, or assistance to an offeror or any other contractor in support of the preparation or submission of an offer for a Government contract by that offeror. An independent contractor is not a marketing consultant when rendering --

- (i) Services excluded in Subpart 37.2;
- (ii) Routine engineering and technical services (such as installation, operation, or maintenance of systems, equipment, software, components, or facilities);
- (iii) Routine legal, actuarial, auditing, and accounting services; or
- (iv) Training services.

(2) Organizational conflict of interest means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

(b) An individual or firm that employs, retains, or engages contractually one or more marketing consultants in connection with a contract, shall submit to the contracting officer, with respect to each marketing consultant, the certificates described below, if the individual or firm is notified that it is the apparent successful offeror.

- (c) The certificate must contain the following:
- (1) The name of the agency and the number of the solicitation in question.
  - (2) The name, address, telephone number, and federal taxpayer identification number of the marketing consultant.
  - (3) The name, address, and telephone number of a responsible officer or employee of the marketing consultant who has personal knowledge of the marketing consultants involvement in the contract.
  - (4) A description of the nature of the services rendered by or to be rendered by the marketing consultant.
  - (5) The name, address, and telephone number of the client or clients, and the name of a responsible officer or employee of the marketing consultant who is knowledgeable about the services provided to such client(s), and a description of the nature of the services rendered to such client(s), if, based on information provided to the Contractor by the marketing consultant, any marketing consultant is rendering or, in the 12 months preceding the date of the certificate, has rendered services respecting the same subject matter of the instant solicitation, or directly relating to such subject matter, to the Government or any other client (including any foreign Government or person).
  - (6) A statement that the person who signs the certificate for the prime Contractor has informed the marketing consultant of the existence of Subpart 9.5 and Office of Federal Procurement Policy Letter 89-1.
  - (7) The signature, name, title, employer's name, address, and telephone number of the persons who signed the certificates for both the apparent successful offeror and the marketing consultant.
- (d) In addition, the apparent successful offeror shall forward to the Contracting Officer a certificate signed by the marketing consultant that the marketing consultant has been told of the existence of Subpart 9.5 and Office of Federal Procurement Policy Letter 89-1, and the marketing consultant has made inquiry, and to the best of the consultant's knowledge and belief, the consultant has provided no unfair competitive advantage to the prime Contractor with respect to the services rendered or to be rendered in connection with the solicitation, or that any unfair competitive advantage that, to the best of the consultant's knowledge and belief, does or may exist, has been disclosed to the offeror.
- (e) Failure of the offeror to provide the certifications may result in the offeror being determined ineligible for award. Misrepresentation of any fact may result in the assessment of penalties associated with false certifications or such other provisions provided for by law or regulation.

L.2 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (FAR 52.212-7)  
(MAY 1986)

Any contract awarded as a result of this solicitation will be a ( ) DX rated order; (X ) DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 350), and the Contractor will be required to follow all of the requirements of this regulation.

L.3 SOLICITATION DEFINITIONS (FAR 52.215-5) (JUL 1987)

- "Offer" means "proposal" in negotiation.  
"Solicitation" means a request for proposals (RFP) or a request for quotations (RFQ) in negotiation.  
"Government" means United States Government.

L.4 UNNECESSARILY ELABORATE PROPOSALS OR QUOTATIONS (FAR 52.215-7)  
(APR 1984)

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror's or quoter's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

L.5 AMENDMENTS TO SOLICITATIONS (FAR 52.215-8) (DEC 1989)

- (a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.
- (b) Offerors shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment; (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting an offer; (3) by letter or telegram or (4) facsimile, if facsimile offers are authorized in the solicitation. The Government must receive the acknowledgment by the time specified for receipt of offers.

L.6 SUBMISSION OF OFFERS (FAR 52.215-9) (DEC 1989)

- (a) Offers and modifications thereof shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation, and (2) showing the time specified for receipt, the solicitation number, and the name and address of the offeror.
- (b) Telegraphic offers will not be considered unless authorized by the solicitation; however, offers may be modified by written or telegraphic notice.
- (c) Facsimile offers, modifications or withdrawals will not be considered unless authorized by the solicitation.
- (d) Item samples, if required, must be submitted within the time specified for receipt of offers. Unless otherwise specified in the solicitation, these samples shall be (1) submitted at no expense to the Government and (2) returned at the sender's request and expense, unless they are destroyed during preaward testing.

L.7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF PROPOSALS  
(FAR 52.215-10) (DEC 1989)

- (a) Any proposal received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it -
- (1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been postmarked by the 15th);
- (2) Was sent by mail or, if authorized by the solicitation, was sent by telegram or via facsimile and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation;
- (3) Was sent by U.S. Postal Service Express Mail Next Day Service-Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working

days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and U.S. Federal holidays; or

- (4) Is the only proposal received.
- (b) Any modification of a proposal or quotation, except a modification resulting from the Contracting Officer's request for "best and final" offer, is subject to the same conditions as in subparagraphs (a)(1), (2), and (3) of this provision.
- (c) A modification resulting from the Contracting Officer's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the Government after receipt at the Government installation.
- (d) The only acceptable evidence to establish the date of mailing of a late proposal or modification sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the proposal, quotation, or modification shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, offerors or quoters should request the postal clerks to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.
- (e) The only acceptable evidence to establish the time of receipt at the Government installation is the time/date stamp of that installation on the proposal wrapper or other documentary evidence of receipt maintained by the installation.
- (f) The only acceptable evidence to establish the date of mailing of a late offer, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (d) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, offerors or quoters should request the postal clerk to place a legible hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.
- (g) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.
- (h) Proposals may be withdrawn by written notice or telegram (including mailgram) received at any time before award. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision entitled "Facsimile Proposals." Proposals may be withdrawn in person by an offeror or an authorized representative, if the representative's identity is made known and the representative signs a receipt for the proposal before award.

#### L.8 PREPARATION OF OFFERS (FAR 52.215-13) (APR 1984)

- (a) Offerors are expected to examine the drawings, specifications, Schedule, and all instructions. Failure to do so will be at the offeror's risk.
- (b) Each offeror shall furnish the information required by the solicitation. The offeror shall sign the offer and print or type its name on the Schedule and each continuation sheet on which it makes an entry. Erasures or other changes must be

initialed by the person signing the offer. Offers signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(c) For each item offered, offerors shall (1) show the unit price/cost, including, unless otherwise specified, packaging, packing, and preservation and (2) enter the extended price/cost for the quantity of each item offered in the "Amount" column of the Schedule. In case of discrepancy between a unit price/cost and an extended price/cost, the unit price/cost will be presumed to be correct, subject, however, to correction to the same extent and in the same manner as any other mistake.

(d) Offers for supplies or services other than those specified will not be considered unless authorized by the solicitation.

(e) Offerors must state a definite time for delivery of supplies or for performance of services, unless otherwise specified in the solicitation.

(f) Time, if stated as a number of days, will include Saturdays, Sundays, and holidays.

#### L.9 EXPLANATION TO PROSPECTIVE OFFERORS (FAR 52.215-14) (APR 1984)

Any prospective offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective offerors before the submission of their offers. Oral explanations or instructions given before the award of the contract will not be binding. Any information given to a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment of the solicitation, if that information is necessary in submitting offers or if the lack of it would be prejudicial to any other prospective offerors.

#### L.10 FAILURE TO SUBMIT OFFER (FAR 52.215-15) (APR 1984)

Recipients of this solicitation not responding with an offer should not return this solicitation, unless it specifies otherwise. Instead, they should advise the issuing office by letter or postcard whether they want to receive future solicitations for similar requirements. If a recipient does not submit an offer and does not notify the issuing office that future solicitations are desired, the recipient's name may be removed from the applicable mailing list.

#### L.11 CONTRACT AWARD (FAR 52.215-16) (JUL 1990)--ALTERNATE II (AUG 1991)

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, cost or price and other factors, specified elsewhere in this solicitation, considered.

(b) The Government may (1) reject any or all offers if such action is in the public interest, (2) accept other than the lowest offer, and (3) waive informalities and minor irregularities in offers received.

(c) The Government intends to evaluate proposals and award a contract after written or oral discussions with all responsible offerors who submit proposals within the competitive range.



(d) The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. *Unless otherwise provided in the Schedule, offers may be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the offer.*

(e) A written award or acceptance of offer mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer, as provided in paragraph (d) above), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award. Negotiations conducted after receipt of an offer do not constitute a rejection or counteroffer by the Government.

(f) Neither financial data submitted with an offer, nor representations concerning facilities or financing, will form a part of the resulting contract. However, if the resulting contract contains a clause providing for price reduction for defective cost or pricing data, the contract price will be subject to reduction if cost or pricing data furnished is incomplete, inaccurate, or not current.

(g) The Government may determine that an offer is unacceptable if the prices proposed are materially unbalanced between line items or subline items. An offer is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the offer will result in the lowest overall cost to the Government, even though it may be the low evaluated offer, or it is so unbalanced as to be tantamount to allowing an advance payment.

#### L.12 FACILITIES CAPITAL COST OF MONEY (FAR 52.215-30) (SEP 1987)

(a) Facilities capital cost of money will be an allowable cost under the contemplated contract, if the criteria for allowability in subparagraph 31.205-10 (a)(2) of the Federal Acquisition Regulation are met. One of the allowability criteria requires the prospective Contractor to propose facilities capital cost of money in its offer.

(b) If the prospective Contractor does not propose this cost, the resulting contract will include the clause Waiver of Facilities Capital Cost of Money.

#### L.13 TYPE OF CONTRACT (FAR 52.216-1) (APR 1984)

The Government contemplates award of a cost-plus-award-fee contract resulting from this solicitation.

#### L.14 SIC CODE AND SMALL BUSINESS SIZE STANDARD (FAR 52.219-22) (JAN 1991)

(a) The standard industrial classification (SIC) code for this acquisition is 7376.

(b)(1) The small business size standard is \$14,500,000 in annual average receipts in the three previous fiscal years.

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

NOTE: The application of SIC codes to subcontracts is determined by the product or service being provided by the subcontractor. Your attention is directed to Paragraphs 19.701(a) and (b) of the Federal Acquisition Regulations regarding proper procedures for the application of size standards when subcontracting.

L.15 PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE REVIEW  
(FAR 52.222-24) (APR 1984)

An award in the amount of \$1 million or more will not be made under this solicitation unless the offeror and each of its known first-tier subcontractors (to whom it intends to award a subcontract of \$1 million or more) are found, on the basis of a compliance review, to be able to comply with the provisions of the Equal Opportunity clause of this solicitation.

L.16 NOTICE OF COMPENSATION FOR PROFESSIONAL EMPLOYEES (FAR 52.222-45)  
(APR 1984)

Note the provisions relating to evaluation of compensation for professional employees set forth elsewhere in this solicitation. Failure to comply with these provisions may constitute sufficient cause to justify rejection of a proposal. The total compensation plan required to be submitted by the offeror will be viewed as being within the purview of Public Law 87-653 (10 U.S.C. 2306(f)) and in accordance with Federal Acquisition Regulation 15.802(a).

L.17 EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES  
(FAR 52.222-46) (APR 1984)

(a) Recompensation of service contracts may in some cases result in lowering the compensation (salaries and fringe benefits) paid or furnished professional employees. This lowering can be detrimental in obtaining the quality of professional services needed for adequate contract performance. It is therefore in the Government's best interest that professional employees, as defined in 29 CFR 541, be properly and fairly compensated. As a part of their proposals, offerors will submit a total compensation plan setting forth salaries and fringe benefits proposed for the professional employees who will work under the contract. The Government will evaluate the plan to assure that it reflects a sound management approach and understanding of the contract requirements. This evaluation will include an assessment of the offeror's ability to provide uninterrupted high-quality work. The professional compensation proposed will be considered in terms of its impact upon recruiting and retention, its realism, and its consistency with a total plan for compensation. Supporting information will include data, such as recognized national and regional compensation surveys and studies of professional, public and private organizations, used in establishing the total compensation structure.

(b) The compensation levels proposed should reflect a clear understanding of work to be performed and should indicate the capability of the proposed compensation structure to obtain and keep suitably qualified personnel to meet mission

objectives. The salary rates or ranges must take into account differences in skills, the complexity of various disciplines, and professional job difficulty. Additionally, proposals envisioning compensation levels lower than those of predecessor Contractors for the same work will be evaluated on the basis of maintaining program continuity, uninterrupted high-quality work, and availability of required competent professional service employees. Offerors are cautioned that lowered compensation for essentially the same professional work may indicate lack of sound management judgment and lack of understanding of the requirement.

(c) The Government is concerned with the quality and stability of the work force to be employed on this contract. Professional compensation that is unrealistically low or not in reasonable relationship to the various job categories, since it may impair the Contractor's ability to attract and retain competent professional service employees, may be viewed as evidence of failure to comprehend the complexity of the contract requirements.

#### L.18 ROYALTY INFORMATION (FAR 52.227-6) (APR 1984)

(a) Cost or charges for royalties. When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

- (1) Name and address of licensor.
- (2) Date of license agreement.
- (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
- (4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
- (5) Percentage or dollar rate of royalty per unit.
- (6) Unit price of contract item.
- (7) Number of units.
- (8) Total dollar amount of royalties.

(b) Copies of current licenses. In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

#### L.19 SERVICE OF PROTEST (FAR 52.233-2) (NOV 1988)

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) or the General Services Administration Board of Contract Appeals (GSBCA), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from William R. Kivett, NASA, Langley Research Center, Mail Stop 134, Hampton, VA 23681-0001.

(b) The copy of any protest shall be received in the office designated above on the same day a protest is filed with the GSBCA or within one day of filing a protest with the GAO.

L.20 SUBMISSION OF SECURITY PLAN FOR UNCLASSIFIED AUTOMATED INFORMATION RESOURCES (NASA 18-52.204-77) (JAN 1992) (NASA/FAR SUPPLEMENT)

(a) The apparently successful offeror shall provide a plan, for Contracting Officer approval prior to award, that describes its automated information security program. The plan shall be submitted no later than thirty days after receipt of the Contracting Officer's written request. The plan shall address the security measures and program safeguards which will be provided to ensure that all information systems and resources acquired and utilized in the performance of the contract by contractor and subcontractor personnel:

- (1) Operate effectively and accurately;
- (2) Are protected from unauthorized alteration, disclosure, or misuse of information processed, stored, or transmitted;
- (3) Can maintain the continuity of automated information support for NASA missions, programs, and functions;
- (4) Incorporate management, general, and application controls sufficient to provide cost-effective assurance of the system's integrity and accuracy; and
- (5) Have appropriate technical, personnel, administrative, environmental, and access safeguards.

(b) This plan, as approved by the Contracting Officer, will be included in any resulting contract for contractor compliance.

L.21 INCREASES IN ESTIMATED COSTS (NASA 18-52.215-70) (DEC 1988)

Once the apparent successful offeror has been selected, that offeror may not unilaterally increase the estimated costs submitted with its proposal except for -

- (a) Changes resulting from updating or correcting the certified cost or pricing data submitted with its proposal;
- (b) Costs resulting from the Government's directed correction of identified weaknesses in the proposal that must be corrected as a condition of contracting; or
- (c) Minor changes in the requirements of the solicitation. In such cases, the Government will consider only those increases arising from requirements actually affected by the changes (irrespective of whether the changes result in an increase or decrease in the requirements or are initiated by the Government or the offeror) and then only to the extent the increases are identified and justified.

L.22 RESTRICTION ON USE AND DISCLOSURE OF PROPOSAL/QUOTATION INFORMATION (DATA) (NASA 18-52.215-72) (DEC 1984)

It is NASA policy to use information contained in proposals and quotations for evaluation purposes only. While this policy does not require that the proposal or quotation bear a restrictive notice, offerors and quoter should, in order to maximize protection of trade secrets or other information that is commercial or financial and confidential or privileged, place the following notice on the title page of the proposal or quotation and specify the information subject to the notice by inserting appropriate identification, such as page numbers, in the notice. In any event, information (data) contained in proposals and quotations will be protected to the extent permitted by law, but NASA assumes no liability for use and disclosure of information not made subject to the notice.

RESTRICTION ON USE AND DISCLOSURE OF PROPOSAL AND QUOTATION  
INFORMATION (DATA)

The information (data) contained in (insert page numbers or other identification) of this proposal or quotation constitutes a trade secret and/or information that is commercial or financial and confidential or privileged. It is furnished to the Government in confidence with the understanding that it will not, without permission of the offeror, be used or disclosed for other than evaluation purposes; provided, however, that in the event a contract is awarded on this proposal or quotation the Government shall have the right to use and disclose this information (data) to the extent provided in the contract. This restriction does not limit the Government's right to use or disclose this information (data) if obtained from another source without restriction.

L.23 EXPENSES RELATED TO OFFEROR SUBMISSIONS  
(NASA 18-52.215-75) (DEC 1988)

This solicitation neither commits the Government to pay any cost incurred in the submission of the offer or in making necessary studies or designs for preparing the offer, nor to contract for services or supplies. Any costs incurred in anticipation of a contract shall be at the offeror's own risk.

## L.24 FALSE STATEMENTS (NASA 18-52.215-76) (DEC 1988)

PROPOSALS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THE SOLICITATION (INCLUDING ATTACHMENTS). THE PENALTY FOR MAKING FALSE STATEMENTS IN PROPOSALS IS PRESCRIBED IN 18 U.S.C. 1001.

L.25 DISPOSAL OF UNSUCCESSFUL PROPOSALS (NASA 18-52.215-80)  
(DEC 1988)

After contract award, one or more copies of each unsuccessful proposal will be retained in the Government's official contract file, and all other copies will be destroyed.

L.26 SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN  
(NASA 18-52.219-73) (DEC 1988) ALTERNATE I (DEC 1988)

- (a) This provision is not applicable to small business concerns.
- (b) The contract expected to result from this solicitation will contain FAR clause 52.219-9, "Small Business and Small Disadvantaged Business Subcontracting Plan." Each offeror must submit the complete plan with its initial proposal.

## L.27 PREPROPOSAL/PRE-BID CONFERENCE (NASA 18-52.215-77) (DEC 1988)

- (a) A preproposal/pre-bid conference will be held as indicated below:

Date:

Time: 1:00 p.m.

Location: NASA LaRC, H.J.E. Reid Conference Center, Building 1222

Other information: The conference is expected to last approximately four hours.

For planning your itinerary, the following is a tentative agenda for the conference:

#### Agenda

Registration 12:30 p.m. - 1:00 p.m.

Opening Remarks

LaRC Presentations

Break

Facilities Tour

Questions and Answers

Attendance will be limited to a maximum of three (3) representatives per offeror. The briefing will be unclassified. If you desire to attend the conference, you should so indicate by written or telephone contact with the appropriate individual specified in L.29 no later than November 12, 1992. After the briefing, advise this Center if you intend to submit a proposal.

In order that as many questions as possible may be answered at the NASA presentations during the briefing, written questions must be submitted to the contact listed in L.29 no later than November 12, 1992. A limited time may be available for answering questions submitted on the day of the conference. However, as there is no assurance that adequate time to answer such questions will remain, submission of questions prior to the conference, by the date specified above, will assure their being fully answered.

(b) Attendance at the preproposal/pre-bid conference is recommended; however, attendance is neither required nor a prerequisite for proposal/bid submission and will not be considered in the evaluation.

#### L.28 CERTIFICATE OF PROCUREMENT INTEGRITY - OFFERS (LaRC 52.203-90) (JUL 1991)

Federal Acquisition Regulation (FAR) provision 52.203-8, Requirement for Certificate of Procurement Integrity, Alternate I, is included in Section J of this solicitation as Attachment 3. In accordance with FAR 3.104-9, the officer or employee responsible for your offer for this procurement must execute this certificate after negotiation of the contract and submit it to the Contracting Officer prior to award. Do not submit the certificate with your proposal.

#### L.29 COMMUNICATIONS REGARDING THIS SOLICITATION (LaRC 52.204-95) (JUN 1988)

All communications in reference to this solicitation (except as specified in L.30 and L.40 E.1.d.2) shall cite the solicitation number and be directed to the following Government representative:

Name: Nancy M. Sessoms  
Phone: (804) 864-2471 (COLLECT CALLS NOT ACCEPTED)  
Facsimile: 804-864-7709  
Address: National Aeronautics and Space Administration  
Langley Research Center  
Attn: Nancy M. Sessoms, Mail Code 126  
Hampton, VA 23681-0001

Any written communications must include the mail code on the envelope or on the telex.

### L.30 BIDDERS LIBRARY

A bidders library has been established and is located at LaRC in the Technical Library, Building 1194, Room 310. Information regarding the contents of the library is included in Attachment 8 - Bidder's Library Information. The hours of operation are from 8:00 a.m. to 4:00 p.m. Monday through Friday, excluding Government holidays. The bidder's library will be open for operation from August 31, 1992, through the proposal due date. Offerors wishing to visit the bidders library should contact Lee A. Lillard at (804) 864-7301 to schedule an appointment. Visits should be limited to four hours. All users of the bidders library must have a proper NASA Visitor's Badge, which may be obtained from the NASA Langley Badge and Pass Office located at the Main Gate (1 Langley Boulevard), telephone (804) 864-2790. Limited copying support will be provided for materials in the bidders library. The maximum number of pages (single side, one copy each side) which may be copied per offeror per visit is 25 pages.

### L.31 NASA'S POLICY ON FACILITIES CAPITAL COST OF MONEY (LaRC 52.215-95) (JUN 1988)

As required by NASA FAR Supplement 18-15.970-3, when facilities capital cost of money is included as an item of cost in the Contractor's proposal, a reduction in the profit objective shall be made in an amount equal to the amount of facilities capital cost of money allowed in accordance with FAR 31.205-10(a).

### L.32 CERTIFICATION OF COST OR PRICING DATA (LaRC 52.215-97) (JUN 1988)

Pursuant to the provisions of Public Law 87-653, as amended by Public Law 97-86, the Contractor will be required to certify, except where the price negotiated is based on adequate price competition, as determined by the Contracting Officer, or established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, that the cost or pricing data submitted or identified on Standard Form 1411 are accurate, complete, and current. The required certificate is set forth in FAR 15.804-4, a copy of which is attached (NASA-Langley Form PROC./P-281) and which shall be properly executed after negotiation and prior to contract award.

L.33 REJECTION, NEGOTIATION, AWARD AND EXPENDITURE OF FUNDS  
(LaRC 52.215-99) (JUN 1988)

This solicitation does not commit the Government to award a contract, since the Government reserves the right to reject any or all proposals, or to negotiate separately with any source considered qualified. The Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with the proposed procurement.

L.34 DRAFT PROVISION - IDENTIFICATION OF UNCOMPENSATED OVERTIME (18-52.237-71)  
( 1992)

(a) As used in this provision, the following definitions apply: (i) "Uncompensated overtime" means the hours worked in excess of an average of 40 hours per week by direct charge employees who are exempt from the Fair Labor Standards Act (FLSA) without additional compensation. Compensated personal absences, such as holiday, vacations, and sick leave shall be included in the normal work week for purposes of computing uncompensated overtime hours. For purposes of this clause, uncompensated overtime also includes hours worked in excess of an average of 40 hours per week by direct charge FLSA-exempt employees for which less than full compensation was received. (ii) "Effectively hourly rate" is the rate which results from multiplying the hourly rate for a 40-hour work week by 40, and then dividing by the proposed hours per week. For example 45 hours proposed on a 40-hour work week basis at \$20.00 per hour would be converted to an effective hourly rate of \$17.78 per hour [(\$20.00 X 40) divided by 45 = \$17.78.]

(b) For any hours proposed against which an effective hourly rate is applied, the Offeror shall identify in its proposal the hours in excess of an average of 40 hours per week, at the same level of detail as the initial 40 hours, and the effective hourly rate, whether at the prime or subcontract level. Such identification is required for FLSA-exempt employees who charge all or some of their time (including overtime) direct. The Offeror shall also identify any compensated overtime hours included in direct cost pools for employees whose regular hours are normally charged direct (for example, FLSA-exempt employees placed in direct cost pools for allocating costs among tasks under a service contract).

(c) Proposals which include unrealistically low labor rates, or which do not otherwise demonstrate cost realism, will be considered in a risk assessment and evaluated for award in accordance with that assessment.

(d) The Offeror's accounting practices used to estimate uncompensated overtime must be consistent with its cost accounting practices used to accumulate and report uncompensated overtime hours.

(e) The Offeror shall include with its proposal a copy of its policy addressing uncompensated overtime, including a description of the timekeeping and accounting systems used to record all hours worked by exempt employees.



### L.35 CERTIFICATE OF MAINTAINABILITY

All equipment listed in Appendix A of Exhibit A has been or will be certified for maintenance by servicing Contractors. Certificates of Maintainability are on file or will be obtained if required. Certificates will be made available for review by the Contractor.

### L.36 CONTRACTOR/GOVERNMENT INTERFACE

To assist the offeror in preparing an organizational structure, the following describes the proposed interface methods to be utilized by the Government in the assignment of work under the proposed contract.

The Contracting Officer will delegate authority to the Contracting Officer Technical Representative (COTR) to monitor work under each of the Statement of Work (SOW) task areas. The COTR will utilize technical work area monitors to interface with the Contractor's work area supervisors or lead personnel and monitor day-to-day operations.

The Contracting Officer will also assign Contract Administration functions to a Contract Specialist.

### L.37 CONTRACTOR'S OFF-SITE FACILITY

The Contractor shall provide an off-site facility to house all administrative staff, approximately 20 percent of the Government's estimated staffing (Attachment 6), and Government-furnished property (listed in Exhibit C). The Contractor shall provide a T-1 data communications circuit at the off-site facility that will be used to interface to LaRCNET Communications Network.

### L.38 USE OF GOVERNMENT SUPPLY SOURCES

You may assume for proposal preparation purposes that use of Government sources such as GSA Contractors will be authorized. Reference FAR Clause 52.251-1.

### L.39 SMALL DISADVANTAGED BUSINESS SUBCONTRACTING GOAL

This solicitation requires the submission of a Small Business and Small Disadvantaged Business Subcontracting plan in accordance with the clause at FAR 52.219-9. Offerors are advised that, in keeping with Congressionally-mandated goals, NASA seeks to place its contract dollars, where feasible, with small disadvantaged business concerns as defined in 52.219-8 of the FAR and 18-52.219-76 of the NASA FAR Supplement. The Contracting Officer has determined that a goal of 15 percent of the total dollar value of your proposal is a suitable minimum goal for small disadvantaged businesses, and that such goal should constitute the minimum acceptable small disadvantaged business subcontracting goal for contract award.

NOTE: NASA encourages all offerors to attempt to meet and/or exceed this goal to the maximum extent practicable and to continue to encourage small disadvantaged business development throughout the contract period. The

extent of each offeror's proposed small business and small disadvantaged business subcontracting plan as it relates to the effective achieving or exceeding of this goal will be a factor considered by the Source Evaluation Board in Factor 4, Other Considerations. Additionally, the extent that the prime Contractor in any resulting contract meets or exceeds this goal will be a factor considered in award fee determinations.

#### L.40 PROPOSAL PREPARATION AND SUBMISSION - SPECIAL INSTRUCTIONS

A. Number of Proposals, Time and Place of Submission--The offeror shall submit the original and 12 copies of each volume of his proposal to the address shown in Block 8 of the Standard Form (SF) 33 (face page of this solicitation), or if hand carried, to the depository listed in Block 9 of the SF 33. Offers must be received at the place indicated on or before the date and hour shown in Block 9 of the SF 33. Each volume of the original must be designated as such, and each volume of all other copies shall be numbered, one through 12, on the outside cover.

B. Proposal Clarity--Your proposal should be specific, complete, and concise. The offeror is urged to examine this solicitation in its entirety and to assure that his proposal contains all the necessary information, provides all required documentation and is complete in all respects since evaluation of the proposal will be based on the actual material presented and not on the basis of what is implied. You should ensure that your cost proposal is consistent with your technical proposal in all respects since the cost proposal may be used as an aid to determine the offeror's understanding of the technical requirements. Discrepancies may be viewed as a lack of understanding.

#### C. Proposal Format and Content

1. Proposals must be submitted in two volumes: Volume I, Mission Suitability Proposal, and Volume II, Business Proposal. No cost information shall be presented in the Mission Suitability Proposal except the salary data requested for proposed Key Personnel and the data required by the Professional Compensation Plan (see L.17 and Subfactor 3 of this RFP).

2. Based on our experience with procurements of this size and complexity, the items to be addressed in your mission suitability proposal can be covered in 150 pages double-spaced. Allowing 28 lines of text per page with an average of 14.3 words per line, this translates into a total of 60,000 words. In order to permit flexibility in formatting while holding the amount of information presented by each offeror to an approximately equal amount, a limit of 60,000 words is imposed on your mission suitability proposal, inclusive of charts, tables, diagrams, captions, and figures, but exclusive of personnel resumes, cover pages, and dividers. You should indicate in the footer of each page the word count for that page and the cumulative word count up to the end of that page. The word-count rules used by any commercial word-processing software package are acceptable. Any information that is determined to be beyond the word-count limit will not be evaluated. All text will be printed black on white, double-spaced, and preferably double-sided. Additionally, offerors are requested to refrain from using script-style or other non-standard type fonts, but instead use fonts such as Courier 10cpi or CG Times 12pt, so as to insure readability of proposals.

3. Each volume should be specific and complete and all pages of both volumes should be numbered. Each volume should include the detailed information outlined below in order that it can be evaluated in accordance with the evaluation factors set forth in Section M.2. You should structure each volume to adhere to the Factor headings listed below:

D. Mission Suitability Proposal - Volume I

1. The prime Contractor will be responsible for satisfactory accomplishment of the contract awarded hereunder. In the event other organizations are proposed as being involved in the conduct of this work, their relationship during the effort shall be indicated, and their proposed contributions to the work and to your proposal shall be identified and integrated into each part of the proposal as applicable.

2. Risk Analysis - In accordance with NFS 1870.3, Appendix I, Section 301, Paragraph 1.f. - Proposal risk will be carefully considered in evaluating proposals. The proposal risks to be assessed are those associated with cost, schedule, performance, and technical aspects of the proposal. These risks will be considered in the Mission Suitability subfactors, Cost factor, and Relevant Experience and Past Performance factor evaluation.

3. FACTOR 1 - MISSION SUITABILITY

As part of your proposal, you should submit a risk analysis which identifies risk areas associated with each Mission Suitability subfactor, as appropriate. You should also submit your recommended approaches to minimize the impact of those risks on the overall success of the program.

a. Subfactor 1 - Organization - This subfactor will be used to evaluate your proposed organization for performing the work. Accordingly, your proposal should include the following:

(1) Corporate/company/team organization chart with supporting narrative for the organization proposed to perform the contract. You should address the contract unit's placement and reporting relationships within the company/team and the role each will play in contract management and performance.

(2) Your contract unit's organization chart with supporting narrative for the organization proposed. You should address any subcontractor placement and reporting relationship within the contract unit. Integration of any subcontract or team effort with the prime effort should be addressed.

(3) You should include your proposed distribution of management and administrative effort and provide rationale therefor.

(4) Personnel which the Government considers to be "Key" to this effort are so designated in Attachment 7 to this RFP. You should list any other personnel which you consider to be "Key" as well as the rationale for so designating each key person.

(5) Describe the duties, responsibilities, and authority of your key positions.

(6) Identify any work functions which you expect to obtain through subcontracting or teaming agreements. Such features as rationale for the arrangement, the qualifications of the subcontractor or team members, nature and extent of the effort, and commitment of subcontractor or team members should be addressed.

(7) A discussion of proposed interfaces with other elements of your company, the Government, and any subcontractors or team members.

(8) Describe any corporate resources or support which will be available under this contract.

b. Subfactor 2 - Phase-In Plan, Staffing and Continuing Personnel Management - Your response to this subfactor should address your plans for initial phase-in and consolidation of the effort currently performed under separate contracts, for minimizing changeover difficulties, maximizing continuity of services to the Government, and maintaining competent staffing for the term of the contract. Accordingly, your proposal should include the following:

(1) A detailed description and schedule of all phase-in activities. Refer to the phase-in schedule in Attachment 14. NOTE: For purposes of establishing your phase-in milestones, assume Contractor selection in May 1993, contract award in July 1993, and contract start date of August 9, 1993.

The following items pertain to the support service staff necessary to perform all of the SOW except Section C.4.

(2) Your proposal should include your plans for reaching the required complement of qualified personnel by contract start (August 9, 1993); a table of personnel sources noting the percentage of the total initial work force which you intend to obtain from the following: your own resources, other divisions of your company, subcontractor or team agreements, outside recruitment, and incumbent personnel retention. Provide your basis for anticipated incumbent work force retention and the proposed mix of personnel sources. You should discuss your plans for making operational any non-personnel resources required for contract performance; e.g., facility, materials, equipment, and vehicles. (If necessary, relocation of Government-furnished equipment and materials from the incumbent's facility to your facility will be the responsibility of the Government).

(3) You should include the initial staffing skill mix you propose. Indicate the number of individuals of each level you propose to employ for each of the positions described in Attachment 6, as well as any other positions you deem appropriate. The estimated staffing in Attachment 6 is provided for your information only and is not restrictive for proposal purposes. You should propose the staff that is optimum for contract performance and meets the level of effort specified, and provide rationale therefor.

(4) A description of the recruitment and employment methods your company will use to staff the contract during the contract term (initial

period and all optional periods). Additionally, you should identify specific recruitment plans for those positions you consider will require highly skilled and difficult-to-locate personnel, to include specialists in the following areas:

- Real-Time Simulation Systems
- Operating System Software and I/O Drivers
- Mass Storage Subsystem
- UNIX Kernel
- Capacity Planning
- Technology Advancement
- Communication Networks

For specialists in each of the above areas and others you may propose, you should discuss specific sources of recruitment; sources of advertisement; time frame required to effect hire; and typical problems encountered in filling the vacancies and proposed solutions to these problems. Describe your company's past recruiting experiences with similar skills.

(5) A discussion of your plans for accommodating personnel absences. Also, include your company's programs and policies (awards and incentive programs) for minimizing turnover and retaining experienced personnel.

(6) A description of your training, orientation, and career development plans with regard to new hires, on-board employees, and changing requirements.

(7) A description of your approach to determining non-professional employees compensation levels including a detailed discussion of fringe benefits and leave policies. Itemize the benefits that require employee contributions and the amount of that contribution as a percentage of the total cost of the benefit and of the employee's wage. Describe your policies for establishing the wage levels of any retained incumbent contractor employees and explain the eligibility and vesting for hired incumbent contractor employees for your proposed fringe benefits; e.g., vacation, medical insurance, sick leave, and retirement. Describe how pre-existing medical conditions for incumbents and their dependents will be handled under your health insurance plan. Highlight differences, if any, between the compensation policies for professional and non-professional personnel.

c. Subfactor 3 - Professional Compensation Plan - Include a Professional Compensation Plan for the professional employees proposed to perform all of the SOW except Section C.4 to include salaries and a detailed description of fringe benefits and leave policies. Itemize the benefits that require employee contributions and the amount of that contribution as a percentage of the total cost of the benefit and of the employee's salary. Describe your policy for establishing the salaries of any retained incumbent contractor employees and explain the eligibility and vesting for hired incumbent contractor employees for your proposed fringe benefits; e.g., vacation, medical insurance, sick leave, and retirement. Describe how pre-existing medical conditions for incumbents and their dependents will be handled under your health insurance plan. Your Professional Compensation Plan should be submitted in accordance with FAR 52.222-46 (see L.17

of this RFP). You should include your compensation plans for all professional positions as defined in 29 CFR 541.

d. Subfactor 4 - Operations Plan - This subfactor will be used to evaluate your understanding of the Statement of Work requirements and your approach for meeting these requirements.

Provide your written responses to technical questions set forth in Attachment 13 and address any other areas of the SOW that you consider essential, but which have not been addressed by the technical questions. The questions are designed to solicit specific information in those areas which are of particular concern and importance to the successful performance of this proposed contract. You should provide detailed, clear, concise, and complete answers to the questions.

To facilitate the evaluation process, your responses to the questions should be included in the appropriate Sections (1 through 6) as set forth below.

- (1) General Management
  - Respond to technical questions 1-4.
- (2) Introduction/Background
  - Respond to technical question 1.
- (3) CSCC Operation
  - Describe your approach to providing CSCC operations.
  - Respond to technical questions C.3.1, 1-6.
- (4) Operating Systems Support
  - Describe your approach to providing operations systems support.
  - Respond to technical questions C.3.2, 1-7.
- (5) CSCC Systems Maintenance
  - Describe your approach to systems maintenance.
  - Respond to technical questions C.4, 1-4.
- (6) Communication Networks
  - Describe your approach to communications network support.
  - Respond to technical questions C.5, 1-6.
- (7) Describe your approach to distributed computing and data reduction support.

- (8) Describe your approach to new technology support and documentation.
- (9) Describe your approach to Total Quality Management.
- (10) Describe your approach for controlling costs, insuring the Government receives acceptable products and services within the manhours/costs allotted. Include your approach for ensuring that monthly maintenance costs are invoiced at the lowest cost available to the Government.
- (11) Describe your approach for assigning, prioritizing, and supervising work and monitoring performance.
- (12) Describe your approach for establishing performance measurement criteria for each area in the Statement of Work and for gathering the necessary data to be used for comparing actual performance with the established performance criteria.
- (13) Purchasing Policies and Procedures - Describe your subcontracting/purchasing system policies and procedures including your approach to insuring efficient and effective expenditure of Government funds. Specify who has procurement authority within your company and indicate their dollar level of authority. Indicate whether your company has an approved purchasing system and provide the name of the approving agency and date of the approval. Include a discussion of your approach to specification, development, solicitation preparation, evaluation criteria, selection, award, and subcontract management.

e. Subfactor 5 - Qualifications and Availability of Key Personnel - This subfactor will be used to evaluate the education, experience, and other qualifications of your proposed Key Personnel against their proposed functions/duties and the position qualifications set forth in Attachment 7, Key Personnel Requirements and Attachment 6, Government Estimated Staffing Requirements and Minimum Position Qualifications.

(1) Positions which the Government considers to be "Key" to this effort are so designated in Attachment 7 to this RFP. You shall include a resume for each proposed key position. Each resume should detail the individual's education, experience, and other qualifications for the proposed position. These resumes should be clear, complete, and comprehensive. Please do not use acronyms in these resumes as it sometimes hampers the Government's evaluation.

(2) Your proposal should state the current and proposed salary for each individual and provide signed statements from the individual as evidence of your ability to employ each individual at the proposed salary and fringe benefits.

(3) The capability and knowledge demonstrated by proposed Key Personnel at oral discussions, if held, as well as the findings of any reference checks which are made, may be considered in arriving at final scores.

(4) Your proposal should include references for all proposed Key Personnel relative to their current and previous positions. These references

should be people directly knowledgeable of your proposed Key Personnel's training, experience and performance. You should include names, organizations, and current telephone numbers for these references.

E. BUSINESS PROPOSAL - VOLUME II

1. FACTOR 2 - COST

Under requirements of the Federal Acquisition Regulation (FAR), the Contracting Officer is responsible for determining reasonableness of pricing. To assist in determining whether the prices proposed in your offer under this solicitation are "fair and reasonable," you are required to submit cost or pricing data with your proposal pursuant to FAR 15.804.

AS DETAILED BELOW, ALL COST AND PRICING DATA SHALL BE PROVIDED ON PAPER AND SHOULD ALSO BE ON PERSONAL COMPUTER DISKETTES.

a. Standard Form (SF) 1411 Instructions

You are required to submit cost proposals using fully executed SF 1411, Contract Pricing Proposal Cover Sheet, a copy of which is included as Attachment 2 of this solicitation. Each subcontract expected to exceed \$500,000 shall also be supported by fully executed SF 1411. You shall comply with the full disclosure requirements set forth in Table 15-2, Instructions for Submission of a Contract Pricing Proposal, which begins on page 2 of the SF 1411. Amounts proposed for each cost element must be separately supported as required by Table 15-2. The SF 1411 must be prepared in a manner consistent with your current accounting system and Cost Accounting Standards Disclosure Statement, if applicable.

In the event you elect to claim exemption from this requirement under FAR 15.804-3 on any cost element or line item, you are required to submit with your proposal a fully executed SF 1412, Claim for Exemption from Submission of Certified Cost or Pricing Data, based on established catalog or market prices. A separate SF 1412 must be submitted for each line item exceeding a seven and one-half year total extended price of \$50,000. Complete each SF 1412, including either Section I or Section II as appropriate, in accordance with instructions contained in the SF 1412, a copy of which is included as Attachment 4 of this solicitation.

b. Cost Forms A-F

(1) In addition to SF 1411 requirements, you shall complete and submit the proposal Cost Forms A-F as specified below (examples are at Attachment 5) on paper and on personal computer diskettes. The paper submission of Cost Forms A-F may be printouts from your completed computerized spreadsheets or you may fill in the blanks on copies of the forms provided. These forms are designed to provide NASA with information necessary to evaluate all offerors' proposals on a uniform and consistent basis. Amounts proposed for each cost element must be separately supported by an explanation of the method by which the amount was determined. Insert "N/A" where cost elements on the forms do not apply.



(2) The composition of some forms may require you to classify some proposed elements of cost in a manner that differs from your normal, disclosed, and/or approved estimating and accounting practices. If these cost classifications differ from your established classification system, identify, reconcile, and explain the differences.

THESE FORMS DO NOT NEGATE THE SUBMITTAL REQUIREMENTS OF PARAGRAPH (a) ABOVE.  
COST FORMS A-F ARE IN ADDITION TO PARAGRAPH (a) REQUIREMENTS.

c. Form Submittal Requirements:

	FORMS	PERIOD
Phase-In	SF 1411	Phase-In Period
Year 1	B, F	8/9/93 - 7/31/94
Year 2	B, F	8/1/94 - 7/31/95
Total Initial Contract Period (2 Yrs)	SF 1411, A1	8/1/93 - 7/31/95
Year 3	B, F	8/1/95 - 7/31/96
Year 4	B, F	8/1/96 - 7/31/97
Total First Option to Extend (2 Yrs)	SF 1411, A2	8/1/95 - 7/31/97
Year 5	B, F	8/1/97 - 7/31/98
Year 6	B, F	8/1/98 - 7/31/99
Year 7	B, F	8/1/99 - 7/31/00
Total Second Option to Extend (3 Yrs)	SF 1411, A3	8/1/95 - 7/31/00
Options to Extend 3 - 8 (1 For Each Mo.) (1 For Total)	SF 1411, B* A4, F	8/1/00 - 1/31/01
Options to Increase Level of Effort	SF 1411, E, E1	8/9/93 - 1/31/01
Systems Maintenance Price Pool	SF 1411, E	8/9/93 - 1/31/01
Total - All Proposed Costs	SF 1411, A, C, C1, D	Phase-In- 1/31/01

\*Provide only one Cost Form B if all six months are the same.

d. Computerized Cost Proposal Input Instructions

(1) The Government intends to use an IBM-compatible personal computer with 8 MB RAM and LOTUS 1-2-3 Release 3.1 software to aid in the evaluation of the cost proposal. The offerors and major subcontractors, as defined below, are required to submit cost data on floppy diskettes, two copies, 3-1/2 or 5-1/4 inch, formatted under MS DOS. Cost data, including Cost Forms A-F, must be submitted as a Lotus 1-2-3 spreadsheet or any spreadsheet retrievable under LOTUS 1-2-3, Release 3.1, in formats with the identical data that is supplied on all Government and contractor paper forms.

(2) For your proposal data to be compatible with our evaluation software on Cost Forms A-F, you may change column widths, formats, fonts, etc., but DO NOT MOVE CELLS and DO NOT INSERT OR DELETE ROWS OR COLUMNS (the exception is the line spacing on Form D). Cost Forms A-F must be saved under one file name. It is recommended you request a Government-provided, pre-formatted, high density diskette containing Cost Forms A-F as a LOTUS 1-2-3, Release 2.0 or 3.1, file. Specify diskette size. Appendix A of Exhibit A will be included on the diskette for information only. Delete Appendix A from the diskette submitted to the Government with your proposal. Contact Jeanne Covington at (804) 864-2545 for the diskette.

(3) Each diskette shall have affixed an external label indicating the name of the offeror and the RFP number. Provide with each diskette an index of file contents and applicable ranges.

ALL DISKETTE SUBMISSIONS SHALL BE TRUE SELF-CALCULATING SPREADSHEETS. For example, your straight time hours might show a formula that either directly or by referencing other cells, multiplies positions in a labor category times the productive manhours in a manyear for that category; the "annual total" column on Cost Form F might show the formulas that multiply the monthly charges times the applicable number of months; and each monthly charge might show a formula that multiplies the BMMC times the appropriate status conversion percentage.

e. Definitions and/or Cost Information - The following is provided to aid you in preparing your proposal and Cost Forms A-F:

(1) Direct Productive Level of Effort (LOE) Hours - These are the hours defined in Section B.2.B of the Contract Schedule. You must propose as base effort the direct productive LOE hours set forth in the following table. Provide details on Cost Form B.

	Period	ST Hrs	OT Hrs	Total
Initial Period	8/9/93 - 7/31/95	631,370	10,000	641,370
First Opt. to Extend	8/1/95 - 7/31/97	637,500	10,000	647,500
Second Opt. to Extend	8/1/97 - 7/31/00	956,250	15,000	971,250
3rd-8th Opt. to Extend	8/1/00 - 1/31/01	159,378	0	159,378
		-----	-----	-----
Total		2,384,498	35,000	2,419,498

The total required direct productive LOE hours were derived by multiplying the 170 positions set forth in Attachment 6, Government Estimated Staffing Requirements, by the Government's estimated productive manyear of 1,875 hours to obtain straight time (ST) and then adding 5,000 hours of overtime (OT) per year (Year 1 is factored as the period is approximately 51 weeks). However, it should be clearly understood that the estimated staffing in Attachment 6 is provided for your information only and is NOT restrictive for proposal purposes. You should propose the staff you consider optimum for contract performance. Further, since the number of productive manhours in a manyear can vary among companies, wage determinations, and collective bargaining agreements, you shall propose a staff to meet the Government's level of effort requirements using your own productive manhours per year and your proposed staffing. Show your productive manyear(s) on Cost Form B. If this varies among positions, show each. DO NOT USE THE GOVERNMENT'S ESTIMATED NUMBER OF MANHOURS PER YEAR (1,875) UNLESS IT ACCURATELY REFLECTS YOUR ESTIMATE OF YOUR PRODUCTIVE MANYEAR.

(2) Options for Additional Direct LOE Labor Hours -As set forth in H.19.B. the Government intends to have priced options to increase the direct productive LOE hours during the initial contract period and each of the priced option periods as follows:

	Period	ST Hrs
Initial Period	8/9/93 - 7/31/95	178,125
First Opt. to Extend	8/1/95 - 7/31/97	288,750
Second Opt. to Extend	8/1/97 - 7/31/00	660,000
3rd-8th Opt. to Extend (20,000 each month)	8/1/00 - 1/31/01	120,000
Total		----- 1,246,875

As the projected requirement will be equally distributed among the labor categories of Sr. Systems Analyst, Programmer Analyst II, Computer Systems Administrator, and Data Specialist, Cost Forms E and E1 should be completed using the average labor rates (excluding overtime) for these categories in each applicable base period. If the labor rates (and associated costs) used on Cost Form E differ from those proposed for the basic effort, supporting rationale for the difference must be provided. The negotiated cost and fee per manhour for the options will be set forth in Section H of the resultant contract.

### (3) Labor Rates

A copy of the Register of Wage Determination issued by the Department of Labor for employees under this proposed contract is included in Exhibit F. It should be noted that the wage rates specified therein are minimum rates. It should also be noted that the Wage Determination may not list all labor classes to be employed under this contract. Paragraph (a) of the Section I clause entitled "Service Contract Act of 1965" states that in the event conformable rates must be established for those service employees to be employed under the contract but not listed on the Wage Determination, these conformable wage rates will be the result of a three-party agreement between the employees, Contractor, and the Government.

To assist you in the preparation of your Cost Proposal, listed below are minimum conformable rates that were established under the existing contract, effective February 1, 1992, in accordance with incorporation of WD 78-1030 (R-21), dated September 18, 1991, for various classes of personnel expected to continue under the proposed contract.

The conformed classes of service employees shall be paid the conformed monetary wages and furnished the fringe benefits as stated in the Wage Determination.

<u>Request for Proposal</u> <u>Job Title</u>	<u>DoL Class</u>	<u>WD</u> <u>Minimum</u> <u>Rate</u>	<u>WD</u> <u>Conformed</u> <u>Rate</u>
Communications Systems Specialist I	Technician III	\$11.93	\$14.85
Communications Systems Specialist II	Technician III	\$11.93	\$16.34
Communications Systems Specialist III	Technician III	\$11.93	\$17.97

NOTE: If new conformable rates are established or a new Wage Determination is received prior to the award of the contract, the new conformable rates and Wage Determination will be incorporated prior to or during negotiations.

Any composite hourly rates on Cost Form B must be detailed. Any rate containing shift differential costs should be considered a composite rate. Provide the basis for all proposed rates.

(4) Overtime - You should assume that overtime will be required equally of all direct LOE labor staff. Enter OT on Cost Form B. Provide your company history on OT usage and address your system for recording OT.

(5) Overtime Premium - For all proposed overtime, indicate the costs for overtime premium, the base, and the application. Enter OT premium on Cost Form B.

(6) Uncompensated Overtime - The use of uncompensated overtime, including undercompensated overtime, is neither encouraged nor discouraged. Guidelines for any proposals of uncompensated overtime are included at L.33 in the form of draft NASA FAR Supplement Clause 18-37.171-7 entitled "Identification of Uncompensated Overtime." If you propose uncompensated overtime, provide historical data showing the amount of uncompensated overtime worked by your employees on similar contracts.

(7) Escalation - You should discuss the rationale for escalation proposed for any cost element, including derivation and the company's escalation history for the past three years. Enter proposed labor rate escalation for each year on Cost Form B. In determining the reasonableness of the proposed escalation, consideration may be given to various references, such as, industry averages and projections, area economic conditions, NASA Headquarters guidelines, company history, and escalation on comparable contracts.

(8) Productive Non-Level-of-Effort Labor - For proposal evaluation purposes, this category is defined in B.2.C. (Some personnel may be apportioned between LOE and non-LOE labor.) This category is to be detailed on Cost Form C and shall include:

1. Labor that will be costed as direct by your accounting systems but is not "direct productive level-of-effort" as defined in B.2.B and (e)(1) above. List positions and costs individually.

2. Labor that will be costed by allocation through an overhead pool. List individually all positions and costs for those positions dedicated 100 percent to the proposed contract. Non-dedicated labor may be listed as a unit.

(9) Payroll Additives/Taxes - These costs (FICA, FUI, SUI, worker's compensation, and general liability insurance) are applicable to both direct productive LOE labor costs and productive non-LOE labor costs. Written details shall delineate bases, rates, and calculations and if these factors vary among the years, explain. The elements are to be itemized on Cost Forms C and C1.

(10) Fringe Benefits - These costs (insurances, retirement costs, savings plans, paid absences, etc.) are applicable to both direct productive LOE labor costs and productive non-LOE labor costs. Written details shall delineate bases, rates, and calculations and if these factors vary among the years, explain. The discussion must provide details to allow analysis and comparison to the total compensation plan detailed in your technical proposal. The elements are to be itemized on Cost Forms C and C1. Show how applicable WD minimum requirements are met.

NOTE: If it is your normal practice to account for the costs in (7) - (9) above as direct costs, or if you intend to include these costs in a pool or pools dedicated to the proposed contract only, estimate the costs for each element and enter on the forms. If these costs are part of a fringe benefit or overhead pool that will allocate to other cost objectives as well as to the proposed contract, and you normally estimate such costs by projecting rates to be applied to a base such as direct labor cost, estimate the costs according to the normal practice and divide the costs among the various individual elements in a logical manner.

(11) Subcontracts - For purposes of this RFP, "subcontract" means all work required by the proposed contract that is not performed directly by the prime Contractor, regardless of dollar value. For each proposed subcontract, show the degree of competition, type of contract, and extent and results of evaluation. Subcontract costs are to be identified as specified on Cost Forms A-F. Each major subcontractor, defined as one providing a portion of the direct productive level of effort or that is at least \$500,000 in total 7 1/2-year value, shall complete SF 1411, Cost Forms A-F, and cost details as set forth in paragraphs E.1.a-d above.

A LOE subcontract is one providing a portion of the direct productive LOE. Integrate LOE subcontract costs into Cost Forms A - A4 for the Prime by showing direct productive LOE hours and costs under Direct Labor with details on Cost Form B. All other costs associated with the LOE subcontracts shall be summarized by subcontractor and shown under Other Direct Costs, LOE Subcontract Non-Direct-Labor Costs.

NOTE: The Service Contract Act and the related Wage Determination (Exhibit F) apply to any subcontracts for those classes of labor covered by the Act.

Further details for non-LOE subcontracts are provided below.

(12) Systems Maintenance - Reference Paragraph H.18 of the Contract Schedule. This category refers to the items listed in Appendix A of Exhibit A. Each of these items are considered an individual line item. A firm fixed price (FFP) shall be listed on Cost Form F for each line item and shall be supported pursuant to the requirements set forth in E.1.a-d above. This FFP shall be based on the status in Appendix A of Exhibit A specified for each line item and shall include burden and profit for only the business entity performing the hands-on work of that line item. (If a line item is to be provided by the prime, the FFP shall include all burden and/or fee. If a line item is to be provided through a subcontract, the FFP shall be the price paid to the subcontractor; any burden and/or fee added by the prime will be shown under appropriate other categories on Forms A - A4 and/or D.) The FFP of each line item

shall be shown as the charge for each month or partial month, as applicable, and as the annual total. If the FFP for any item is proposed at \$0, it should be indicated as such. The annual FFP totals on Cost Form F shall be carried forward to the line entitled Systems Maintenance on Cost Form A for each corresponding year. You shall also enter on Form F your proposed Basic Monthly Maintenance Charge (BMMC), as defined in H.18 of the Contract Schedule, for each hardware and environmental control system item listed in Appendix A of Exhibit A. Provide your proposed status conversion percentages associated with the maintenance coverage addressed in Section C.4.1 of the SOW in the cost details of Volume 2. The BMMC and status conversion schedule may be negotiated and will be inserted into the cost-plus-award-fee Contract Schedule.

(13) Specified Other Direct Costs (ODC) - These are estimates for materials and equipment purchases (80%), software purchases (3%), travel (4%), training (3%), and fixed-price specialized services (10%) that are directly required by the Statement of Work (Ref. B.4). Escalation is included in these amounts, but any company burden is in addition. To cover these items your proposal should include the amounts set forth in the table below:

	Period	Costs
Initial Period	8/9/93 - 7/31/95	\$4,450,000
First Opt. to Extend	8/1/95 - 7/31/97	5,224,000
Second Opt. to Extend	8/1/97 - 7/31/00	8,599,000
3rd-8th Opt. to Extend	8/1/00 - 1/31/01	1,534,200
		-----
Total		\$19,807,200

(14) Company Specific Other Direct Costs - This category is intended to provide a cost element that can be used to estimate costs that will be charged directly to this one contract but are not easily identified with other elements of cost listed above. Itemize company unique ODC on Cost Form D and carry the total to Cost Forms A - A4. This category might include such categories as, subcontract burden, recruiting and relocation costs, uniforms, and computer use time charges, as well as the categories defined below.

(a) Travel and Training - These costs are the result of your company programs and policies and are not directly required by the SOW.

(b) Buildings and Related Costs - These costs are related to your facility, reference paragraph L.37. This should include, as applicable, rent or depreciation or an allocated portion thereof, property taxes, insurance, costs of modifications that will be charged to the proposed contract, utilities, telephone service, T-1 line charge, maintenance of building and grounds, furniture/fixtures, and security.

(c) Capital/Leased Equipment Costs - These costs are related to vehicles and any other tangible capital equipment. Fully explain the costs and provide the rationale for the methods of acquisition selected. Provide the terms of any proposed leases.

(d) City/County Business License Tax - You should consult applicable local jurisdictions to determine any applicable business license taxes

and the City of Hampton regarding personnel to be housed at LaRC even if your facility will not be located in Hampton.

(15) General and Administrative Expense (G&A) - Specify the G&A costs on Cost Forms A - A4. Identify separately the rates used to determine the costs and the base(s) to which the rates are applied. Provide the composition of the proposed G&A pool(s) and the allocation base(s). Provide your G&A rate history for the past three years and the bases for the projections made in your proposal.

(16) Facilities Capital Cost of Money (FCCOM) - You may choose to include the cost of money for facilities capital in their proposal as authorized by Cost Accounting Standards (CAS) 414 and 417 and FAR 31.205-10. However, it is NASA policy, reference NASA Far Supplement 18-15.970-3, to reduce the fee/profit objective dollar-for-dollar for imputed FCCOM. In the event an offeror does not propose FCCOM, Clause 52.215-31 WAIVER OF FACILITIES CAPITAL COST OF MONEY (SEPT 1987) will be included in the contract. Enter FCCOM on Cost Forms A - A4.

(17) Fee - You shall enter on Cost Forms A - A4 the amounts of fees you propose for the contract and provide the rationale for determining the proposed amounts. It is anticipated an award fee pool will be negotiated for the LOE and related costs, including Specified Other Direct Costs, for the initial period and the first and second Options To Extend. This award fee pool will also include any fee on systems maintenance that may not have been included in the line item price. Fixed fees will be negotiated for Options to Extend for Periods 3 - 8.

(18) Systems Maintenance Price Pool - The contract will contain, at H.20, a defined cost pool of \$35,000,000 to effect system maintenance changes. This is an all inclusive number and is already included on the cost forms where applicable.

(19) Phase-In - If Phase-In costs are proposed, they shall be itemized on Cost Form A. Cost Forms B-F are not required for phase-in. Support shall be provided pursuant to paragraph a above.

## 2. FACTOR 3 - RELEVANT EXPERIENCE AND PAST PERFORMANCE

You should submit a summary of your experience and performance history with respect to meeting technical objectives on schedule and within cost on related efforts. You should also submit a summary of the experience and performance history on related efforts of proposed major subcontractors. Experience is the accomplishment of work which is comparable or related to the work or effort required by this RFP. This factor includes the evaluation of overall corporate or offeror experience and past performance, but not the experience and performance of individuals who are proposed to be involved with work pursuant to this RFP. You are cautioned that omissions or an inaccurate or inadequate response to this evaluation factor will have a negative effect on your overall evaluation. Your summary should include the following for each related contract: contract number, contracting agency, telephone number, point of contact at agency, contract type, dollar value, dates contract began and ended or ends, description of contract work and explanation of relevance of work to this RFP, and

actual delivery and cost performance versus delivery and cost agreed to in contract. For award fee contracts, separately state in dollars the base fee and award fee available and the award fee actually received.

### 3. FACTOR 4 - OTHER CONSIDERATIONS

a. Subfactor 1 - Subcontracting Plan for Small Business and Small Disadvantaged Business Concerns--The offeror (except small businesses) shall include a proposed subcontracting plan for small business and small disadvantaged business concerns for consideration in the source evaluation and selection process. The planned subcontracting amounts should be broken out and provided for each contract period, for a total contract duration of 7 1/2 years. This plan must comply with the Section I clause entitled, "Small Business and Small Disadvantaged Business Subcontracting Plan," and should provide for the small disadvantaged business goal that is equal to or greater than the goal referenced in L.39.

b. Subfactor 2 - Financial Condition and Capability--In order for your financial responsibility to be evaluated, you must submit profit and loss statements for your last three Fiscal Years and balance sheets as of the end of your last three Fiscal Years. In addition, indicate your current credit rating, lines of credit, sources of funds, and proposed means for financing any resulting contract.

c. Subfactor 3 - Facility--Your attention is directed to the requirements of L.37. Include evidence that you have or will have a facility by contract start date (August 9, 1993). You should specify the size, general description, and interior layout of the local facility (layout drawings should be to scale). You should provide evidence of your proposed lease or purchase arrangements including costs, your plan for maintaining the operational status of the facility, and any options for future expansion of the facility to house all or a portion of the work force contained in the options set forth in H.19. Members of the Source Evaluation Board may inspect the off-site facility.

d. Subfactor 4 - Contract Terms and Conditions--You should cite any proposed exceptions that you have to the terms and conditions, together with an explanation of the basis therefor, and your proposed means for resolving any such exceptions should be discussed. This same information for any additive terms and conditions should be provided.

## SECTION M - EVALUATION FACTORS FOR AWARD

### M.1 METHOD OF EVALUATION

A. Proposals received in response to this RFP will be evaluated by a NASA Source Evaluation Board (SEB) in accordance with NASA Handbook (NHB) 5103.6B. Mission Suitability will be scored. Cost, Relevant Experience and Past Performance, and Other Considerations will not be scored. The Source Selection Official, after consultation with the SEB and other advisors, will select the offeror (or offerors) for final negotiation which he considers can perform the contract in a manner most advantageous to the Government, all factors considered.



B. Alternate Evaluation Procedures--The SEB may use evaluation procedures outlined in NHB 5103.6B or may use alternate procedures outlined in the NASA Streamlined Acquisition Handbook which dispense with initial scoring. Under the alternate procedure, proposals are initially reviewed to eliminate unacceptable proposals and determine strong and weak points, develop questions and proceed directly to written and/or oral discussion. Following questions, "Best and Final Offers," are requested. Based on the "Best and Final Offers," proposals are reexamined and scored.

C. Evaluation will be on the basis of material presented and substantiated in your proposal and not on the basis of what may be implied. Vague statements will be interpreted as a lack of understanding on the part of the offeror and/or inability to demonstrate adequate qualifications. Your attention is directed to Section L, L.40, which provides important instructions concerning proposal preparation.

## M.2 EVALUATION FACTORS

A. Factor 1 - Mission Suitability--The content of this section of your proposal will provide the basis for evaluation of your response to the technical requirements of the RFP. NOTE: Proposal risks associated with schedule, performance, and technical aspects of the proposal will be assessed. The evaluation of risk will consider the probability of success, the impact of failure, and the alternatives available to meet the requirements. The Mission Suitability Subfactors to be considered and scored in the evaluation of your Mission Suitability Proposal are set forth below:

### 1. Subfactor 1 - Organization

This subfactor will be used to evaluate the proposed adequacy and suitability of the proposed organization for performing the work efficiently and effectively. The following items will be evaluated:

- a. Corporate/company/team organization and reporting relationships within the company/team and the role each will play in the contract management and performance.
- b. Contract unit's organization, the placement and reporting relationship of any subcontractor or team member within the contract unit, and subcontractor/team effort integration with the prime effort.
- c. Distribution of management and administrative effort.
- d. Designation of key personnel and supporting rationale.
- e. Duties, responsibilities, and authority of key positions.
- f. Proposed subcontracting and/or consulting agreements, including the rationale for the arrangement, the qualifications of the subcontractor or team members, nature and extent of effort, and commitment of subcontractor to this effort.

g. Proposed interfaces with other elements of your company, the Government, and any subcontractors or team members.

h. Availability of corporate resources or support proposed for this contract effort.

## 2. Subfactor 2 - Phase-In, Staffing, Continuing Personnel Management

Under this subfactor an evaluation will be made of your plans for minimizing changeover difficulties, maximizing continuity of services to the Government, and maintaining competent staffing during the term of the contract. The following items will be evaluated:

a. Effectiveness of your phase-in schedule including your approach to meeting each milestone in Attachment 14.

The following items will be evaluated as they pertain to the support service staff necessary to perform the SOW except Section C.4 Systems Maintenance.

b. The effectiveness of your plan to fully staff the contract by contract start (August 9, 1993) with qualified personnel and make operational the non-personnel resources, e.g., facility, materials, equipment, and vehicles. Rationale for the proposed mix of personnel sources and soundness of anticipated incumbent work force retention.

c. The effectiveness and appropriateness of your proposed staffing skill mix.

d. The effectiveness of your recruitment and employment methods proposed to staff the contract during the contract term for all personnel. Effectiveness of specific recruitment plans for those positions for which personnel are considered difficult-to-locate.

e. Your plans for accommodating personnel absences. Your programs and policies for minimizing turnover and retaining experienced personnel.

f. Your training, orientation, and career development plans.

g. Your proposed non-professional compensation will be evaluated regarding the suitability and equitableness of the proposed compensation structure (both wages and fringe benefits) to assure that highly qualified personnel are attracted to the effort and their continued interest and employment are likely to occur. Non-professional compensation will also be evaluated to assure that the proposed compensation reflects an understanding of the requirements to be performed.

## 3. Subfactor 3 - Professional Compensation Plan

Your Professional Compensation Plan for professional employees performing the SOW except Section C.4 will be evaluated regarding the suitability and equitability of the proposed compensation structure (both salaries and fringe

benefits) to assure that highly qualified personnel are attracted to the effort and their continued interest and employment are likely to occur. The Professional Compensation Plan will also be evaluated to assure that the proposed compensation reflects an understanding of the requirements to be performed.

#### 4. Subfactor 4 - Operations Plan

Under this subfactor, an evaluation will be made of the effectiveness of your management and technical approach to accomplishing the work described in the Statement of Work. The following items will be evaluated:

- a. Your responses to the technical questions (Ref. Attachment 13) and discussion of any other areas of the SOW that you consider essential but which have not been addressed by the technical questions will be evaluated.
- b. Approach to distributed computing and data reduction support.
- c. Approach to new technology support and documentation.
- d. Approach for Total Quality Management.
- e. Efficiency of your cost control system.
- f. Effectiveness of your approach for assigning, prioritizing, and supervising work and monitoring performance.
- g. The soundness of your purchasing and subcontracting policies and procedures.
- h. Effectiveness of your performance measurement system.

#### 5. Subfactor 5 - Qualifications and Availability of Key Personnel

This subfactor will be used to evaluate the education, experience, and other qualifications of your proposed Key Personnel against their proposed functions/duties and the position qualifications set forth in Attachment 7, Key Personnel Requirements and Attachment 6, Government Estimated Staffing Requirements and Minimum Position Qualifications. The evidence of availability of key personnel at reasonable compensation level will be evaluated. Consideration will be given to the capability and knowledge demonstrated by proposed Key Personnel at oral discussions, if held, as well as the findings of any reference checks which are made.

B. Factor 2 - Cost--An analysis of the proposed cost and fee for the basic and priced option periods, and for the options for additional labor will be conducted to determine their validity and the extent to which they reflect performance addressed in the Mission Suitability proposal. Proposal risk will be considered in the Cost Factor evaluation. An assessment will be made of the offeror's capability to accomplish the contract objectives within the estimated cost proposed. The reasonableness of the proposed award fee and fixed fee will also be determined in accordance with the guidelines set forth in NASA FAR Supplement 18-15.902. A probable cost will be developed in accordance with NHB

5103.6 for each proposal in the competitive range or, in the event the Alternate Evaluation Procedures are used, for each acceptable proposal. The cost proposal may be used as an aid to determine the offeror's understanding of Mission Suitability Requirements.

C. Factor 3 - Relevant Experience and Past Performance--Experience and past performance will be assessed to determine the extent to which contract objectives (including technical, schedule and cost) have been achieved on related efforts. Each performance evaluation and risk assessment will consider the number and severity of problems, the effectiveness of corrective actions taken, and the overall work record. The assessment of performance risk is not intended to be a simple arithmetic function of an offeror's performance on a list of contracts; but rather the information deemed most relevant and significant will receive the greatest consideration. Experience will be viewed as the demonstrated accomplishment of work which is comparable and relevant to the objectives of this procurement. This factor includes the evaluation of overall corporate or offeror experience and past performance, including major subcontractors, but not the experience and performance of individuals who are proposed to be involved in the required work. Independent verification will be made as needed.

D. Factor 4 - Other Considerations--The following subfactors will be evaluated based on information presented in your proposal and all other information available to NASA.

1. Subfactor 1 - Small Business and Small Disadvantaged Business Subcontracting Plan--Your plan will be evaluated to determine the extent of the offeror's compliance with NASA policy to afford maximum practicable opportunity for small and small disadvantaged business concerns to participate in Government contracts. This subfactor will consider the extent that the proposed small disadvantaged business goal is greater or less than the goal stated in L.39. A proposed small disadvantaged goal less than the goal referenced in L.39, will have a negative effect on your evaluation of this subfactor. NOTE: This subfactor does not apply to small business offerors.

2. Subfactor 2 - Financial Condition and Capability--Your financial position (and that of all proposed major subcontractors) will be evaluated with regard to its soundness and to insure that adequate financial resources are available to perform this effort for the total potential period of performance.

3. Subfactor 3 - Facility--Your proposed off-site facility will be evaluated to determine the appropriateness of the facility's size, location, and lay-out to house the necessary personnel and equipment, to facilitate the accomplishment of the contract effort. Any lease/purchase agreement will also be reviewed.

4. Subfactor 4 - Contract Terms and Conditions--Your proposal will be reviewed to determine the extent to which terms and conditions as set forth in the RFP are accepted. Your rationale for and the acceptability of any exceptions will be evaluated.

## M.3 RELATIVE IMPORTANCE OF EVALUATION FACTORS

A. The weights to be used in the scoring of the Mission Suitability Subfactors are presented below:

<u>Subfactors</u>	<u>Weights</u>
1. Organization	15%
2. Phase-In, Initial Staffing, and Continuing Personnel Management	20%
3. Total Compensation Plan	15%
4. Operations Plan	35%
5. Qualifications and Availability of Key Personnel	<u>15%</u>
	100%

The numerical weights assigned to the above subfactors of those evaluation areas. The weights will be utilized only as a guide.

B. Overall, in the selection of a Contractor for negotiation leading to contract award, Mission Suitability, Cost, Relevant Experience and Past Performance and Other Considerations will be of essentially equal importance. Within Factor 2, Cost, the costs associated with the options for the additional level-of-effort and the six 1-month option periods may be considered of less significance than the costs for the initial period (including phase-in) and the first and second priced options to extend the contract term.

## ATTACHMENT 1

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 LANGLEY RESEARCH CENTER  
 HAMPTON, VIRGINIA 23665-5225

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that, to the best of my knowledge and belief, the cost or pricing data (as defined in Section 15.801 of the Federal Acquisition Regulation (FAR) and required under FAR Subsection 15.804-2) submitted, either actually or by specific identification in writing, to the Contracting Officer or the Contracting Officer's representative in support of \_\_\_\_\_\* are accurate, complete, and current as of \_\_\_\_\_\*\*  
 day month year

This certification includes the cost or pricing data supporting any advance agreements and forward pricing rate agreements between the offeror and the Government that are part of the proposal.

FIRM \_\_\_\_\_

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

\_\_\_\_\_  
 Date of Execution \*\*\*

\*Identify the proposal, quotation, request for price adjustment, or other submission involved, giving the appropriate identifying number (e.g., RFP No.).

\*\*Insert the day, month, and year when price negotiations were concluded and the price agreement was reached.

\*\*\*Insert the day, month, and year of signing, which should be as close as practicable to the date when the price negotiations were concluded and the contract price was agreed to.

<b>CONTRACT PRICING PROPOSAL COVER SHEET</b>		1. SOLICITATION/CONTRACT/MODIFICATION NO.	FORM APPROVED OMB NO. 9000-0013
NOTE: This form is used in contract actions if submission of cost or pricing data is required. (See FAR 15.804-6(b))			
2. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)		3A. NAME AND TITLE OF OFFEROR'S POINT OF CONTACT	3B. TELEPHONE NO.
4. TYPE OF CONTRACT ACTION (Check)			
<input type="checkbox"/> A. NEW CONTRACT		<input type="checkbox"/> D. LETTER CONTRACT	
<input type="checkbox"/> B. CHANGE ORDER		<input type="checkbox"/> E. UNPRICED ORDER	
<input type="checkbox"/> C. PRICE REVISION/REDETERMINATION		<input type="checkbox"/> F. OTHER (Specify)	
5. TYPE OF CONTRACT (Check)		6. PROPOSED COST (A+B=C)	
<input type="checkbox"/> FFP <input type="checkbox"/> CPFF <input type="checkbox"/> CPIF <input type="checkbox"/> CPAF <input type="checkbox"/> FPI <input type="checkbox"/> OTHER (Specify)		A. COST	B. PROFIT/FEE
		\$	\$
7. PLACE(S) AND PERIOD(S) OF PERFORMANCE		C. TOTAL	
		\$	

8. List and reference the identification, quantity and total price proposed for each contract line item. A line item cost breakdown supporting this recap is required unless otherwise specified by the Contracting Officer. (Continue on reverse, and then on plain paper, if necessary. Use same headings.)

A. LINE ITEM NO.	B. IDENTIFICATION	C. QUANTITY	D. TOTAL PRICE	E. REF.

9. PROVIDE NAME, ADDRESS, AND TELEPHONE NUMBER FOR THE FOLLOWING (If available)

A. CONTRACT ADMINISTRATION OFFICE	B. AUDIT OFFICE

10. WILL YOU REQUIRE THE USE OF ANY GOVERNMENT PROPERTY IN THE PERFORMANCE OF THIS WORK? (If "Yes," identify)	11A. DO YOU REQUIRE GOVERNMENT CONTRACT FINANCING TO PERFORM THIS PROPOSED CONTRACT? (If "Yes," complete Item 11B)	11B. TYPE OF FINANCING (v one)
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> ADVANCE PAYMENTS <input type="checkbox"/> PROGRESS PAYMENTS <input type="checkbox"/> GUARANTEED LOANS
12. HAVE YOU BEEN AWARDED ANY CONTRACTS OR SUBCONTRACTS FOR THE SAME OR SIMILAR ITEMS WITHIN THE PAST 3 YEARS? (If "Yes," identify item(s), customer(s) and contract number(s))	13. IS THIS PROPOSAL CONSISTENT WITH YOUR ESTABLISHED ESTIMATING AND ACCOUNTING PRACTICES AND PROCEDURES AND FAR PART 31 COST PRINCIPLES? (If "No," explain)	
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	

14. COST ACCOUNTING STANDARDS BOARD (CASB) DATA (Public Law 91-379 as amended and FAR PART 30)

A. WILL THIS CONTRACT ACTION BE SUBJECT TO CASB REGULATIONS? (If "No," explain in proposal)	B. HAVE YOU SUBMITTED A CASB DISCLOSURE STATEMENT (CASB DS-1 or 2)? (If "Yes," specify in proposal the office to which submitted and if determined to be adequate)
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
C. HAVE YOU BEEN NOTIFIED THAT YOU ARE OR MAY BE IN NON-COMPLIANCE WITH YOUR DISCLOSURE STATEMENT OR COST ACCOUNTING STANDARDS? (If "Yes," explain in proposal)	D. IS ANY ASPECT OF THIS PROPOSAL INCONSISTENT WITH YOUR DISCLOSED PRACTICES OR APPLICABLE COST ACCOUNTING STANDARDS? (If "Yes," explain in proposal)
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO

This proposal is submitted in response to the RFP, contract, modification, etc. in Item 1 and reflects our best estimates and/or actual costs as of this date and conforms with the instructions in FAR 15.804-6(b) (2), Table 15-2. By submitting this proposal, the offeror, if selected for negotiation, grants the contracting officer or an authorized representative the right to examine, at any time before award, those books, records, documents and other types of factual information, regardless of form or whether such supporting information is specifically referenced or included in the proposal as the basis for pricing, that will permit an adequate evaluation of the proposed price.

15. NAME AND TITLE (Type)	16. NAME OF FIRM
17. SIGNATURE	18. DATE OF SUBMISSION

TABLE 15-2 INSTRUCTIONS FOR SUBMISSION OF A CONTRACT PRICING PROPOSAL\*

183

1. SF 1411 provides a vehicle for the offeror to submit to the Government a pricing proposal of estimated and/or incurred costs by contract line item with supporting information, adequately cross-referenced, suitable for detailed analysis. A cost-element breakdown, using the applicable format prescribed in 7A, B, or C below, shall be attached for each proposed line item and must reflect any specific requirements established by the contracting officer. Supporting breakdowns must be furnished for each cost element, consistent with offeror's cost accounting system. When more than one contract line item is proposed, summary total amounts covering all line items must be furnished for each cost element. If agreement has been reached with Government representatives on use of forward pricing rates/factors, identify the agreement, include a copy, and describe its nature. Depending on offeror's system, breakdowns shall be provided for the following basic elements of cost, as applicable:

**Materials**--Provide a consolidated priced summary of individual material quantities included in the various tasks, orders, or contract line items being proposed and the basis for pricing (vendor quotes, invoice prices, etc.). Include raw materials, parts, components, assemblies, and services to be produced or performed by others. For all items proposed, identify the item and show the source, quantity, and price.

**Competitive Methods**--For those acquisitions (e.g., subcontracts, purchase orders, material orders, etc.) over \$500,000 priced on a competitive basis, also provide data showing degree of competition, and the basis for establishing the source and reasonableness of price. For interorganizational transfers priced at other than cost of the comparable competitive commercial work of the division, subsidiary, or affiliate of the contractor, explain the pricing method (see 31.205-26(e)).

**Established Catalog or Market Prices/Prices Set by Law or Regulation**--When an exemption from the requirement to submit cost or pricing data is claimed, whether the item was produced by others or by the offeror, provide justification for the exemption as required by 15.804-3(e).

**Noncompetitive Methods**--For those acquisitions (e.g., subcontracts, purchase orders, material orders, etc.) over \$500,000 priced on a noncompetitive basis, also provide data showing the basis for establishing source and reasonableness of price. For standard commercial items fabricated by the offeror that are generally stocked in inventory, provide a separate cost breakdown if priced based on cost. For interorganizational transfers priced at cost, provide a separate breakdown of cost by elements. As required by 15.806-2(a), provide a copy of cost or pricing data submitted by the prospective source in support of each subcontract, or purchase order that is either (i) \$1,000,000 or more, or (ii) both more than \$500,000 and more than 10 percent of the prime contractor's proposed price. The contracting officer may require submission of cost or pricing data in support of proposals in lower amounts. Submit the results of the analysis of the prospective source's proposal as required by 15.806. When the submission of a prospective source's cost or pricing data is required as described above, it shall be included as part of the offeror's initial pricing proposal.

**Direct Labor**--Provide a time-phased (e.g., monthly, quarterly, etc.) breakdown of labor hours, rates, and cost by appropriate category, and furnish bases for estimates.

**Indirect Costs**--Indicate how offeror has computed and applied offeror's indirect costs, including cost breakdowns, and showing trends and budgetary data, to provide a basis for evaluating the reasonableness of proposed rates. Indicate the rates used and provide an appropriate explanation.

**Other Costs**--List all other costs not otherwise included in the categories described above (e.g., special tooling, travel, computer and consultant services, preservation, packaging and packing, spoilage and rework, and Federal excise tax on furnished articles) and provide bases for pricing.

**Royalties**--If more than \$250, provide the following information on a separate page for each separate royalty or license fee: name and address of licensor; date of license agreement; patent numbers, patent application serial numbers, or other basis on which the royalty is payable; brief description (including any part or model numbers of each contract item or component on which the royalty is payable); percentage or dollar rate of royalty per unit; unit price of contract item; number of units; and total dollar amount of royalties. In addition, if specifically requested by the contracting officer, provide a copy of the current license agreement and identification of applicable claims of specific patents. (See FAR 27.204 and 31.205-37).

**Facilities Capital Cost of Money**--When the offeror elects to claim facilities capital cost of money as an allowable cost, the offeror must submit Form CASB-CMB and show the calculation of the proposed amount (see FAR 31.205-10).

2. As part of the specific information required, the offeror must submit with offeror's proposal, and clearly identify as such, cost or pricing data (that is, data that are verifiable and factual and otherwise as defined at FAR 15.801). In addition, submit with offeror's proposal any information reasonably required to explain offeror's estimating process, including--

a. The judgmental factors applied and the mathematical or other methods used in the estimate, including those used in projecting from known data; and

b. The nature and amount of any contingencies included in the proposed price.

3. Whenever the offeror has incurred costs for work performed before submission of proposal, those costs must be identified in the offeror's cost/price proposal.

4. There is a clear distinction between submitting cost or pricing data and merely making available books, records, and other documents without identification. The requirement for submission of cost or pricing data is met when all accurate cost or pricing data reasonably available to the offeror have been submitted, either actually or by specific identification, to the contracting officer or an authorized representative. As later information comes into the offeror's possession, it should be promptly submitted to the contracting officer. The requirement for submission of cost or pricing data continues up to the time of final agreement on price.

5. In submitting offeror's proposal, offeror must include an index, appropriately referenced, of all the cost or pricing data and information accompanying or identified in the proposal. In addition, any future additions and/or revisions, up to the date of agreement on price, must be annotated on a supplemental index.

\*Federal Acquisition Regulation, paragraph 15.804-6(b).



6. By submitting offeror's proposal, the offeror, if selected for negotiation, grants the contracting officer or an authorized representative the right to examine, at any time before award, those books, records, documents, and other types of factual information, regardless of form or whether such supporting information is specifically referenced or included in the proposal as the basis for pricing, that will permit an adequate evaluation of the proposed price.

7. As soon as practicable after final agreement on price, but before the award resulting from the proposal, the offeror shall, under the conditions stated in FAR 15.804-4, submit a Certificate of Current Cost or Pricing Data.

8. HEADINGS FOR SUBMISSION OF LINE-ITEM SUMMARIES:

A. New Contracts (including Letter contracts).

COST ELEMENTS	PROPOSED CONTRACT ESTIMATE-TOTAL COST	PROPOSED CONTRACT ESTIMATE-UNIT COST	REFERENCE
(1)	(2)	(3)	(4)

Under Column (1)--Enter appropriate cost elements.

Under Column (2)--Enter those necessary and reasonable costs that in offeror's judgment will properly be incurred in efficient contract performance. When any of the costs in this column have already been incurred (e.g., under a letter contract or unpriced order), describe them on an attached supporting schedule. When preproduction or startup costs are significant, or when specifically requested to do so by the contracting officer, provide a full identification and explanation of them.

Under Column (3)--Optional, unless required by the contracting officer.

Under Column (4)--Identify the attachment in which the information supporting the specific cost element may be found. Attach separate pages as necessary.

B. Change Orders Modifications, and Claims.

COST ELEMENTS	ESTIMATED COST OF ALL WORK DELETED	COST OF DELETED WORK ALREADY PERFORMED	NET COST TO BE DELETED	COST OF WORK ADDED	NET COST OF CHANGE	REFERENCE
(1)	(2)	(3)	(4)	(5)	(6)	(7)

Under Column (1)--Enter appropriate cost elements.

Under Column (2)--Include (i) current estimates of what the cost would have been to complete deleted work not yet performed, and (ii) the cost of deleted work already performed.

Under Column (3)--Include the incurred cost of deleted work already performed, actually computed if possible, or estimated in the contractor's accounting records. Attach a detailed inventory of work, materials, parts, components, and hardware already purchased, manufactured, or performed and deleted by the change, indicating the cost and proposed disposition of each line item. Also, if offeror desires to retain these items or any portion of them, indicate the amount offered for them.

Under Column (4)--Enter the net cost to be deleted which is the estimated cost of all deleted work less the cost of deleted work already performed. Column (2) less Column (3) = Column (4).

Under Column (5)--Enter the offeror's estimate for cost of work added by the change. When nonrecurring costs are significant, or when specifically requested to do so by the contracting officer, provide a full identification and explanation of them. When any of the costs in this column have already been incurred, describe them on an attached supporting schedule.

Under Column (6)--Enter the net cost of change which is the cost of work added, less the net cost to be deleted. When this result is negative, place the amount in parentheses. Column (4) less Column (5) = Column (6).

Under Column (7)--Identify the attachment in which the information supporting the specific cost element may be found. Attach separate pages as necessary.

C. Price Revision/Redetermination.

CUTOFF DATE	NUMBER OF UNITS COMPLETED	NUMBER OF UNITS TO BE COMPLETED	CONTRACT AMOUNT	REDETERMINATION PROPOSAL AMOUNT	DIFFERENCE
(1)	(2)	(3)	(4)	(5)	(6)

COST ELEMENTS	INCURRED COST- PREPRODUCTION	INCURRED COST- COMPLETED UNITS	INCURRED COST- WORK IN PROGRESS	TOTAL INCURRED COST	ESTIMATED COST TO COMPLETE	ESTIMATED TOTAL COST	REFERENCE
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

Under Column (1)--Enter the cutoff date required by the contract if applicable.

Under Column (2)--Enter the number of units completed during the period for which experienced costs of production are being submitted.

Under Column (3)--Enter the number of units remaining to be completed under the contract.

Under Column (4)--Enter the cumulative contract amount.

Under Column (5)--Enter the offeror's redetermination proposal amount.

Under Column (6)--Enter the difference between the contract amount and the redetermination proposal amount.

When this result is negative, place the amount in parenthesis. Column (4) less Column (5) = Column (6).

Under Column (7)--Enter appropriate cost elements. When residual inventory exists, the final costs established under fixed-price-incentive and fixed-price-redeterminable arrangements should be net of the fair market value of such inventory. In support of subcontract costs, submit a listing of all subcontracts subject to repricing action, annotated as to their status.

Under Column (8)--Enter all costs incurred under the contract before starting production and other nonrecurring costs (usually referred to as startup costs) from offeror's books and records as of the cutoff date. These include such costs as preproduction engineering, special plant rearrangement, training program, and any identifiable nonrecurring costs such as initial rework, spoilage, pilot runs, etc. In the event the amounts are not segregated in or otherwise available from offeror's records, enter in this column offeror's best estimates. Explain the basis for each estimate and how the costs are charged on offeror's accounting records (e.g., included in production costs as direct engineering labor, charged to manufacturing overhead, etc.). Also show how the costs would be allocated to the units at their various stages of contract completion.

Under Columns (9) and (10)--Enter in Column (9) the production costs from offeror's books and records (exclusive of preproduction costs reported in Column (8)) of the units completed as of the cutoff date. Enter in Column (10) the costs of work in process as determined from offeror's records or inventories at the cutoff date. When the amounts for work in process are not available in contractor's records but reliable estimates for them can be made, enter the estimated amounts in Column (10) and enter in Column (9) the differences between the total incurred costs (exclusive of preproduction costs) as of the cutoff date and these estimates. Explain the basis for the estimates, including identification of any provision for experienced or anticipated allowances, such as shrinkage, rework, design changes, etc. Furnish experienced unit or lot costs (or labor hours) from inception of contract to the cutoff date, improvement curves, and any other available production cost history pertaining to the item(s) to which offeror's proposal relates.

Under Column (11)--Enter total incurred costs (Total of Column (8), (9), and (10)).

Under Column (12)-- Enter those necessary and reasonable costs that in contractor's judgment will properly be incurred in completion of the remaining work to be performed under the contract with respect to the item(s) to which contractor's proposal relates.

Under Column (13)--Enter total estimated cost (Total of Column (11) and (12)).

Under Column (14)--Identify the attachment in which the information supporting the specific cost element may be found. Attach separate pages as necessary.

REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY  
(FAR 52.203-8) (NOV 1990) ALTERNATE I (SEP 1990)

- (a) Definitions. The definitions at FAR 3.104-4 are hereby incorporated in this provision.
- (b) Certifications. As required in paragraph (c) of this provision, the officer or employee responsible for this offer shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY

(1) I, \_\_\_\_\_  
[Name of certifier]

am the officer or employee responsible for the preparation of this offer and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certificate, I have no information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended\* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement

\_\_\_\_\_  
(solicitation number)

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of \_\_\_\_\_

[Name of offeror]

who has participated personally and substantially in the preparation or submission of this offer has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsection 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity (Continuation Sheet), ENTER NONE IF NONE EXIST) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(4) I agree that, if awarded a contract under this solicitation, the certifications required by subsection 27(e)(1)(B) of the Act shall be maintained in accordance with paragraph (f) of this provision.

\_\_\_\_\_  
[Signature of the officer or employee responsible for the offer and date]

\_\_\_\_\_  
[Typed name of the officer or employee responsible for the offer]

\*Subsections 27(a), (b), and (d) are effective on December 1, 1990.  
Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(c) For procurements, including contract modifications, in excess of \$100,000 made using procedures other than sealed bidding, the signed certifications shall be submitted by the successful Offeror to the Contracting Officer within the time period specified by the Contracting Officer when requesting the certificates except as provided in subparagraphs (c)(1) through (c)(5) of this clause. In no event shall the certificate be submitted subsequent to award of a contract or execution of a contract modification:

(1) For letter contracts, other unpriced contracts, or unpriced contract modifications, whether or not the unpriced contract or modification contains a maximum or not to exceed price, the signed certifications shall be submitted prior to the award of the letter contract, unpriced contract, or unpriced contract modification, and prior to the definitization of the letter contract or the establishment of the price of the unpriced contract or unpriced contract modification. The second certification shall apply only to the period between award of the letter contract and execution of the document definitizing the letter contract, or award of the unpriced contract or unpriced contract modification and execution of the document establishing the definitive price of such unpriced contract or unpriced contract modification.

(2) For basic ordering agreements, prior to the execution of a priced order; prior to the execution of an unpriced order, whether or not the unpriced order contains a maximum or not to exceed price; and, prior to establishing the price of an unpriced order. The second certificate to be submitted for unpriced orders shall apply only to the period between award of the unpriced order and execution of the document establishing the definitive price for such order.

(3) A certificate is not required for indefinite delivery contracts (see Subpart 16.5) unless the total estimated value of all orders eventually to be placed under the contract is expected to exceed \$100,000.

(4) For contracts and contract modifications which include options, a certificate is required when the aggregate value of the contract or contract modification and all options (see 3.104-4(e)) exceeds \$100,000.

(5) For purposes of contracts entered into under section 8(a) of the SBA, the business entity with whom the SBA contracts, and not the SBA, shall be required to comply with the certification requirements of subsection 27(e). The SBA shall obtain the signed certificate from the business entity and forward the certificate to the Contracting Officer prior to the award of a contract to the SBA.

(6) Failure of an Offeror to submit the signed certificate within the time prescribed by the Contracting Officer shall cause the offer to be rejected.

(d) Pursuant to FAR 3.104-9(d), the Offeror may be requested to execute additional certifications at the request of the Government. Failure of an Offeror to submit the additional certifications shall cause its offer to be rejected.

(e) A certification containing a disclosure of a violation or possible violation will not necessarily result in the withholding of award under this solicitation. However, the Government, after evaluation of the disclosure, may cancel this procurement or take any other appropriate actions in the interests of the Government, such as disqualification of the Offeror.

(f) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing contractor responsible for the offer may rely upon a onetime certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to suspension of Section 27 (i.e., prior to December 1, 1989), the contractor shall ensure that an individual who has so certified is notified that Section 27 is reinstated. These certifications shall be maintained by the Contractor for 6 years from the date a certifying employee's employment with the company ends or, for an agent, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the Contractor.

(g) The certifications in paragraphs (b) and (d) of this provision are a material representation of fact upon which reliance will be placed in awarding a contract.

**CLAIM FOR EXEMPTION FROM SUBMISSION OF CERTIFIED COST OR PRICING DATA**

FORM APPROVED OMB NO.  
3090-0118

1. OFFEROR (Name, address, ZIP Code)	3. SOLICITATION NO.	
	4. ITEM OF SUPPLIES AND/OR SERVICES TO BE FURNISHED	
2. DIVISION(S) AND LOCATION(S) WHERE WORK IS TO BE PERFORMED	5. QUANTITY	6. TOTAL AMOUNT PROPOSED FOR ITEM \$

By submission of this form the offeror claims exemption from requirements for submitting certified cost or pricing data on the basis that the price offered is based on an established catalog or market price of a commercial item sold in substantial quantities to the general public or is a price set by law or regulation (see FAR 15.804-3). Complete Section I, II, or III below as applicable.

**SECTION I - CATALOG PRICE (See Instructions for items 7 thru 11 on reverse.)**

7. CATALOG IDENTIFICATION AND DATE		8. SALES PERIOD COVERED	
		FROM	TO
9. CATEGORIES OF SALES	TOTAL UNITS SOLD *	10. REMARKS	
a. U.S. Government sales			
b. Sales at catalog price to general public			
c. Other sales to general public			

\* If your accounting system does not provide precise information, insert your best estimate and explain the basis for it in Item 10, REMARKS. Continue on a separate sheet, if necessary.

**11. LIST THREE SALES OF THE ITEM OFFERED**

SALES CATEGORY	DATE	NO. OF UNITS SOLD	PRICE/UNIT
a. <input type="checkbox"/> B <input type="checkbox"/> C			\$
b. <input type="checkbox"/> B <input type="checkbox"/> C			\$
c. <input type="checkbox"/> B <input type="checkbox"/> C			\$

**SECTION II - MARKET PRICE (See Instructions for item 12 on reverse.)**

12. SET FORTH THE SOURCE AND DATE OR PERIOD OF THE MARKET QUOTATION OR OTHER BASE FOR MARKET PRICE, THE BASE AMOUNT, AND APPLICABLE DISCOUNTS.

**SECTION III - LAW OR REGULATION (See Instructions for item 13 on reverse.)**

13. IDENTIFY THE LAW OR REGULATION ESTABLISHING THE PRICE OFFERED

**REPRESENTATION (See Instructions for item 14 on reverse.)**

The offeror represents that all statements made above and on attachments submitted are accurate and are submitted for the purpose of claiming exemption from requirements for submitting certified cost or pricing data. The offeror also represents that, except as stated in an attachment, a like claim for exemption involving the same or a substantially similar item has not been denied by a Government Contracting Officer within the last 2 years. Pending consideration of the proposal supported by this submission and, if this proposal or a modification of it is accepted by the Government, until the expiration of 3 years from the date of final payment under a contract resulting from this proposal, the Contracting Officer or any other authorized employee of the United States Government is granted access to books, records, documents, and other supporting data that will permit verification of the claim.

14. TYPED NAME, TITLE, AND FIRM	15. SIGNATURE	16. DATE OF SUBMISSION

Item 7. Attach a copy of the catalog, or the appropriate pages covering price and published discounts, or a statement that the catalog is on file in the buying office to which this proposal is being made. Catalog price, is a price that is included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public. To justify a catalog price exemption for the Government item, the catalog item must be identical or must be so similar in material and design that any price difference or its absence can be evaluated solely by price analysis (see FAR 15.805-2). In the latter case, a statement must be attached identifying the specific differences and explaining, by price analysis of the differences, how the proposed price is derived from the catalog price.

Item 8. This period should include the most recent regular monthly, quarterly, or other period for which sales data are reasonably available and should extend back only far enough to provide a total period representative of average sales. You may also attach sales data for a prior representative period if for any reason recent sales are abnormal and the prior period is sufficiently recent (not more than 2 years preceding) to support the proposed price for the Government item. In the latter case, you must explain, by price analysis only, how the proposed price is derived from the catalog sales for the prior period.

Item 9. (a) Include in Category A all sales of the catalog item (a) directly to the U.S. Government and its instrumentalities and (b) for U.S. Government use (sales directly to U.S. Government prime contractors, or their subcontractors or suppliers at any tier, for use as an end item, or as part of an end item, by the U.S. Government).

(b) Include in Category B all sales of the catalog item made strictly at the catalog price, less only published discounts, to the general public (i.e., catalog price sales other than those (i) to affiliates of the offeror or (ii) included in Category A (Instruction 9(a)).

(c) Include in Category C all sales to the general public that were not made strictly at the catalog price or that were made at special discounts or discount rates not published in the catalog.

Item 11. On line a, insert information on the lowest price at which Category B or C sales of the offered item was made during the period, regardless of quantity.

On lines b. and c. insert sales information in the following manner.

a. Give the lowest price Category C sales of comparable quantities. If there were no sales of comparable quantities, then give

b. The lowest price Category C sales of quantities most nearly the quantity being offered. If there were no sales of Category C, then give

c. The lowest price Category B sales of comparable quantities. If there were no sales of comparable quantities, then give

d. The lowest price Category B sales of quantities most nearly the quantity being offered.

Attach a complete explanation (i) if you, during the period covered, offered special discounts not included in the catalog, or (ii) if the price proposed is not the lowest price at which a sale was made to any customer during that period for like items and comparable quantities.

Item 12. Market price is a current price, established in the usual and ordinary course of trade between buyers and sellers free to bargain, that can be substantiated from sources independent of the manufacturer or vendor. There must be a sufficient number of commercial buyers so that their purchases establish an ascertainable current market price for the item or service. The nature of this market should be described. To justify a market-price exemption, the item or service being purchased must be identical to the commercial item or service or must be so similar in material and design (for supplies) or in work and facilities (for services) that any price difference or its absence can be evaluated solely by price analysis (see FAR 15.805-2). In the latter case, a statement must be attached identifying the specific differences and explaining, by price analysis of the differences, how the proposed price is derived from the market price.

Item 13. Identify 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.

Item 14. Insert the name, title, and firm of the person authorized by the offeror to sign this form.



ATTACHMENT 5  
COST PROPOSAL FORMS, A-F



**FORM A**  
Summary of Program Cost

PROPOSER: \_\_\_\_\_

TOTAL EFFORT

RFP 1-41-1100.1015	TOTAL EFFORT	PHASE IN	INITIAL PERIOD - OPTION 2	OPTION 3 - OPTION 8	OPTIONS TO INCREASE
DESCRIPTION	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
<b>DIRECT PRODUCTIVE LOE LABOR:</b>					
(Detail on Form B)					
Straight Time Hours.....					
Overtime Hours.....					
Subcontract Hours.....					
<b>Total Direct Prod LOE Hours.....</b>	-----	-----	-----	-----	-----
Straight Time Costs.....					
Overtime (w/o premium) Costs.....					
Overtime Premium.....					
Subcontract Direct LOE Costs.....					
<b>Total Direct Prod LOE Costs.....</b>	-----	-----	-----	-----	-----
<b>OVERHEAD: (Detail on Form C)</b>					
Productive Non-LOE Labor Costs.....					
Payroll Additives/Taxes.....					
Fringe Benefits.....					
Other.....					
<b>Total Overhead.....</b>	-----	-----	-----	-----	-----
<b>SYSTEM MAINTENANCE (Detail on Form F)....</b>					
<b>OTHER DIRECT COSTS: (Detail on Form D)</b>					
LOE Subcontracts Non-DL Costs.....					
Specified Other Direct Costs.....					
Company Specific.....					
<b>Total ODC.....</b>	-----	-----	-----	-----	-----
G&A.....					
FCCOM.....					
<b>TOTAL COST.....</b>	-----	-----	-----	-----	-----
<b>FEE.....</b>	-----	-----	-----	-----	-----
<b>COST PLUS FEE.....</b>	-----	-----	-----	-----	-----
<b>SYSTEM MAINTENANCE POOL.....</b>	\$35,000,000	n/a	n/a	n/a	\$35,000,000
<b>TOTAL.....</b>	=====	=====	=====	=====	=====
<b>AVG DIRECT LABOR ST COST PER HOUR.....</b>					
<b>TOTAL COST PER DIRECT LABOR HOUR.....</b>					
<b>FEE PER DIRECT LABOR HOUR.....</b>					
<b>CPF PER DIRECT LABOR HOUR.....</b>					

**FORM A1**  
**Summary of Program Cost**  
**Initial Contract Period**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	INITIAL PERIOD TOTAL	YEAR 1	YEAR 2
=====	=====	=====	=====
<i>DESCRIPTION</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>
-----	-----	-----	-----
<b>DIRECT PRODUCTIVE LOE LABOR:</b>			
(Detail on Form B)			
Straight Time Hours.....			
Overtime Hours.....			
Subcontract Hours.....			
	-----	-----	-----
Total Direct Prod LOE Hours.....			
Straight Time Costs.....			
Overtime (w/o premium) Costs.....			
Overtime Premium.....			
Subcontract Direct LOE Costs.....			
	-----	-----	-----
Total Direct Prod LOE Costs.....			
<b>OVERHEAD: (Detail on Form C)</b>			
Productive Non-LOE Labor Costs.....			
Payroll Additives/Taxes.....			
Fringe Benefits.....			
Other.....			
	-----	-----	-----
Total Overhead.....			
<b>SYSTEM MAINTENANCE (Detail on Form F)....</b>			
<b>OTHER DIRECT COSTS: (Detail on Form D)</b>			
LOE Subcontracts Non-DL Costs.....			
Specified Other Direct Costs.....			
Company Specific.....			
	-----	-----	-----
Total ODC.....			
G&A.....			
FCCOM.....			
	-----	-----	-----
TOTAL COST.....			
AWARD FEE.....			
	-----	-----	-----
COST PLUS AWARD FEE.....			
SYSTEM MAINTENANCE POOL.....	n/a	n/a	n/a
	-----	-----	-----
TOTAL.....			
	=====	=====	=====
AVG DIRECT LABOR ST COST PER HOUR.....			
TOTAL COST PER DIRECT LABOR HOUR.....			
AWARD FEE PER DIRECT LABOR HOUR.....			
CPAF PER DIRECT LABOR HOUR.....			
=====			

**FORM A2**  
**Summary of Program Cost**  
**First Option to Extend**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	1ST OPTION TO EXTEND TOTAL	YEAR 3	YEAR 4
<i>DESCRIPTION</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>
<b>DIRECT PRODUCTIVE LOE LABOR:</b>			
(Detail on Form B)			
Straight Time Hours.....			
Overtime Hours.....			
Subcontract Hours.....			
<b>Total Direct Prod LOE Hours.....</b>			
Straight Time Costs.....			
Overtime (w/o premium) Costs.....			
Overtime Premium.....			
Subcontract Direct LOE Costs.....			
<b>Total Direct Prod LOE Costs.....</b>			
<b>OVERHEAD: (Detail on Form C)</b>			
Productive Non-LOE Labor Costs.....			
Payroll Additives/Taxes.....			
Fringe Benefits.....			
Other.....			
<b>Total Overhead.....</b>			
<b>SYSTEM MAINTENANCE (Detail on Form F)....</b>			
<b>OTHER DIRECT COSTS: (Detail on Form D)</b>			
LOE Subcontracts Non-DL Costs.....			
Specified Other Direct Costs.....			
Company Specific.....			
<b>Total ODC.....</b>			
G&A.....			
FCCOM.....			
<b>TOTAL COST.....</b>			
<b>AWARD FEE.....</b>			
<b>COST PLUS AWARD FEE.....</b>			
<b>SYSTEM MAINTENANCE POOL.....</b>	n/a	n/a	n/a
<b>TOTAL.....</b>			
AVG DIRECT LABOR ST COST PER HOUR.....			
TOTAL COST PER DIRECT LABOR HOUR.....			
AWARD FEE PER DIRECT LABOR HOUR.....			
CPAF PER DIRECT LABOR HOUR.....			

**FORM A3**  
**Summary of Program Cost**  
**Second Option to Extend**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	2ND OPTION TO EXTEND TOTAL	YEAR 5	YEAR 6	YEAR 7
<i>DESCRIPTION</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>	<i>HRS/COSTS</i>
<b>DIRECT PRODUCTIVE LOE LABOR:</b>				
(Detail on Form B)				
Straight Time Hours.....				
Overtime Hours.....				
Subcontract Hours.....				
<b>Total Direct Prod LOE Hours.....</b>				
Straight Time Costs.....				
Overtime (w/o premium) Costs.....				
Overtime Premium.....				
Subcontract Direct LOE Costs.....				
<b>Total Direct Prod LOE Costs.....</b>				
<b>OVERHEAD: (Detail on Form C)</b>				
Productive Non-LOE Labor Costs.....				
Payroll Additives/Taxes.....				
Fringe Benefits.....				
Other.....				
<b>Total Overhead.....</b>				
<b>SYSTEM MAINTENANCE (Detail on Form F).....</b>				
<b>OTHER DIRECT COSTS: (Detail on Form D)</b>				
LOE Subcontracts Non-DL Costs.....				
Specified Other Direct Costs.....				
Company Specific.....				
<b>Total ODC.....</b>				
G&A.....				
FCCOM.....				
<b>TOTAL COST.....</b>				
<b>AWARD FEE.....</b>				
<b>COST PLUS AWARD FEE.....</b>				
<b>SYSTEM MAINTENANCE POOL.....</b>	n/a	n/a	n/a	n/a
<b>TOTAL.....</b>				
=====				
AVG DIRECT LABOR ST COST PER HOUR.....				
TOTAL COST PER DIRECT LABOR HOUR.....				
AWARD FEE PER DIRECT LABOR HOUR.....				
CPAF PER DIRECT LABOR HOUR.....				
=====				

**FORM A4**  
**Summary of Program Cost**  
**Options To Extend 3-8 (1 Month Each)**

PROPOSER: \_\_\_\_\_

DESCRIPTION	3RD - 8TH OPT	OPTION 3	OPTION 4	OPTION 5	OPTION 6	OPTION 7	OPTION 8
	TO EXTEND TOT	(MONTH 1)	(MONTH 2)	(MONTH 3)	(MONTH 4)	(MONTH 5)	(MONTH 6)
	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
<b>DIRECT PRODUCTIVE LOE LABOR:</b>							
(Detail on Form B)							
Straight Time Hours.....							
Overtime Hours.....							
Subcontract Hours.....							
<b>Total Direct Prod LOE Hours.....</b>							
<b>STRAIGHT TIME COSTS:</b>							
Straight Time Costs.....							
Overtime (w/o premium) Costs.....							
Overtime Premium.....							
Subcontract Direct LOE Costs.....							
<b>Total Direct Prod LOE Costs.....</b>							
<b>OVERHEAD: (Detail on Form C)</b>							
Productive Non-LOE Labor Costs.....							
Payroll Additives/Taxes.....							
Fringe Benefits.....							
Other.....							
<b>Total Overhead.....</b>							
<b>SYSTEM MAINTENANCE (Detail on Form F).....</b>							
<b>OTHER DIRECT COSTS: (Detail on Form D)</b>							
LOE Subcontracts Non-DL Costs.....							
Specified Other Direct Costs.....							
Company Specific.....							
<b>Total ODC.....</b>							
G&A.....							
FCCOM.....							
<b>TOTAL COST.....</b>							
<b>FIXED FEE.....</b>							
<b>COST PLUS FIXED FEE.....</b>							
<b>SYSTEM MAINTENANCE POOL.....</b>							
<b>TOTAL.....</b>							

AVG DIRECT LABOR ST COST PER HOUR.....  
TOTAL COST PER DIRECT LABOR HOUR.....  
FIXED FEE PER DIRECT LABOR HOUR.....  
CPFF PER DIRECT LABOR HOUR.....

**FORM B**  
**Details of Direct Productive Level of Effort Labor Hours and Cost**

PROPOSER: \_\_\_\_\_

Productive Manyear:  
 Manhours

Labor Escalation:

RFP 1-41-1100.1015

LABOR CATEGORY	NUMBER OF POSIT.	ST HOURS	OT HOURS	ST RATE	ST COSTS	OT COSTS (W/O PREMIUM)	OT PREMIUM COSTS	YEAR	
								LOE	TOTAL COSTS
Project Systems Analyst									
Sr. Systems Analyst									
Systems Analyst									
Programmer Analyst III									
Programmer Analyst II									
Programmer Analyst I									
Sr. Comm. Systems Specialist									
Systems Engineer									
Sr. Operations Analyst/Manager									
Comm. Maintenance Manager									
Systems Adm/Analyst									
Communications Engineer									
Computer Operator III									
Computer Operator II									
Computer Operator I									
Data Specialist									
Documentation Specialist									
Comm. Specialist									
Comm. Systems Specialist III									
Comm. Systems Specialist II									
Comm. Systems Specialist I									
Electronics Technician III									
Electronics Technician II									
Requirements Specialist									
Other: (List)									

SUBTOTAL - PRIME  
 SUBTOTAL - SUBCONTRACTORS

TOTAL DIRECT LOE HOURS/COSTS

=====  
 Annotate with an \* those labor categories to which the wage determination is applicable.  
 Annotate with a # any labor category provided by a subcontractor.  
 Annotate with an @ any labor category that is a composite and detail that composite rate in your proposal

**FORM C**  
**Details of Overhead**

PROPOSER: \_\_\_\_\_

	YEARS 1 - 7						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
RFP 1-41-1100.1015							
Overhead escalation by year:							
*HOURS							

PRODUCTIVE NON-LOE LABOR: \*\*  
 Contract Manager  
 Technical Managers  
 Other: \*\*\*

TOTAL PROD NON-LOE LABOR

PAYROLL ADDITIVES/TAXES:  
 FICA  
 FUI  
 SUI  
 Worker's Compensation  
 General Liability Insurance

TOTAL PAYROLL ADD/TAXES

FRINGE BENEFITS:  
 Medical/Dental Insurance  
 Life/Disability Insurance  
 Paid Absence  
 Pensions  
 Savings Plans  
 Other Fringes: \*\*\*

TOTAL FRINGE BENEFITS

OTHER OVERHEAD ELEMENTS: \*\*\*

TOTAL OTHER OH ELEMENTS

TOTAL OVERHEAD

OVERHEAD RATE

NOTE: Provide formulas (bases and rates) used to derive all dollars shown.  
 \* If the hours are not consistent among year, itemize and provide your rationale on a separate sheet.  
 \*\* Annotate with a # any classification provided by a subcontractor. Provide separate forms for prime and subcontractor data.  
 \*\*\* Itemize on a separate sheet if the format of Form C does not have enough rows.

FORM C1  
Details of Overhead

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015  
Overhead escalation by year: 6 ONE--MONTH OPTIONS

	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
*HOURS	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

PRODUCTIVE NON-LOE LABOR: \*\*  
Contract Manager  
Technical Managers  
Other: \*\*\*

TOTAL PROD NON-LOE LABOR

PAYROLL ADDITIVES/TAXES:

- FICA
- FUI
- SUI
- Worker's Compensation
- General Liability Insurance

TOTAL PAYROLL ADD/TAXES

FRINGE BENEFITS:

- Medical/Dental Insurance
- Life/Disability Insurance
- Paid Absence
- Pensions
- Savings Plans
- Other Fringes: \*\*\*

TOTAL FRINGE BENEFITS

OTHER OVERHEAD ELEMENTS: \*\*\*

TOTAL OTHER OH ELEMENTS

TOTAL OVERHEAD

OVERHEAD RATE

NOTE: Provide formulas (bases and rates) used to derive all dollars shown.

\* If the hours are not consistent among year, itemize and provide your rationale on a separate sheet.

\*\* Annotate with a # any classification provided by a subcontractor. Provide separate forms for prime and subcontractor data.

\*\*\* Itemize on a separate sheet if the format of Form C does not have enough rows.



**FORM D**  
**Details of Other Direct Costs**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	YEARS 1 - 7						
	MONTHS 1 - 6						
DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
LOE Subcontracts Non-DL Costs: *							
Specified ODC:							
Mat'l & Equipment	1,951,200	2,248,800	2,386,400	2,432,800	2,506,400	2,586,400	2,746,400
Software Purchases	73,170	84,330	89,490	91,230	93,990	96,990	102,990
Travel	97,560	112,440	119,320	121,640	125,320	129,320	137,320
Training	73,170	84,330	89,490	91,230	93,990	96,990	102,990
FP Specialized Svcs	243,900	281,100	298,300	304,100	313,300	323,300	343,300
Subtotal	2,439,000	2,811,000	2,983,000	3,041,000	3,133,000	3,233,000	3,433,000

Company Specific:  
(Itemize)\*\*

TOTAL ODCS	TOTAL	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
LOE Subcontracts Non-DL Costs: *							
Specified ODC:							
Mat'l & Equipment	1,387,200	231,200	231,200	231,200	231,200	231,200	231,200
Software Purchases	52,020	8,670	8,670	8,670	8,670	8,670	8,670
Travel	69,360	11,560	11,560	11,560	11,560	11,560	11,560
Training	52,020	8,670	8,670	8,670	8,670	8,670	8,670
FP Specialized Svcs	173,400	28,900	28,900	28,900	28,900	28,900	28,900
Subtotal	1,734,000	289,000	289,000	289,000	289,000	289,000	289,000

Company Specific:  
(Itemize)\*\*

TOTAL ODCS

\* List individually and provide details on Forms A,C-E for each LOE subcontractor.  
 \*\* Provide discussion on a separate sheet. List each subcontract individually. Provide details in a format similar to Forms A-E for each subcontractor with a proposed price in excess of \$500,000.

**FORM E**  
Options for Additional Direct Labor Hours

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	TOTAL	INITIAL PERIOD	FIRST OPTION PD	SECOND OPTION PD
<b>=====</b>				
<b>OPTIONS FOR ADDITIONAL DIRECT LABOR HOURS</b>				
<b>DESCRIPTION</b>	<b>HRS/COSTS</b>	<b>HRS/COSTS</b>	<b>HRS/COSTS</b>	<b>HRS/COSTS</b>
<b>-----</b>				
<b>DIRECT PRODUCTIVE LOE LABOR:</b>				
Straight Time Hours.....				
Subcontract Hours.....				
<b>Total Direct Prod LOE Hours.....</b>				
<b>Straight Time Costs.....</b>				
<b>Subcontract Direct LOE Costs.....</b>				
<b>Total Direct Prod LOE Costs.....</b>				
<b>OVERHEAD: *</b>				
Productive Non-LOE Labor Costs.....				
Payroll Additives/Taxes.....				
Fringe Benefits.....				
Other.....				
<b>Total Overhead.....</b>				
<b>OTHER DIRECT COSTS: *</b>				
LOE Subcontracts Non-DL Costs.....				
Company Specific.....				
<b>Total ODC.....</b>				
G&A.....				
FCCOM.....				
<b>TOTAL COST.....</b>				
<b>AWARD FEE.....</b>				
<b>COST PLUS AWARD FEE.....</b>	<b>=====</b>	<b>=====</b>	<b>=====</b>	<b>=====</b>
<b>AVG DIRECT LABOR COST PER HOUR.....</b>				
<b>TOTAL COST PER DIRECT LABOR HOUR.....</b>				
<b>AWARD FEE PER DIRECT LABOR HOUR.....</b>				
<b>CPAF PER DIRECT LABOR HOUR.....</b>				

\* If the rates applied, application bases, or element content differ from those proposed for the corresponding base period, explain and/or provide Cost Form C or D, as appropriate.

**=====**  
**OPTION FOR SYSTEMS MAINTENANCE PRICE POOL**

SYSTEM MAINTENANCE POOL.....	\$35,000,000	\$35,000,000	n/a	n/a
------------------------------	--------------	--------------	-----	-----

**=====**

**FORM E 1**  
**Options for Additional Direct Labor Hours**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015	TOTAL	MONTH 1		MONTH 2		MONTH 3		MONTH 4		MONTH 5		MONTH 6	
		HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS	HRS/COSTS
<b>DESCRIPTION</b>													
<b>DIRECT PRODUCTIVE LOE LABOR:</b>													
Straight Time Hours.....													
Subcontract Hours.....													
<b>Total Direct Prod LOE Hours.....</b>													
Straight Time Costs.....													
Subcontract Direct LOE Costs.....													
<b>Total Direct Prod LOE Costs.....</b>													
<b>OVERHEAD: *</b>													
Productive Non-LOE Labor Costs.....													
Payroll Additives/Taxes.....													
Fringe Benefits.....													
Other.....													
<b>Total Overhead.....</b>													
<b>OTHER DIRECT COSTS: *</b>													
LOE Subcontracts Non-DL Costs.....													
Company Specific.....													
<b>Total ODC.....</b>													
G&A.....													
FCCOM.....													
<b>TOTAL COST.....</b>													
<b>AWARD FEE.....</b>													
<b>COST PLUS FIXED FEE.....</b>													

**AVG DIRECT LABOR COST PER HOUR.....**  
**TOTAL COST PER DIRECT LABOR HOUR.....**  
**AWARD FEE PER DIRECT LABOR HOUR.....**  
**CPAF PER DIRECT LABOR HOUR.....**

\* If the rates applied, application bases, or element content differ from those proposed for the corresponding base period, explain and/or provide Cost Form C or D, as appropriate.

FORM F  
LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

Provide disclosure details or a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 1 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE
COMPUTER HARDWARE ITEMS						1059					
1000						1060					
1001						1061					
1002						1062					
1003						1063					
1004						1064					
1005						1065					
1006						1066					
1007						1067					
1008						1068					
1009						1069					
1010						1070					
1011						1071					
1012						1072					
1013						1073					
1014						1074					
1015						1075					
1016						1076					
1017						1077					
1018						1078					
1019						1079					
1020						1080					
1021						1081					
1022						1082					
1023						1083					
1024						1084					
1025						1085					
1026						1086					
1027						1087					
1028						1088					
1029						1089					
1030						1090					
1031						1091					
1032						1092					
1033						1093					
1034						1094					
1035						1095					
1036						1096					
1037						1097					
1038						1098					
1039						1099					
1040						1100					
1041						1101					
1042						1102					
1043						1103					
1044						1104					
1045						1105					
1046						1106					
1047						1107					
1048						1108					
1049						1109					
1050						1110					
1051						1111					
1052						1112					
1053						1113					
1054						1114					
1055						1115					
1056						1116					
1057						1117					
1058						1118					
\$0 CUMULATIVE ANNUAL TOTAL						\$0 CUMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.

\*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

FORM F  
LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

Provide disclosure details or a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 2 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE
1119						1179					
1120						1180					
1121						1181					
1122						1182					
1123						1183					
1124						1184					
1125						1185					
1126						1186					
1127						1187					
1128						1188					
1129						1189					
1130						1190					
1131						1191					
1132						1192					
1133						1193					
1134						1194					
1135						1195					
1136						1196					
1137						1197					
1138						1198					
1139						1199					
1140						1200					
1141						1201					
1142						1202					
1143						1203					
1144						1204					
1145						1205					
1146						1206					
1147						1207					
1148						1208					
1149						1209					
1150						1210					
1151						1211					
1152						1212					
1153						1213					
1154						1214					
1155						1215					
1156						1216					
1157						1217					
1158						1218					
1159						1219					
1160						1220					
1161						1221					
1162						1222					
1163						1223					
1164						1224					
1165						1225					
1166						1226					
1167						1227					
1168						1228					
1169						1229					
1170						1230					
1171						1231					
1172						1232					
1173						1233					
1174						1234					
1175						1235					
1176						1236					
1177						1237					
1178						1238					
\$0 CUMULATIVE ANNUAL TOTAL						\$0 CUMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.  
 \*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

FORM F  
LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

Provide disclosure details on a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 3 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE
1239						1299					
1240						1300					
1241						1301					
1242						1302					
1243						1303					
1244						1304					
1245						1305					
1246						1306					
1247						1307					
1248						1308					
1249						1309					
1250						1310					
1251						1311					
1252						1312					
1253						1313					
1254						1314					
1255						1315					
1256						1316					
1257						1317					
1258						1318					
1259						1319					
1260						1320					
1261						1321					
1262						1322					
1263						1323					
1264						1324					
1265						1325					
1266						1326					
1267						1327					
1268						1328					
1269						1329					
1270						1330					
1271						1331					
1272						1332					
1273						1333					
1274						1334					
1275						1335					
1276						1336					
1277						1337					
1278						1338					
1279						1339					
1280						1340					
1281						1341					
1282						1342					
1283						1343					
1284						1344					
1285						1345					
1286						1346					
1287						1347					
1288						1348					
1289						1349					
1290						1350					
1291						1351					
1292						1352					
1293						1353					
1294						1354					
1295						1355					
1296						1356					
1297						1357					
1298						1358					
\$0 CUMULATIVE ANNUAL TOTAL						\$0 CUMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.

\*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

FORM F  
LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

Provide disclosure details or a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 4 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	** SUPPORT TYPE
						COMPUTER SOFTWARE ITEMS				
1359						6000				
1360						6001				
1361						6002				
1362						6003				
1363						6004				
1364						6005				
1365						6006				
1366						6007				
1367						6008				
1368						6009				
1369						6010				
1370						6011				
1371						6012				
1372						6013				
1373						6014				
1374						6015				
1375						6016				
1376						6017				
1377						6018				
1378						6019				
1379						6020				
1380						6021				
1381						6022				
1382						6023				
1383						6024				
1384						6025				
1385						6026				
1386						6027				
1387						6028				
1388						6029				
1389						6030				
1390						6031				
1391						6032				
1392						6033				
1393						6034				
1394						6035				
1395						6036				
1396						6037				
						6038				
						6039				
						6040				
						6041				
						6042				
						6043				
						6044				
						6045				
						6046				
						6047				
						6048				
						6049				
						6050				
						6051				
						6052				
						6053				
						6054				
						6055				
						6056				
						6057				
						6058				
\$0 CUMULATIVE ANNUAL TOTAL						\$0 CUMULATIVE ANNUAL TOTAL				

\* Refer to Appendix A for transitions dates applicable to partial months.

\*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

**FORM F  
LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

Provide disclosure details or a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 5 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL- MONTH CHARGE	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL- MONTH CHARGE	BMMC	** TYPE
6059					ENVIRONMENTAL SUPPORT EQUIPMENT					
6060					8000					
6061					8001					
6062					8002					
6063					8003					
6064					8004					
6065					8005					
6066					8006					
6067					8007					
6068					8008					
6069					8009					
6070					8010					
6071					8011					
6072					8012					
6073					8013					
6074					8014					
6075					8015					
6076					8016					
6077					8017					
6078					8018					
6079					8019					
6080					8020					
6081					8021					
6082					8022					
6083					8023					
6084					8024					
6085					8025					
6086					8026					
6087					8027					
6088					8028					
6089					8029					
6090					8030					
6091					8031					
6092					8032					
					8033					
					8034					
\$0 CUMULATIVE ANNUAL TOTAL					\$0 CUMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.  
 \*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.



## Attachment 6

### GOVERNMENT ESTIMATED STAFFING REQUIREMENTS AND MINIMUM POSITION QUALIFICATIONS

Presented in this attachment is a summary of the Government's estimated direct staffing requirements with minimum position qualifications. This attachment pertains to the work performed in response to all Statement of Work areas except section C.4 as further defined in paragraph B.2 of the Request for Proposal.

To assist you in the preparation of your proposal, General Position Descriptions are provided herein which identify the approximate skills required for the listed positions. Names and resumes are only required for proposed Key Personnel; your attention is invited to Attachment 7.

Several of the position descriptions state that various levels/grades may exist within these position categories. The Government's estimated direct staffing requirements reflect several levels (i.e. I, II, III) for those positions; however, you should propose the actual levels that you determine are needed for contract performance.

The number of positions requiring a SECRET clearance are indicated in the appropriate column on the Government Estimated Skill Mix chart.

An area of expertise is indicated for each position included in the Government's estimated staffing. These areas of expertise relate to the work requirements described in the Statement of Work.

There is no correlation between the position levels listed in this attachment and the levels described on the Register of Wage Determination and Fringe Benefits (Exhibit F).

## Government Estimated Skill Mix

<u>Position</u>	<u>Number of Positions</u>	<u>Number of SECRET Clearances</u>	<u>Area of Expertise</u>
Senior Operations Analyst/Manager	3	3	Operations Shift Manager
Senior Systems Analyst	1	1	Capacity Planning
Systems Analyst	1	1	Performance Analysis
Senior Systems Analyst	5	5	} Computer and I/O Systems, Operations Support, File Management
Systems Analyst	6	5	
Programmer Analyst II	2	2	
Programmer Analyst I	1	1	
Computer Operator I	5	2	Tape Operation, Cleaning, Certification
Computer Operator III	3	2	GDCM, Card Key, etc.
Senior Systems Analyst	1	1	User/Operations Interface
Systems Analyst	1	1	User/Operations Interface
Computer Operator III	2	2	User/Operations Interface
Computer Operator III	4	4	} SNS, NOS, CONVEX, FSCS, MPP Operation
Computer Operator II	5	5	
Computer Operator II	5	4	} Plotting, Laser Printer, I/O Operations
Computer Operator I	3	2	
Systems Engineer	1	1	Maintenance Coordinator
Data Specialist	1	1	Maintenance Support
Documentation Specialist	1	0	Operations/Systems Support
Programmer Analyst III	2	1	Resource Accounting
Programmer Analyst II	1	0	Resource Accounting
Data Specialist	2	1	} Resource Accounting Processing Support
Programmer Analyst I	1	1	
Senior Systems Analyst	1	1	Video Editor
Systems Analyst	1	0	Video Technical Coordinator
			Video Producer

Project Systems Analyst	4	4	} Special Projects Operating System, Programming Support
Senior Systems Analyst	4	2	
Systems Analyst	4	2	
Programmer Analyst III	6	2	
Programmer Analyst II	5	1	
Programmer Analyst I	1	1	
Programmer Analyst III	1	1	LaTS
Programmer Analyst II	1	1	LaTS
Programmer Analyst I	1	0	LaTS
Communications Specialist	4	3	LaTS
Senior Communication Systems Specialist	2	2	LaTS
Communication Systems Specialist III	2	2	LaTS
Communication Systems Specialist II	1	1	LaTS
Communication Systems Specialist I	1	1	LaTS
Electronics Technician III	2	2	LaTS
Electronics Technician II	1	1	LaTS
Project Systems Analyst	2	2	LaRCNET
Systems Analyst	3	3	LaRCNET
Programmer Analyst III	2	2	LaRCNET
Programmer Analyst II	3	1	LaRCNET
Programmer Analyst I	1	0	LaRCNET
Communications Specialist	1	1	LaRCNET
Senior Communication Systems Specialist	2	2	LaRCNET
Communication Systems Specialist II	1	1	LaRCNET
Electronics Technician III	2	2	LaRCNET
Electronics Technician II	2	2	LaRCNET
Communications Specialist	1	1	Video Communications
Senior Communication Systems Specialist	1	1	Video Communications
Communication Systems Specialist II	1	1	Video Communications
Electronics Technician III	2	2	Video Communications
Communications Maintenance Manager	1	1	LaTS, LaRCNET, and Video
Documentation Specialist	1	1	LaTS, LaRCNET, and Video
Communications Engineer	1	1	LaTS, LaRCNET, and Video
Requirements Specialist	1	1	Purchasing
Project Systems Analyst	1	0	Lead Distributed Systems/Data Reduction
Data Specialist	12	2	Distributed Systems/Data Reduction
Senior Systems Analyst	10	7	Distributed Systems/Data Reduction
Programmer Analyst II	10	6	Distributed Systems/Data Reduction
Systems Administrator	10	7	Distributed Systems/Data Reduction
<b>TOTAL</b>	<b>170 positions</b>		

## Government Estimated Skill Mix Position Summary

<u>Position No.</u>		<u>Number</u>
1	Project Systems Analyst	7
2	Senior Systems Analyst	22
3	Systems Analyst	16
4	Programmer Analyst III	11
4	Programmer Analyst II	22
4	Programmer Analyst I	5
5	Senior Communication Systems Specialist	5
6	Systems Engineer	1
7	Senior Operations Analyst/Manager	3
8	Communications Maintenance Manager	1
9	Systems Administrator/Analyst	10
10	Communications Engineer	1
11	Computer Operator III	9
11	Computer Operator II	10
11	Computer Operator I	8
12	Data Specialist	15
13	Documentation Specialist	2
14	Communications Specialist	6
15	Communication Systems Specialist III	2
15	Communication Systems Specialist II	3
15	Communication Systems Specialist I	1
16	Electronics Technician III	6
16	Electronics Technician II	3
17	Requirements Specialist	<u>1</u>
<b>TOTAL Positions</b>		<b>170</b>

Position No.: 1

Title: Project Systems Analyst

Duties:

Provides consultation and/or project leadership on complex multifaceted systems involving data communications, supercomputers, mass storage, mid-range computers, workstations, real-time computing, and/or data acquisition or reduction programming. Responsible for technical assessment, analysis, design, planning, and implementation of proposed ACD systems or changes to existing systems. Responsible for resolving major operational or system problems. Analyzes existing systems and recommends improvements to such systems. Keeps updated on the latest technology in areas of expertise, prepares technical presentations and reports, and works independently or only under general direction.

Experience/Knowledge:

Should have a minimum of ten (10) years experience in appropriate technical areas in the Statement of Work (SOW). Should have experience and knowledge of large-scale computing systems, supercomputing, data storage systems, state-of-the-art workstations, and data acquisition/reduction systems as appropriate for the specialized area. At least two (2) years of experience should have been in the management of work/project that is similar to the appropriate technical area in the SOW.

Education:

Should have a Bachelor's degree in (a) computer science, (b) engineering, (c) physical science or a related field. A Graduate degree in a related field will be considered equivalent to two (2) years of general experience.

Position No.: 2

Title: Senior Systems Analyst

Duties:

Performs advanced analysis of complex computing and communications hardware and software systems, serve as consultant to users and systems personnel, conducts system studies, analyzes problems, recommends improvements, and develops and maintains system software. Works independently or only under general direction on complex multifaceted problems in the areas of analysis, problem resolution, development, etc. Provides technical direction for personnel performing various tasks associated with development, planning, analysis, implementation, or operations including review of work products produced for correctness, adherence to standards and/or concepts, and for progress in accordance with schedules.

Experience/Knowledge:

Should have proficiency as well as demonstrated knowledge of scientific programming languages, operating systems, supercomputers, mini-computers, workstations, and communication systems. Should have a minimum of six (6) years experience in programming and analysis with at least three (3) years on state-of-the-art, large-scale computing systems.

Education:

Should have a Bachelor's degree in (a) computer science, (b) mathematics, (c) physical science, or a related field.

Position No.: 3

Title: Systems Analyst

Duties:

Performs analysis of complex computing and communication hardware and software systems, consults with users and systems personnel, conducts system studies, analyzes problems, recommends improvements, and develops and maintains system software. May work independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy and compliance with instructions.

Experience/Knowledge:

More than one level or grade of this position may exist with progressive levels of experience for each grade. Should have proficiency as well as demonstrated knowledge of scientific programming languages, operating systems, supercomputers, mini-computers, workstations, and communications systems. The lowest grade should have a minimum of one (1) year experience in programming and analysis.

Education:

Should have a Bachelor's degree in (a) computer science, (b) mathematics, (c) physical science, or a related field.

Position No.: 4

Title: Programmer Analyst (Levels I, II, and III)

Duties:

Develops and applies computer software for complex problems which require competence in all phases of programming concepts and practices. Analyzes problems and information to be processed. Defines problems and develops requirements and/or program specifications from which detailed programs, tests, and tasks are developed. Performs fact-finding analysis to assist in establishing the feasibility of new or modified computer or communications applications. Maintains data management system and applies computer software for processing and analyzing scientific data and generating graphics and other data products. Senior level positions may be required to act as group leader.

Experience/Knowledge:

More than one level or grade of this position may exist with progressive levels of experience for each grade. Should have proficiency as well as demonstrated knowledge in the use of one or more levels of scientific programming languages. A knowledge of operating systems, supercomputers, mini-computers, workstations, and communication systems is desired. The minimum number of years of experience in programming and analysis for three levels of programmer analysts are: level I should have one (1) year; level II should have four (4) years; and level III should have six (6) years.

Education:

Should have a Bachelor's degree in (a) computer science, (b) mathematics, (c) physical science, or a related field.



Position No.: 5

Title: Senior Communications System Specialist

Duties:

Provides engineering and technical support for the installation, expansion, and maintenance of large-scale, Center-wide telephone, computer, and video communication networks at LaRC. Specific duties include: (1) provides system-level technical support and oversees maintenance for major network systems; (2) directs technology assessments and evaluations; (3) plans work and assigns and schedules jobs; (4) assesses material and labor requirements; (5) serves as project leader for the development and implementation of new network capabilities; and (6) defines requirements and directs development of new and improved network diagnostic capabilities.

Experience/Knowledge:

Should have an in-depth knowledge of the design and operation of voice, data, and video communications systems and networks. Should have experience using sophisticated test equipment and software diagnostic tools to efficiently diagnose and resolve communications problems. Should have experience in the development, installation, and maintenance of complex communications and computer network systems.

Should have at least eight (8) years of experience working with communication networks including four (4) years of specialized experience performing system-level maintenance of one of the following systems: (1) ROLM 9751 multinode voice/data PBX with PhoneMail; (2) Ethernet/FDDI large-scale computer network with TCP/IP network protocol; or (3) broadband CATV system including network expansion design. In addition, experience should include at least two (2) years as a project leader or supervisor overseeing maintenance of a major network system.

Education/Training:

Should have a high school diploma or equivalent. Should have completed at least two (2) years of training from an accredited electronic technical school or an equivalent amount of specialized training in electronics technology. This specialized training may have been obtained in industrial training programs, military programs, or work experience.

Position No.: 6

Title: Systems Engineer

Duties:

Responsible for engineering support for the maintenance and configuration of all supercomputer, mid-range, and data storage equipment within the CSCC. Responsible for the coordination and scheduling of all hardware maintenance activities including remedial and preventive maintenance and system testing. Works independently in managing the maintenance work activities. Serves as the primary interface to the Government on all maintenance activities. Prepares maintenance activity reports, maintains data base of system performance and activities, and presents results as required.

Experience/Knowledge:

Should have a minimum of five (5) years experience in electrical/electronic work areas associated with large-scale computing systems and support equipment. At least two (2) years of experience should have been in the management of hardware maintenance.

Education:

Should have a Bachelor's degree in electrical engineering or a related field.

Position No.: 7

Title: Senior Operations Analyst/Manager

Duties:

Responsible for technical direction and oversight for personnel assigned to the operations work areas. Schedules and manages operations work area activities involving a wide diversity of computing services and functions. Analyzes work performance and provides recommendations for improvements.

Experience/Knowledge:

Should have a minimum of six (6) years experience in computer operations involving large scale computing systems and support related to the appropriate technical areas described in the Statement of Work. At least two (2) years of experience should have been in providing technical direction for computing operations, hardware, and/or software projects.

Education:

Should have an Associate's degree in science, mathematics, or a related field. A Bachelor's degree in (a) computer science, (b) physical science, or a related field will be considered to be equivalent to three (3) years of general experience.

Position No.: 8

Title: Communications Maintenance Manager

Duties:

Responsible for engineering and technical direction and oversight for personnel responsible for the installation, expansion, and maintenance of Center-wide computerized telephone data and video communication networks at LaRC. Specific duties include: (1) interfaces with Government management to develop and implement plans and procedures to provide responsive communication installations and maintenance services to the LaRC user community; (2) oversees all work scheduling, assignment of priorities, and work completion; (3) assesses material and labor requirements; and (4) analyzes work performance and takes action to implement improvements where deficiencies exist.

Experience/Knowledge:

Should have an in-depth knowledge of the design, operation, and maintenance of large-scale communications systems and networks. Should have a working knowledge of effective management tools and techniques. Should have at least ten (10) years of experience working with communication networks, including at least five (5) years overseeing maintenance of a large voice, data, or video network.

Education/Training:

Should have a Bachelor's degree in Electrical (Electronics) Engineering or equivalent.

Position No.: 9

Title: Systems Administrator/Analyst

Duties:

Sets up, coordinates, and manages computer systems for use by programmers, analysts, and researchers. Installs and checks out system upgrades and trains users on all elements of system use. Coordinates system maintenance and repair. Provides operational documentation as required. Develops and maintains system programs and application software used on systems.

Experience/Knowledge:

Should have an in-depth knowledge of computer systems, including peripheral equipment, and be proficient in systems programming, software development, and hardware applications. Should have proficiency and demonstrated knowledge in system administration procedures applicable to mini-computers and high-level workstations.

Education:

Should have a Bachelor's degree in (a) computer science, (b) mathematics, (c) physical science, or a related field.

Position No.: 10

Title: Communications Engineer

Duties:

Provides engineering support for the design, development, testing, implementation, and maintenance of large-scale, Center-wide voice, computer, and video communication networks at LaRC. Specific duties include: (1) directing the development and implementation of custom hardware and software to facilitate network maintenance; (2) directing the assessment and evaluation of new network technologies; (3) developing and refining maintenance procedures to improve service to the user community; and (4) overseeing diagnosis and resolution of complex network problems.

Experience/Knowledge:

Should have an in-depth knowledge of digital electronics, data communications, computer networking technologies, microprocessor hardware and software, and fiber-optic transmission systems. Should have at least two (2) years of experience with the development and maintenance of voice, computer, and/or video networks.

Training/Education:

Should have a Bachelor's degree in Electrical (Electronics) Engineering or equivalent.

Position No.: 11

Title: Computer Operator (Levels I, II, and III)

Duties:

Operates a variety of computing, peripheral, and support equipment. Interfaces with analysts and users in discussions and analysis of problems and procedures. Assignments may require the operator to select from a variety of standard setups and operating procedures. In responding to operating procedures or error conditions, applies standard operating or corrective procedures, but may deviate from standard practices or procedures when standard practices/procedures fail. Senior level positions may be required to act as area leader.

Experience/Knowledge:

More than one level or grade of this position may exist with progressive levels of experience for each grade. Should have experience with and understanding of general equipment architecture, a general understanding of system software, and be able to apply operating procedures to normal/abnormal conditions. The minimum number of years of experience in the operations of computing equipment for three levels of computer operators are: level I should have one (1) year; level II should have four (4) years; and level III should have six (6) years.

Education:

Should have a high school diploma or equivalent. College level or specialized formal education applicable to this assignment is desirable.

Position No.: 12

Title: Data Specialist

Duties:

Processes data and assists in preparing graphical and text output for distribution and dissemination. Prepares and submits jobs for computer processing by gathering, arranging, and entering the data, selecting programs, magnetic tapes, or files for use in processing, and following established procedures for job submittal and the quality control monitoring of both input and output. Operates a workstation or data terminal to maintain and manage data files. Senior level positions will be required to perform basic programming (e.g., changing control language) and the analysis of existing operational systems for problem resolution and efficiency.

Experience/Knowledge:

More than one level or grade for this position may exist with progressive levels of experience for each grade. Should have experience using scientific programming systems and recommending improvements to such systems. The lowest grade should have a minimum of one (1) year experience in processing scientific data.

Education:

Should have a high school diploma or equivalent. Specialized training applicable to data processing is desirable.



Position No.: 13

Title: Documentation Specialist

Duties:

Performs technical documentation work, such as typing technical reports, correspondence, procedures, program documentation, and miscellaneous material, and performs filing and other general office duties.

Experience/Knowledge:

Should have proficiency and demonstrated knowledge in the use of state-of-the-art workstation word processing systems. Should have a minimum of one (1) year of experience in general office duties.

Education:

Should have a high school diploma or equivalent.

Position No.: 14

Title: Communications Specialist

Duties:

Provides support for the operation of Center-wide voice, data, and video networks at LaRC. Specific duties include: (1) interfaces with the user community to identify requirements for moves, adds, and changes (MACs) to communications facilities; (2) develops work orders to implement MACs; (3) updates network data bases and provides data base administration; (4) performs traffic analysis and develops network utilization reports; and (5) operates the video conference center.

Experience/Knowledge:

Should have a general knowledge of the operation of telephone, data, and video communications systems. Should have experience working with a large user community. Should have experience using a personal computer for word processing and data base applications. Should have at least two (2) years of work experience in which the use of a computer was an integral part of the job.

Training/Education:

Should have a high school diploma or equivalent.

Title: Communication System Specialist (Levels I, II, and III)

Duties:

Provides technical support for the installation and maintenance of large-scale, Center-wide voice, computer, and video communication networks at LaRC. Specific duties include: (1) installation, relocation, and maintenance of end-user network hardware and software; (2) installation and maintenance of network infrastructure hardware and software; (3) technology assessments and evaluations; and (4) system testing.

Experience/Knowledge:

Should have a general knowledge of the design and operation of a broad range of voice, data, and video communication systems and networks. Should have experience installing and maintaining communication systems and networks. Should have experience using sophisticated test equipment and software diagnostic tools to efficiently diagnose and resolve communications problems. Should have experience as listed below for Levels I, II, and III.

**Level I**

Should meet the experience requirements of a Level III Electronics Technician plus an additional two (2) years of experience. Experience should include at least four (4) years of specialized experience in the installation and maintenance of communication networks.

**Level II**

Should meet the experience requirements of a Level I Specialist plus an additional two (2) years of experience with communication networks. Experience should include at least two (2) years of highly specialized experience performing system-level maintenance of one of the following systems: (1) ROLM 9751 multi-node voice/data PBX with PhoneMail; (2) Ethernet/FDDI large-scale computer network using TCP/IP network protocol; or (3) Broadband CATV system including network expansion design.

**Level III**

Should meet the experience requirements of a Level II Specialist plus an additional two (2) years of experience with one of the highly specialized systems listed above for Level II. Experience should also include at least one (1) year as a field or group leader overseeing installations and maintenance of communications equipment, including assignment and scheduling of jobs, planning work, and assessment of material and labor requirements.

Education/Training:

Should have a high school diploma or equivalent. Should have completed at least two (2) years of training from an accredited electronic technical school or an equivalent amount of specialized training in electronics technology. This specialized training may have been obtained in industrial training programs, military programs, or work experience.

Position No.: 16

Title: Electronics Technician (Levels II and III)

Duties:

Provides technical support for the installation and maintenance of large-scale, Center-wide voice, computer, and video communication networks at LaRC. Specific duties include installation, relocation, and maintenance of end-user network hardware and wiring.

Experience Knowledge:

Should have general knowledge of electronics with experience in installing, fabricating, maintaining, repairing, troubleshooting, and testing electrical equipment. Should be able to determine malfunctions and resolve problems. Should have experience as listed below for Levels II and III.

**Level II**

Should have at least four (4) years of general electronics work experience solving complex technical problems, including those that cannot be solved solely by referring to manufacturer's manuals or similar documents. Experience should include at least one (1) year in a communications related field.

**Level III**

Should have at least six (6) years of general electronics work experience including at least two (2) years in a communications related field. Experience should include at least one (1) year providing technical guidance to lower level technicians.

Education/Training:

Should have a high school diploma or equivalent. Should have completed at least two (2) years of training from an accredited electronic technical school or an equivalent amount of specialized training in electronics technology. This specialized training may have been obtained in industrial training programs, military programs, or work experience.

Position No.: 17

Title: Requirements Specialist

Duties:

Provides support for purchasing material necessary to maintain, expand, and upgrade Center-wide communication networks at LaRC. Duties include: (1) monitoring equipment inventories and interfacing with appropriate personnel to determine when new equipment is needed; (2) assisting with the development of specifications for new equipment; (3) contacting equipment vendors using appropriate competitive procedures; (4) initiating purchase process; (5) verifying delivery of materials; and (6) generating summary documentation of all purchasing activity using an appropriate data base.

Experience/Knowledge:

Should have general knowledge of telecommunication equipment and systems. Should have experience using a personal computer for word processing and data base applications. Should have at least two (2) years of experience in a communications related technical field.

Training/Education:

Should have a high school diploma or equivalent.

## Attachment 7

### KEY PERSONNEL REQUIREMENTS

Key personnel are the top, directly involved managers who are extremely important to the successful accomplishment of the contract. You must submit resumes for these individuals.

Key personnel include, but are not necessarily limited to, the following:

- (a) Contract Manager (and Deputy Manager, if proposed)
- (b) Technical Managers responsible for the following technical areas:
  - CSCC Equipment Operation (SOW C.3.1)
  - Operating Systems Support (SOW C.3.2)
  - CSCC Systems Maintenance (SOW C.4)
  - Communication Networks (SOW C.5)
  - LaRC Distributed Computing and Data Reduction Support (SOW C.6)

Depending on such things as the qualifications of specific individuals, your technical/management approach, and your proposed organization, we realize that one key person could possibly be responsible for managing more than one area. Similarly, you might elect to propose more than one key person per area or more key personnel in addition to those identified above. Our intent is, as a minimum, to evaluate the top managers critical to the effort and not to restrict/inhibit your organizational approach.

Title: Contract Manager (and Deputy Manager, if proposed)

#### Duties:

This position involves the overall planning, direction, coordination, and administration of SCOMAC support services under the contract. The Contract Manager is responsible for assignments, scheduling, reviewing work discrepancies, policies, and goals of the organization and formulating and enforcing work standards.

#### Experience/Knowledge:

Should have a minimum of ten (10) years of appropriate professional experience related to the technical areas described in the Statement of Work (SOW). At least five (5) years of experience should have been in progressive managerial positions, and at least two (2) years experience performing managerial, technical, and administrative duties required by the position of contract manager on a contract of the size and diversity of this proposed effort.

#### Education:

Should have a Bachelor's degree in (a) computer science, (b) engineering, (c) physical science or a related field.

Title: Technical Manager (as deemed appropriate by the Contractor's organization)

Duties

Responsible for managing and directing technical work within designated Statement of Work area.

Experience/Knowledge:

Should have a minimum of eight (8) years experience including five (5) years experience supervising and providing technical direction in appropriate technical areas in the Statement of Work.

Education:

Should have a Bachelor's degree in (a) computer science, (b) engineering, (c) physical science or a related field.

## Attachment 8

## BIDDER'S LIBRARY INFORMATION

## CSCC

**Doc. No. Title**

**General Manuals**

- A-1e Introduction to the Use of the Central Scientific Computing Complex (April 1991)
- A-2a Guidelines for Central Scientific Computing Complex Documentation Series (May 1990)
- A-3 A Guide to Using Magnetic Tape at the Langley Central Scientific Computing Complex (August 1984)
- A-5c Central Scientific Computing Complex Information Resources (September 1991)
- A-6 LaRCNET User's Guide (May 1987)
- A-7 GUIDELINES For Developing Structured FORTRAN PROGRAMS (March 1985)
- A-8 SNS Programming Environment User's Guide (February 1991)
- A-9 Image Processing Mini Manual (June 1992) PRELIMINARY

**CRAY User Manuals**

## CSCC

**Doc. No. Title**

## CRAY

**Doc. No.**

- |           |  |             |
|-----------|--|-------------|
| CR-1c     | CRAY Mini Manual (February 1991)                     |             |
| CR-2a     | CRAY UNICOS Primer                                   | SG-2010C    |
| CR-3a     | CRAY Mathematical Libraries (January 1990)           |             |
| CR-5a     | CRAY FORTRAN (CFT2) Reference Manual                 | SR-2007D    |
| CR-6b(v1) | CRAY UNICOS Commands Reference Manual (Volume 1)     | SR-2011 6.0 |
| CR-6b(v2) | CRAY UNICOS Commands Reference Manual (Volume 2)     | SR-2011 6.0 |
| CR-7      | CRAY UNICOS Editor's Primer                          | SG-2050     |
| CR-8b     | CRAY Segment Loader (SEGLDR) and ld Reference Manual | SR-0066 6.0 |
| CR-9a     | CRAY UNICOS Support Tools Guide                      | SG-2016 6.0 |
| CR-10     | CRAY Symbolic Debugging Package Reference Manual     | SR-0112     |
| CR-11b    | CRAY TCP/IP Network User Guide                       | SG-2009 6.0 |
| CR-12     | CRAY UNICOS Source Code Control System User's Guide  | SG-2017     |
| CR-13a    | CRAY UNICOS Macros and Opdefs Reference Manual       | SR-2082     |
| CR-16b    | CRAY UNICOS Performance Utilities Reference Manual   | SR-2040     |
| CR-18a    | CRAY Multitasking Programmer's Reference Manual      | SN-2026C    |
| CR-20     | CRAY C Reference Manual                              | SR-2024     |
| CR-21a    | CRAY PASCAL Reference Manual                         | SR-0060     |
| CR-22     | CRAY Computer Systems User Environment               | SN-2086     |
| CR-23a    | CRAY UPDATE Reference Manual                         | SR-0013K    |
| CR-24     | CRAY SORT Reference Manual                           | SR-0074     |



<b>CSCC Doc. No.</b>	<b>Title</b>	<b>CRAY Doc. No.</b>
CR-25a	CRAY UNICOS CDBX Debugger User's Guide	SG-2094
CR-26b	CRAY UNICOS CDBX Symbolic Debugger Reference Manual	SR-2091
CR-27a	CRAY UNICOS FORTRAN Library Reference Manual	SR-2079
CR-29a	CRAY UNICOS Math and Scientific Library Reference Manual	SR-2081
CR-30a	CRAY Standard C Programmer's Reference Manual	SR-2074
CR-31a	CRAY Standard C Library Reference Manual	SR-2080
CR-32b	CRAY The FORGE User's Guide	
CR-33	CRAY Y-MP, CRAY X-MP EA and CRAY X-MP Multitasking Programmers' Manual	SR-0222F-01
CR-34	CRAY Macros and Opdefs Reference Manual	SR-0012D
CR-35a	CF77 Compiling System, Volume 1: FORTRAN Reference Manual	SG-3071
CR-36a	CF77 Compiling System, Volume 2: Compiler Message Manual	SG-3072
CR-37	CF77 Compiling System, Volume 3: Optimization Guide	SG-3073
CR-38a	CF77 Compiling System, Volume 4: Parallel Processing Guide	SG-3074
CR-39	UNICOS Source Manager (USM) User's Guide	SG-2097
CR-40	X Window System RM	SR-2101
CR-43	I/O Technical Note	SN-3075

#### **CRAY System Manuals**

CR-61	CRAY Y-MP Computer Systems Functional Description	HR-4001A
CR-62	CRAY Operator Workstation (OWS) Guide	SN-3030A
CR-63	CRAY Operator Workstation (OWS) Station Interface Reference Manual	SN-3031A
CR-64a	CRAY UNICOS Index for CRAY Y-MP, Cray X-MP EA, CRAY X-MP and CRAY-1 Computer Systems	SR-2049
CR-65	CRAY IOS Software Internal Reference Manual	SM-0046I
CR-66	CRAY IOS Table Descriptions Internal Reference Manual	SM-0007
CR-67	System Administration for Source Releases, Vol 1	SG-2113
CR-68	System Administration for Source Releases, Vol 2	SG-2113
CR-69a	UNICOS Installation Guide	SG-2112
CR-71b	CRAY UNICOS Administrator Commands Reference Manual	SR-2022
CR-73b	CRAY TCP/IP Network Library Reference Manual	SR-2057
CR-74	CRAY CAL Assembler Version 2 Reference Manual	SR-2003C
CR-75b	CRAY UNICOS Index for Cray-2 Computer Systems	SR-2048
CR-76	CRAY-2 Computer System Functional Description	HR-2000C
CR-77b	CRAY UNICOS File Formats & Special Files Reference Manual	SR-2014
CR-78b	CRAY UNICOS System Calls Reference Manual	SR-2012
CR-80	CRAY UNICOS Overview for Data Center Managers	SG-2053
CR-82	CRAY UNICOS Overview for Users	SG-2052A
CR-84	CRAY HYPERchannel Driver Design Specification	SN-2046A
CR-85b	CRAY Front-End Protocol Internal Reference Manual	SM-0042

<b>CSCC</b>		<b>CRAY</b>
<b>Doc. No.</b>	<b>Title</b>	<b>Doc. No.</b>
CR-86b	CRAY TCP/IP Protocol Definitions Internal Reference Manual	SM-2069B
CR-87a	CRAY TCP/IP Table Descriptions Internal Reference Manual	SM-2068A
CR-89a	CRAY Debug Tables Internal Reference Manual	SM-0225C
CR-90	CRAY FORTRAN (CFT2) Internal Reference Manual	SM-2006B
CR-91b	CRAY UNICOS Tape Subsystem User's Guide	SG-2051
CR-93	CRAY UNICOS NFS Internal Reference Manual	SM-2065
CR-94	CRAY UNICOS Internal Library Reference Manual	SR-2083
CR-95a	CRAY Remote Procedures Call Reference Manual	SR-2089
CR-97	Defining and Compiling terminfo Definitions for the UNICOS Operating Systems	SN-2067
CR-98	UNICOS Message Reference Manual	SR-2200
CR-99	UNICOS Multilevel Security Feature UG	SG-2111
CR-100	UNICOS 6.1 System Administration Technology Notes	S1-2113

### CONVEX User Manuals

<b>CSCC</b>		<b>CONVEX</b>
<b>Doc. No.</b>	<b>Title</b>	<b>Doc. No.</b>
CX-1e	CONVEX Mini Manual (February 1992)	
CX-2a	CONVEX UNIX Primer	710-000221-202
CX-3a	CONVEX Mathematical Libraries (January 1990)	
CX-4c	CONVEX FORTRAN Language Reference Manual	720-002230-003
CX-5c	CONVEX FORTRAN User's Guide	720-000030-208
CX-6d	CONVEX OS Man Pages for Users	710-015830-000
CX-7	CONVEX Text Editor's User's Guide	740-000430-000
CX-8d	CONVEX Loader User's Guide	710-008630-000
CX-9d	CONVEX OS Man Pages for Programmers	710-004030-002
CX-10a	CONVEX adb Debugger User's Guide	740-002630-203
CX-11a	CONVEX Consultant User's Guide	740-002530-203
CX-12d	CONVEX Internet Services User's Guide	710-002530-204
CX-13a	CONVEX Portable C User's Guide	720-000530-202
CX-14a	CONVEX Network File System User's Guide	710-001530-203
CX-16b	CONVEX VECLIB User's Guide	710-011030-000
CX-17	CONVEX LSQPACK User's Guide	740-002230-202
CX-18	CONVEX Guide to Software Development	710-001930-200
CX-19a	CONVEX Notesfile Reference Manual	
CX-20b	CONVEX FORTRAN Master Index	720-003230-001
CX-21	CONVEX GNU Emacs Manual	
CX-22	CONVEX Make Utility	
CX-23a	CONVEX CXbatch User's Guide	710-002730-205
CX-24	CONVEX nroff/troff Manual	
CX-25a	CONVEX CXbatch Concepts	710-006630-003
CX-26	CONVEX LINPACK and EISPACK Subroutines (January 1990)	

<b>CSCC</b>		<b>CONVEX</b>
<b>Doc. No.</b>	<b>Title</b>	<b>Doc. No.</b>
CX-27a	CONVEX FORTRAN Optimization Guide	
CX-28	CONVEX Consultant Programmer's Reference	710-004130-000
CX-29a	CONVEX CXbatch Programmer's Reference	710-004430-003
CX-30	CONVEX Network File System Programmer's Reference	710-004230-000
CX-31	CONVEX Ada User's Guide	720-000730-202
CX-32	CONVEX Ada Optimization Guide	720-001030-200
CX-33	CONVEX Ada Debugger User's Guide	720-000830-202
CX-34	CONVEX Ada Debugger Reference Manual	720-000250-202
CX-35	CONVEX Ada Programmer's Reference	720-001730-000
CX-36a	CONVEX FORTRAN Programmer's Reference	720-001630-002
CX-37a	CONVEX C Programmer's Reference	720-001530-001
CX-38a	CONVEX CXwindows Programmer's Reference	710-004530-002
CX-39	CONVEX OSF-Motif and CXwindows User's Guide	
CX-40	CONVEX Performance Analyzer (CXpa) User's Guide	710-007230-002
CX-41	CONVEX CXpa Programmer's Reference	710-004730-002
CX-42	Applications Compiler User's Guide	720-004030-001
CX-43	CXdb Concepts May 1991	710-015330-001
CX-44	CXdb Users Guide October 1991	720-015530-001
CX-45	X Toolkit 1988	
CX-46	CONVEX C Guide	720-000630-205
CX-47	Toolbox Man Pages	710-004930-001
CX-48	CONVEX C Optimization Guide	720-001130-202
CX-49	CX/MOTIF Programmers Manual	710-008930-001
CX-50	UNIX for the Beginning User December 1987	
CX-53	CXdb Reference Manual December 1991	710-015430-002
 <b>CONVEX POSIX Manuals</b>		
CX-60	CONVEX POSIX Impacts	710-002130-000
CX-61	CONVEX POSIX Concepts	710-005030-000
CX-62	CONVEX POSIX Conformance	710-002030-200
 <b>CONVEX System Manuals</b>		
CX-71b	CONVEX NFS System Manager's Guide	710-001630-205
CX-72a	CONVEX Processor Operation Guide	081-000040-200
CX-73b	CONVEX NFS Reference Set	710-001730-205
CX-74b	CONVEX Internet Services System Manager's Guide	710-002430-204
CX-75b	CONVEX Interprocess Communication Programmer's Guide	710-002630-202
CX-76a	CONVEX Architecture Reference	081-009330-000
CX-78b	CONVEX OS Tutorial Papers	710-011130-000
CX-79a	CONVEX Assembly Language User's Guide	740-000030-204
CX-80a	CONVEX CXbatch System Manager's Guide	710-006730-003
CX-81a	CONVEX CXbatch System Manager Utilities Reference Manual	710-006830-003

CSCC Doc. No.	Title	CONVEX Doc. No.
CX-82a	CONVEX CXbatch Master Index	710-007630-003
CX-83a	CONVEX Programmer's Reference Master Index	October 1990
CX-84a	CONVEX Internet Services Master Index	710-003030-201
CX-85	CONVEX Networking Concepts	710-000103-201
CX-86	CONVEX Checkpoint Restart Guide	710-006530-001
CX-87	CONVEX Tape System User's Guide	November 1990
CX-88	CONVEX NFS Concepts	
CX-89	CONVEX NFS Programmer's Reference	October 1990
CX-90	CONVEX Managing ConvexOS: Configuration Guide	710-001430-209
CX-91	CONVEX Managing ConvexOS: Operations Guide	710-011830-001
CX-92	CONVEX OS Man Pages for System Managers	710-015930-000

### CDC CYBER NOS 2 Documentation

CSCC Doc. No.	CDC Number	Title
N2-1b		NOS Version 2 Mini Manual (September 1988)
N2-2f	60459680	NOS 2 Reference Set Volume 3 System Commands
N2-3d		Mathematical And Statistical Software at Langley (May 1990)
N2-4a	60481300	FORTRAN Version 5 Reference Manual
N2-5	60484000	FORTRAN Version 5 User's Guide
N2-6c	60459690	NOS 2 Reference Set Volume 4 Program Interface
N2-7a		Langley XEDIT Reference Manual
N2-8a	60429800	CYBER Loader Version 1 Reference Manual
N2-9	60484100	CYBER Interactive Debug Version 1 Guide for Users Of FTN5
N2-10	60481400	CYBER Interactive Debug Version 1 Reference Manual
N2-11b	60459660	NOS 2 Reference Set Volume 1 Introduction To Interactive Usage
N2-13b	60459390	NOS 2 Diagnostic Index
N2-14	60449900	UPDATE Version 1 Reference Manual
N2-15a	60450100	MODIFY Reference Manual
N2-16b	60499600	Remote Batch Facility Version 1 Reference Manual
N2-17a	60499300	CYBER Record Manager Advanced Access Methods Version 2 Reference Manual
N2-18a	60499400	CYBER Record Manager Advanced Access Methods Version 2 Users' Guide
N2-19	60495700	CYBER Record Manager Basic Access Methods Version 1.5 Reference Manual
N2-20	60495800	CYBER Record Manager Basic Access Methods Version 1.5 Users' Guide
N2-21	60499200	Common Memory Manager Version 1 Reference Manual
N2-26	60483000	Fortran Extended Version 4 to FTN Version 5 Conversion AID
N2-27	199983900	Basic Version 3 Reference Manual

<b>CSCC Doc. No.</b>	<b>CDC Number</b>	<b>Title</b>
N2-28a	60492600	Compass Version 3 Reference Manual
N2-31a	60484800	Sort/Merge Version 5 Reference Manual
N2-33a	60496200	Form Version 1 Reference Manual
N2-34	60495500	8-Bit Subroutines Version 1 Reference Manual
N2-35		RNF Text Formatter User's Manual
N2-36a		Utility Libraries and Software Tools
N2-37b	60497700	Pascal Version 1 Reference Manual
N2-39c	60459670	NOS 2 Reference Set Volume 2 Guide to System Usage
N2-40a	60482300	CYBER Loader Version 1 User's Guide
N2-41b	60460420	Full Screen Editor Users' Guide
N2-42b	60460430	NOS Version 2 Screen Formatting Reference Manual
N2-44	60463830	CDCNET Access Guide
N2-45	60463850	CDCNET Terminal Interface
N2-46	60000214	CDCNET TCP/IP Usage
N2-47	60463863	CDCNET Batch Device Users' Guide

### **Graphics Documentation**

<b>CSCC Doc. No.</b>	<b>Title</b>
G-1a	Graphics Mini Manual (February 1990)
G-2	Guidelines in Preparing Computer-Generated Plots for NASA Technical Reports with the LaRC Graphics Output System. (NASA TM81908 (revised), August 1983)
G-3	Langley Graphics System (January 1983)
G-4	Langley Plot 10 User's Guide
G-5c	DI-3000 User's Guide (Version 6) Appendix D - DI-TEXTPRO Appendix E - DI-3000 XPM
G-6 (NOS)	Metafile System User's Guide
G-6	Metafile Translator User's Guide
G-7	Grafmaker User's Guide
G-8	Contouring System User's Guide
G-9 (NOS)	NCAR Graphics Software
G-9	NCAR GKS-Compatible Graphics System
G-10	Device Driver Guides
G-11b	PICSURE User's Guide PICSURE Plus User's Guide - PICQUICK PICSURE Plus User's Guide Appendix C - PICTOOLS
G-12	Common Graphics Library (CGL) Volume I: LEZ User's Guide
G-13	Common Graphics Library (CGL) Volume II: Low-Level User's Guide
G-14	Raster Metafile and Raster Metafile Translator
G-15a	FIGARO Reference Manual
G-16a	FIGARO Training Manual

**CSCC**

<b>Doc. No.</b>	<b>Title</b>
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G-17	TECPLOT: Installation Manual/Tutorials Manual, Volume A
G-18	TECPLOT: Users Guide/Reference Manual, Volume B
G-19a	TECPLOT: Users Manual for Version 4.0, Part I
G-22	UNIMAP 2000 User's Manual
G-23	NCAR, Version 3 Reference Manual
G-24	NCAR, Version 3 User's Guide

**Real-Time Simulation Documentation**

R-1b	Real-Time Simulation User's Guide (January 1992)
R-2	Verification and Documentation of Simulator Performance (October 1988)

**Miscellaneous CSCC Documentation**

Z-1a	MACSYMA Usage at Langley (January 1987)
Z-2	A Description of the Langley Wireframe Geometry Standard (LaWGS) Format (January 1985)
Z-3	RIM Version 6.0 User's Guide
Z-4	RIM Version 7.0 and Report Writer User's Guide
Z-5	ACSL-Advanced Continuous Simulation Language (September 1986)
Z-6	KERMIT User Guide (August 1984) - PRELIMINARY

**Operations**

- Operating Procedures Manual (OPM)
  - Volumes I and II: Network Operating System (NOS)
  - Volume III: Supercomputing Network Subsystem (SNS)
- Facility Monitor Instructions: B-1268/1268A/1268B
- Summary of Facility Malfunction Reports (FMRs)
- Summary of System Malfunction Reports (SMRs)
- LaRC SNS Software Configuration Control Process
- Communication Trouble Reports and Weekly Summaries

**Real-Time Simulation**

- The New Langley Research Center Advanced Real-Time Simulation (ARTS) System (AIAA Paper 86-2680)
- Use of CONVEX Supercomputers for Flight Simulation at NASA Langley

**Communications**

- LaTS 1992
- LaRCNET 1992
- Video Network 1992
- Copies of Work Orders
- Spare Parts List

**Miscellaneous**

GSA Supply Catalog  
LaRC Stores Stock Catalog  
Copies of Work Orders  
Copies of current contracts to be consolidated into SCOMAC  
Certificates of Maintainability

**Diagrams and Floor Plans**

B1268 Complex First Floor Plan  
B1268 Complex Second Floor Plan  
B1268 Complex Basement Floor Plan  
LaRC Computer Network (LaRCNET)  
CRAY-2/Y-MP8/Lab Equipment Layout (Drawing 1E3)  
STK Equipment Layout (Drawing 2E2)  
CONVEX Equipment Layout (Drawing 3E2)  
Real-Time Equipment Layout (Drawing 4E4)  
CPFS/Tape Library Equipment Layout (Drawing 5E1)  
CPFS Mainframe RM2209 Equipment Layout (Drawing 6E2)  
I/O Equipment Layout (Drawing 7E2)  
Real-Time and Lower High Bay Offices (Drawing 8E1)  
A, Y, Z, R, T Computers Channel 10 (Drawing 92-A)  
Y Computer (Drawing 92-C)  
Z Computer (Drawing 92-D)  
Network/CDCNET Configuration (Drawing 92-G)  
Shared Equipment (Drawing 92-H)  
SNS Equipment (Drawing 92-I)

## Attachment 9

### DESCRIPTION OF THE CENTRAL SCIENTIFIC COMPUTING COMPLEX

The equipment currently contained in the Central Scientific Computing Complex is given, by broad category, in the list below; the various subsystems in the CSCC and the responsibilities under the SCOMAC effort are listed in Table 1. The major subsystems of the CSCC and their relationships are shown in Figure 1. Operational services are required for a configuration of computing machines having high processing speeds, multiprogramming capability, large storage capacity, remote terminal capability, and multiple input/output channels with a variety of peripheral devices and special subsystems. The associated software systems to run and utilize the computing systems and interfaces have been developed and are provided. These software systems consist of the following: The CDC Network Operating System (NOS), the Cray UNICOS Operating System, the CONVEX UNIX Operating System, MS-DOS-VM, SUN OS and the DEC Operating System. Typical weekly workloads for the CSCC are shown in Table 2.

#### Computer Systems

##### Supercomputing Network Subsystem

- |                     |                 |
|---------------------|-----------------|
| 1 - CRAY Y-MP8/5128 | 1 - CONVEX C210 |
| 1 - CRAY 2S/4-128   | 1 - CONVEX C220 |
|                     | 1 - IBM 9730    |

##### Networking Operating Subsystem

- 2 - CDC CYBER 860A

##### Flight Simulation Computing Subsystem

- 1 - CONVEX C230
- 1 - CONVEX C3850

#### Peripherals

- 2 - IBM Laser Printers (Model 3800-006)

#### Storage Devices

- 19 - CDC Magnetic Tape Units (Models 667, 669, and 679)
- 2 - CDC MASSTOR Units (Model M-860)
- 4 - CDC Disk Units (Model 844-41)
- 16 - CDC Disk Units (Model 895)
- 2 - CRI Disk Subsystems (Model DD41)



- 2 - StorageTek Cartridge Subsystems
- 8 - CONVEX Disk Units (Model DKD214)
- 4 - CRI Disk Subsystems (Model DD4R)
- 13 - CONVEX Disk Units (Model DKD208)
- 8 - CONVEX Disk Units (Model DKD284)

**Special On-Line Systems and Subsystems** (Interfaced to one or more computers of the complex)

- Advanced Real-Time Simulation Subsystem, consisting of analog-to-digital and digital-to-analog channels, CRT displays, direct writing recorders, discrete-signal input/output channels, and simulation consoles.
- DEC PDP 11/34 and PDP 11/44 Systems with RSX-11M Operating System used for the Mission Oriented Terminal Area Simulation.
- DEC VAX 8650 System with VAX/VMS Operating System used for the Advanced Concepts Simulator.
- High Performance Graphic Subsystems.
- Interactive terminals of several manufacturers.
- Telecommunications switching system, consisting of a ROLM processor and operating system software.
- LaRCNET

**Special Off-Line Systems and Subsystems**

- Automatic Graphics Equipment.

A number of graphics output devices for the presentation of computed results of analytical and experimental studies are located in the input/output area of building 1268. Several computers that are nodes on LaRC's local area network (LaRCNET) are used as graphics servers for these devices.

The present complement of graphics output devices and their graphics servers is described here.

Two Sun Microsystems SPARC workstations act as graphics servers for the following graphics devices:

California Computer Products Color Electrostatic Plotter

The Calcomp electrostatic plotter is a wide format plotter that produces color and monochrome plots directly from compressed raster data or random vector data. The

plotter uses specially treated dielectric paper or film as its output media and requires chemical toners to produce color graphics output.

#### California Computer Products Thermal Plotter

The Calcomp black and white thermal plotter produces monochrome wide format plots using thermal imaging. The plotter supports a number of data formats including compressed raster format and Hewlett-Packard Graphic Language format. Thermal imaging occurs on media with heat sensitive coating.

#### California Computer Products Color Thermal Plotter

The Calcomp color thermal plotter produces A-size and B-size color plots. The plotter supports the Calcomp compressed raster format and random vector data. Thermal imaging occurs on media with heat sensitive coating.

#### QMS PostScript Laser Printer

The QMS Laser prints A-size black and white PostScript files at a rate of 15 pages per minute. It uses current state-of-the-art laser printer technology to fuse dry toner on the print media.

#### California Computer Products Pen Plotter

The Calcomp pen plotter plots in both a narrow and a wide format. It has an eight-pen carousel for color plotting and plots on paper and film. It accepts data in vector and Hewlett-Packard Graphics Language formats.

#### QMS PostScript Thermal Printer

The QMS thermal printer prints A-size color PostScript files on paper and film. Color thermal transfer technology is used to produce color images on media with heat sensitive coating.

#### Film Recording Lab

A Digital Equipment Corporation VAX 11/750 with disk and tape drives and personal computer is the graphics server for the Film Recording Lab. The Film Recording Lab consists of a CELCO film recorder, Solitaire film recorder, Superset rasterizer, and the Hope film processing system. Plots are output to 35 mm slides, 16 mm movies, 4 x 5 viewgraphs and negatives, 8 x 10 viewgraphs or microfiche.

- IBM laser printing system used for text and graphics.

An International Business Machines 9375 mini computer along with two disk drives, a tape drive, and personal computer act as the graphics server for the IBM-3800 laser

printer/plotter system. The two laser printers plot data at a rate of 120 pages per minute on 7.5 inch x 13.75 inch fanfold paper. The laser printer/plotter accepts only DI-3000 formatted metafiles as input.

- Data Visualization and Animation Lab

The Data Visualization and Animation Lab (DVAL) is an open shop facility created by and supported through the Flight Software and Graphics Branch of the Analysis and Computation Division to assist researchers of the LaRC with image processing or scientific visualization requirements.

#### Image Processing System

The image processing capabilities in the DVAL are supported primarily through a network of Sun workstations. Digital image data may be transferred to the Sun network through the Center's local area network, or may be transferred to the system from 9-track magnetic tape. The Eikonix Model 1412 camera and Sharp JX-600 flatbed scanner are available to acquire digital data from various photographic media. A video input/output system is available for performing video-rate digitization, processing, and storage of large sequences of video frames. The supported video formats include VHS and S-VHS. The Sun TAAC-1 application accelerator can handle large arrays of data fast enough to support interactive processing.

#### Scientific Visualization System

The Scientific Visualization System (SVS) of the DVAL is a state-of-the-art digital video editing suite for creating video reports of time-dependent theoretical and experimental data. The system consists of a DF/X Compositum video editor which controls digital video machines as well as analog video machines. The digital video machines include a Sony D1 tape recorder and an Abekas A60 real-time disk drive. Because these machines are digital video, they preserve the integrity of the original images regardless of the number of editing generations. The Abekas is also connected to LaRCNET so that digital images can easily be transferred from a workstation to the SVS. The analog machines include WORM laser disk recorders and numerous tape recorders (Betacam SP, S-VHS, and Umatic). These machines are used for input (e.g., a wind tunnel or in-flight experiment recorded onto video tape) and final output. One laser disk recorder is mounted into a transportable rack with a multiple frequency scan convertor so that it can be shipped to the researcher's site and connected to a workstation/PC for local recording. Finally an audio system is being added to support narrations and background music.

- Geometry Laboratory

The Geometry Laboratory (GEOLAB) in the CSCC is a facility focused to provide rapid response to the computational-geometry needs of LaRC. Currently there are nine Silicon Graphics high-performance workstations and five X-terminals in the GEOLAB. A

Cyberware Laser Digitizer that works in conjunction with one of the SGI Iris workstations has been incorporated into the lab. The digitizer will allow wind tunnel models and other small objects to be rapidly measured and the measurements utilized on a workstation for display, surface modeling or grid generation.

There are three primary categories of software used in GEOLAB: Surface modeling, grid generation and visualization. The surface modeling software includes an interactive Computer-Aided Design system and a conceptual and preliminary design system under development at Langley. Grid generation software is available for creating block-structured and unstructured grids. Visualization software is capable of displaying structured grids and associated solutions, unstructured grids and smoothed surfaces.

- **Acquidneck Optical Archival System (OAS)**

The Acquidneck Optical Archival System (OAS) consists of three Acquidneck OAS 150 systems and a Cygnet 1802 Optical Disk Autochanger "jukebox" with elevator module for fully automatic operation. The system utilizes Write-Once-Read-Many (WORM) technology.

Each OAS system is made up of an Optimum 100 Series M optical drive and an Acquidneck controller. Additionally, two of the systems are connected to StorageTek nine-track tape transports with 6250 capability. These two systems are interfaced to an IBM-XT allowing tape to disk, disk to disk, or disk to tape transfer operations. A Mini-VAX is used as the controller for the third system. This VAX is also the host machine to the Cygnet 1802 Autochanger.

The Cygnet Autochanger is an optical-based tape library emulation system for storage and retrieval of data. This system utilizes two Optimum 1000 Series M drives. The system, as configured, is able to hold 51 double sided, double-insertion, 12-inch optical disk resulting in a 130 Gb capacity. The optical media utilized has a 2.6 Gb capacity and is available from Phillips DuPont Optical.

Computer mainframes and/or peripheral equipment may be added to or deleted from the Computer Complex during the contract period.

### Operational Areas

The areas associated with computer operations are as follows:

- o I/O peripheral equipment area.
- o NOS computer operations areas will be associated with mainframe console operations for all CDC computers. Besides the consoles, these areas will contain disks and magnetic tapes.
- o CONVEX 220 is in a secure (classified) room environment. This room contains tape drives, a printer, removable disk pack, and secure vaults for storing removable packs and other materials. Operational support is required for this activity.

- o CONVEX 210 has its own operational area. Besides a console, this area contains disks, tape drives, and printer. This area requires some operational support on an as needed basis.
- o The CRAY-2 and CRAY Y-MP each has its own operational area. Each area includes workstations, disk drives and StorageTek Cartridge Subsystem.
- o There is a separate area for real time activities. The computers in this area are the CONVEX C230 and CONVEX C3850. Each machine includes tape drives, disk, removable disk, and printers along with support consoles.

In addition, there are operations areas associated with plotting as described in Appendix III.

### **Access Control System**

The Access Control System consists of a Card Key System, Inc., Model 3100 micro computer connected to 69 points of entry throughout the building 1268 complex. The system is LSI11 based with software capability providing various levels of access security at any of the designated entry points.

The 69 points of access control (also known as Terminal Interface Units) consist of 21 exterior perimeter doors; 39 card reader-controlled doors and access points; 8 interior doors without card readers; and 1 access point that serves as an alarm interface to the video monitoring system. The 69 points of access are monitored for alarm conditions from the central Facility Monitoring Stations. Any access point can also be commanded to an open (unsecured) or closed (secured) mode from the Facility Monitoring Station. Backup control is also provided in the Operations Control Office (OCO) and in the Access Computer area.

Currently approximately 425 card keys are active within the system.

### **Environmental Control System**

The Powers 600 Insight System consists of an Everex 386/25 PC with an 80 MB disk and 4 MB of memory that is built upon a mouse-driven Microsoft Windows foundation. This provides a graphical approach to building environmental management and control. Using the Micrografx In\*A\*Vision (CAD) drawing package, one can create drawing layouts of buildings, rooms, and HVAC systems to monitor and control temperatures, HVAC equipment, and alarms. The Powers System also provides trend data collection at the PC. By saving the data of each point, historical records on building temperatures, HVAC status and alarms can be stored. In addition, reports can be generated from the collected data of each control point.

### **Facility Documentation System**

The Graphic Data Center Manager (GDCM) operates on an IBM-compatible 486/33 PC with 250 MB of disk storage and 10 MB of memory. The GDCM package provides for the design of accurate scale drawings. These drawings are used to plan, modify, and maintain up-to-date drawings of computer rooms, equipment layout, and the building complex. A symbol library is used to store detailed computer equipment symbols which are used on drawings. GDCM also uses a data base system to store information such as manufacturer, model, and description of each piece of computer equipment on a drawing.

**Table 1. Systems Included in CSCC**

System	Responsibility under SCOMAC	
	Operate	Maintain
NOS Computing Subsystem (NCS)	X	X
Supercomputing Network Subsystem (SNS)	X	X
Flight Simulation Computing Subsystem (FSCS)	X	X
Automatic Graphics Equipment	X	
Laser Printing system	X	X
Data Visualization and Animation Lab:		
Scientific Visualization System (SVS)	X	X
Image Processing System		
Advanced Real-Time Simulation Subsystem (ARTSS)		
Advanced Concepts Simulator		
Mission Oriented Terminal Area Simulator		
Card-Key System	X	
Powers 600 Insight System	X	
Geometry Laboratory (GEOLAB)		
Graphic Data Center Manager (GDCM)	X	
Acquidneck Optical Archival System (OAS)	X	

**Table 2. CSCC Typical Workloads**

Unless stated otherwise, all numbers are weekly averages.

**Computer System Activity (hours):**

	CRAY Y-MP	CRAY-2S	C210	C220	C230	C3850	CY860A
Production	149.8	156.2	164.5	166.8	40	50	166.8
Production Support	13.9	8.8	3.0	1.0	10	10	0
Miscellaneous	4.3	3.0	0.5	0.2	118	108	1.2

**System Malfunction reports generated:** 10.6

**Facility Malfunction reports generated:** 5.5

**Output Activity:**

Graphics:	Number of Jobs	Frames/Copies
Calcomp Tapes Processed	76.9	364.6 (f)
Versatec Tapes Processed	30.8	40.6 (f)
Microfiche Tapes Processed	222.5	408.2 (f/c)
Thermal Plotter	15.8	104.7 (c)
Solitaire Film Recorder	20.7	39.3 (c)
Celco Film Recorder	26.6	38.3 (c)
Xerox Production	8.0	11,397.0 (c)

**Printing:**

Laser printer - 142,819 pages (~55 boxes) for 3,810 jobs

Statistical charts created/updated - 8

**Tape Library:**

Activity	Number
Tapes mounted	1412
Tapes cleaned	794
Tapes scanned	247
Tapes released	41
Tapes issued	62
Tapes replaced	36
Tapes disposed	52
Plot tapes processed	690
Reports generated	11
Incoming external reels	26
Remote tape facility, slots labeled	457
Users assisted	9

**Operations Control Office:**

Activity	Number
Customer service inquiries	184
Computer/LaRCNET bulletins issued	2
Bulletin data base (additions/modifications)	
Computer data base	10
LaRCNET data base	36
Documents issued	190

**Data Management:**

Activity/Software	Number
GDCM, drawings generated/updated	20.0
Powers 600, charts generated	109.0
Cardkey data base (additions/modifications):	
Lost/damaged cardkeys	2.8
Access level changes	14.4
Cardkeys issued	4.2
<b>Courier Service</b>	<b>40 trips</b>



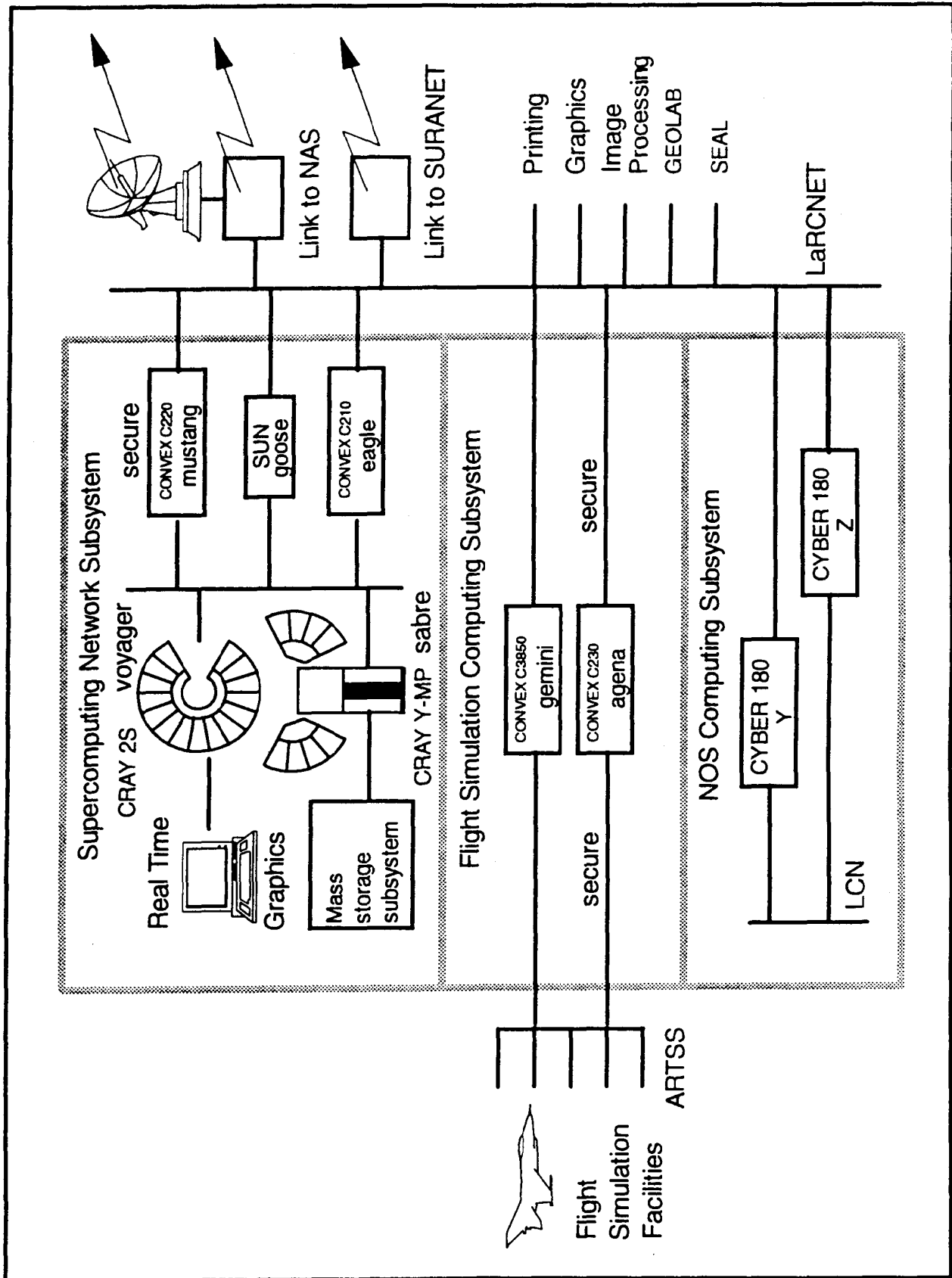


Figure 1. The Central Scientific Computing Complex

## Attachment 10

### DESCRIPTION OF LaRC COMMUNICATION NETWORKS

There are three major Center-wide communication networks at LaRC: (1) the LaRC Computer Network (LaRCNET), providing high-speed data communications among the Center's distributed and central computing resources; (2) the LaRC Telecommunications System (LaTS), providing local telephone service and low-speed interactive data communications; and (3) the LaRC Video Network (LaRCVIN), providing video conferencing and local distribution of internal and external video equipment located throughout LaRC's campus environment. The campus covers approximately 4 square miles in LaRC's West Area and 2 square miles in the East Area. The West and East areas are co-located on the Langley Air Force Base but are approximately 4 miles apart.

All Government furnished vans listed in Exhibit D are dedicated in support of the Communication Networks services. Typical user service workloads required to support the three networks are given in Table 1. Existing layout of all communications cabling, both within and between buildings is fully documented.

#### LANGLEY COMPUTER NETWORK (LaRCNET)

LaRCNET is a Center-wide computer network that interconnects multi-vendor PC's, workstations, minicomputers, mainframe computers, and Supercomputers located throughout the LaRC campus environment. On-site gateways connect LaRCNET to nationwide and worldwide computer networks. The LaRCNET technology and architecture, developed initially in 1985, has been and continues to be refined using advances in technology to satisfy unique and evolving LaRC researcher requirements for computer networking.

The LaRCNET architecture is a combination of state-of-the-art Ethernet and FDDI technologies. Computers are connected to building Ethernets, and buildings are connected to a Center-wide FDDI fiber optic backbone network. Translation bridges in each building link the Ethernet networks to the FDDI network. The predominant communication protocol is TCP/IP, although other protocols (e.g., DECNET, Appletalk) are accommodated.

Both thick-wire coax and twisted-pair Ethernets are currently installed within buildings. However, all new installations are twisted-pair, and existing coax will be phased out. A star-shaped FDDI ring interconnects buildings. Fiber optic cable connects each building to a central hub building and a logical ring topology connects buildings. An FDDI-to-Ethernet translation bridge in each building provides the link between the building's Ethernet and the FDDI backbone ring. Network gateways in the hub building provide access to nationwide and worldwide networks, such as Suranet, NASNET, Aeronet, and NREN, and the Internet. TCP/IP is the standard LaRCNET protocol; however, the LaRCNET configuration of bridges, routers, and gateways does not restrict communications to TCP/IP, and other protocols can be (and are) used.

## LaRCNET CONFIGURATION AND COMPONENTS

The current LaRCNET configuration and major components are listed below. Because LaRCNET is continually expanding and evolving to meet rapidly growing researcher demands for new services and higher performance, the information below changes frequently in both quantity and type. The following is current as of January 1992.

### LaRCNET Configuration

74	Buildings	
5	Off-site T1 connections	
4	External network gateways	
2700	Computer connections:	
	Personal Computers (PC/compatible, MAC, etc.)	1701
	Workstations (Sun, Iris, MicroVAX, etc.)	946
	Minicomputers (VAX, CONVEX, etc.)	51
	Supercomputers (CRAY)	2

### LaRCNET Major Components

Twisted-Pair Ethernet Hub (Synoptics 3000, 3030, 2810)	43
FDDI/Ethernet Translation Bridge (Fibronics FX8210)	10
Pronet/Ethernet 80 Mbps Bridge (Proteon)	11
Pronet/Ethernet 10 Mbps Bridge (Proteon)	28
T1/Ethernet Bridge (Vitalink M2501, HP 28674)	13
Ethernet/Ethernet Bridge (DEC 100, BICC 1400)	46
Ethernet/Ethernet Repeater (Cabletron, Inmac, Xerox)	21
Fiber Optic Repeater (BICC 1150)	69
Appletalk/Ethernet Router (Kinetics Fastpath 4, 5)	100
Appletalk Hub (Star Controller 207, 307)	84
Network Router (Proteon 4210)	4
Terminal Server (Cisco)	8
Fiber Optic Modems (Proteon 3001, 3002, 3190)	103
Ethernet Transceiver (Cabletron Singleport)	2650
Ethernet Transceiver (Cabletron Multiport)	450
Ethernet Transceiver (Thick-wire to Twisted-pair)	610
Ethernet Board for PC (3COM 3C501, 3C503, 3C523)	1100
Ethernet Board for MAC (Asante Maccon)	200
TCP/IP Network Software for PC (FTP Software, Inc.)	1220
TCP/IP Network Software for MAC (Multiteck)	800
UPS Systems	1

### LaRC TELECOMMUNICATIONS SYSTEMS (LaTS)

The LaRC Telecommunications System (LaTS) provides telephone service, voice mail, and low-speed interactive data communications for the LaRC community. The LaTS is a NASA-owned,

on-premise ROLM 9751 digital voice/data switching system that was installed at LaRC by ROLM in January 1989. LaRC in-house personnel now manage and maintain the system, engineer system expansions and upgrades, and perform all telephone installations, relocations, and feature changes.

The ROLM telephone switching equipment consists of 13 fully redundant 9751 Computerized Branch Exchange (CBX) nodes distributed among four switchrooms. Multiple switchrooms are required because of ROLM cable distance limitations. The LaTS provides a full range of telephone features, including call conferencing, camp-on, call forwarding, call transfer, and caller identification. A sophisticated PhoneMail system provides features similar to electronic mail. An RS-232 data communications interface on most telephones allows simultaneous voice and low-speed (up to 19.2 kbps) data communications over the ROLM digital facilities. Centralized in-bound and out-bound modem pools provide data communications outside of LaRC up to 9600 bps. Each LaRC telephone is connected to its associated CBX node with twisted-pair copper cable, and the 13 CBX nodes are connected together with redundant fiber optic links. Trunks are provided for connection to commercial common carrier telephone networks and the Government's Federal Telecommunications System (FTS) network.

### **LaTS CONFIGURATION**

The current LaTS configuration, as of January 1992, is listed below. The configuration changes to accommodate new requirements for services.

13	ROLM 9751 CBX nodes
6	ROLM PhoneMail nodes
6300	Digital ROLMphones (voice and data)
1400	Data-only modules
2100	PhoneMail boxes
251	Local C&P Telephone Company common carrier trunks
85	FTS trunks
18	Foreign exchange trunks
4	Battery Systems
4	Diesel Generators

### **LaRC VIDEO NETWORK (LARCVIN)**

The LaRC Video Network (LARCVIN) provides video conferencing and Center-wide distribution of internal and external video transmissions. The video distribution system is essentially a small cable TV system. It consists of a head-end and coax cable plant to distribute the signal. Head-end equipment includes signal processing and switching equipment with 40-channel capacity. Head-end equipment also includes satellite receivers to capture downlinks for live distribution or video taping for later use. The cable plant consists of a standard broadband RF system with video coax cable routed to the buildings through underground steam tunnels and duct banks. Amplifiers, splitters, and associated hardware necessary to distribute the signal and maintain proper signal levels are located in the tunnels. The system has reverse feed capability from selected buildings. In those buildings, a video signal can be reverse fed to the head-end for redistribution to all sites.

The Video Conference Center is a dedicated room designed specifically for video conferencing. It consists of a central area for participants, rear projection TV's, cameras, microphones, and associated hardware. The conference facilities are linked by satellite to other similar sites for interactive conferencing. The conference room equipment is provided and maintained by NASA's Program Support Communications Network (PSCN) staff. The Communications and Network Systems Branch of LaRC provides operations staff for the conference facility.

### **LaRC Video Network Equipment**

The major video network equipment, as of January 1992, is listed below. The network is rapidly expanding and major upgrades are planned.

42	Building connections
105	Monitors

### **LaRC Video Network Major Components**

Satellite Receiver (Sierra, STS)	4
Modulator/Demodulator (Olson Tech. OTR-2000)	11
Signal Switcher (Dynair System 21)	1
VCR (Sony VD-5600, Panasonic AG-6300, etc.)	7
Combiner (Cadco)	1
Character Generator (Mycrovision)	1
Amplifiers (C-COR)	15
Splitters (General Instruments)	40

**Table 1. Communication Network User Services Workload**

All numbers are weekly averages.

#### **LaTS:**

Work Orders	104
Inquiries	77
Trouble Tickets	27

#### **LaRCNET:**

Work Orders	39
Inquiries	111
Trouble Tickets	19

#### **LaRCVIN:**

Conferences at Video Conference Center	10
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## Attachment 11

### NATURE OF RESEARCH COMPUTING AT LaRC

#### 1.0 The Mission of the Langley Research Center

The primary mission of Langley Research Center (LaRC) is to conduct basic research in aeronautical, structural, and space related disciplines and to apply this basic research to the development of technology for various vehicle classes and to the support of agency programs.

The Center's basic research program may be divided into 16 principal disciplines. Of these, 10 have significant computing requirements. These include:

- Aeronautics Disciplines
  - Aerodynamics
  - Fluid Dynamics
  - Hypersonic Propulsion
  - Airframe/Propulsion Integration
  
- Structural Disciplines
  - Structures
  - Materials
  - Aeroelasticity
  - Acoustics
  
- Space Disciplines
  - Atmospheric Science
  - Aerothermodynamics

The basic technology outlined above is applied in a more focused manner to a number of vehicle classes. These classes include:

- Subsonic and Supersonic Transports
- Military Aircraft and Missiles
- Hypersonic Aircraft
- Space Transportation Systems
- Large Space Structures

As computer-based simulations developed in the basic research evolve from research-oriented to operational tools, they become an integral part of vehicle development activities. Examples of this migration are the Advanced Turboprop Project and the Viscous Drag Reduction Program which are applicable to the Subsonic and Supersonic Transports vehicle area. Advanced wing design, propulsion integration, and turbulence physics research associated with these two programs are areas requiring computer support.

There are a number of multidisciplinary programs and projects currently underway or being supported at the Center which require extensive computational support. These include:

- The High-Speed Aeronautics Research (HiSAIR) Program
- The Interdisciplinary Research Program
- The Shuttle Program
- The Space Station (Freedom) Project
- The Earth Observing Satellite (EOS) Project.

In addition to the more traditional modeling activities, computer support for these programs involves extensive data management.

## **2.0 Categories of Scientific Computing**

Scientific computing activities at LaRC fall into four major categories:

- Analytical computing;
- Experimental and observational data reduction;
- Development of flight software; and
- Flight simulation.

### **2.1 Analytical Computing**

This is the use of computers to help understand and predict physical phenomena and to conduct conceptual design studies. The approach is to “model” the system under study with mathematical equations, representing the governing laws and constraints. The solutions to these equations represent the behavior of the system. Because the variables are continuous, the equations cannot be solved directly by a digital computer. Instead, they are discretized and the resulting discrete equations are solved approximately through the use of numerical methods. A typical study will require the determination of the order of ten dependent variables at thousands of spatial grid points, and at possibly hundreds of time steps.

The solution may then be visualized with the use of computer graphics. A dependent variable is assigned a color, depending on its value, at each grid point. The display of this color at all spatial grid points then presents an image of the distribution of that variable. Validation of the solution is obtained through comparison with observed results, and through varying the discretization parameters.

The following is a partial list of current applications of this type:

- Fluid dynamics, including potential flow; compressible, inviscid flow; viscous boundary layer flow; and turbulence modeling.
- Aerodynamic load prediction at all velocity regimes for complex configurations.
- Aerothermal dynamics involving calculations of heat transfer, wall temperatures, depth and surface chemistry of ablative materials, finite rate combustion, and reacting boundary layers.

- Avionics, including digital flight control systems and on-board flight software, navigation and guidance systems, and automated take-off and landing systems.
- Environmental modeling and monitoring, such as atmospheric chemistry, pollutant dispersion, surveillance and measurement systems for water and air pollutants, aerosols, and trace chemical species.
- Atmospheric dynamics in storms and microbursts; atmospheric turbulence detection.
- Crystal growth in normal and earth orbital gravity conditions.
- The design of optical electro-mechanical scanner systems, including image data display and analysis, pattern recognition, and classification.
- Structural analysis, including frequency response of complex structures, structural optimization, mode shapes of vibrating structures, and aeroelasticity. Nonlinear structural analysis.
- Acoustics, involving wave propagation, jet and rotor noise, duct and structural acoustics, and airframe noise.
- Aerospace vehicle design, including configuration definition and display, aerodynamic characteristics, performance evaluation, mission analyses, power-plant studies, environment impact, weight and balance calculations, and non-uniform wake analysis.
- Spacecraft trajectory analysis, including estimation of spherical gravitation coefficients, and dynamics of orbiting spacecraft and large space structures.
- Ground test facility design, particularly wind tunnel configurations, flow characteristics, fan design, gas constituent, and temperature control.

## **2.2 Research and Observational Data Reduction**

Data reduction is concerned with reducing the output of measuring devices used in experimental or observational research to a form that can be most readily analyzed by the research engineer. As practiced at LaRC, data reduction embraces all the operations between the measurement of the physical quantities and the analysis of the computed results. It includes: data recording; transcription of data to a computer input medium; preparation and application of calibration information; application of corrections, axis transfers, etc., Computation of engineering quantities; error analysis; and preparation of results in tabular, plotted, or graphical form.

The laboratory facilities at LaRC include a large variety of wind tunnels, jets, and shock tubes that cover wide ranges of flow Mach numbers, Reynolds numbers, heating conditions, sizes, and operating modes; they also include structural and materials laboratories. Detailed investigations of fluid physics, aerodynamics, loads, flight dynamics, aeroelasticity, propulsion characteristics, heat transfer, and material behavior are conducted in these facilities. An array of environmental test facilities permits the determination of the reaction of flight systems and materials to static and dynamic loads, noise, heat, vacuum, radiation, and atmospheric constituents that will be encountered in flight.



In addition to laboratory facilities, LaRC uses flight research such as drop-test and free-flight models, operational and experimental aircraft, rocket-propelled flight systems, satellites, and other space vehicles to demonstrate whether all of the practical aspects of a problem or of a new concept have been properly recognized and treated, and whether the evaluations, predictions, and solutions of laboratory experiments and analyses are valid.

The processing of high-frequency dynamic information using digital techniques results in a large volume of data to be digested by the computer. This includes data from measurements of vibration, flutter, noise, air turbulence, etc. The data are processed to obtain power spectrums and other frequency information. In many cases these measurements may represent the vibration response of complex structures requiring the use of a large number of sensing devices to obtain an accurate quantitative and qualitative definition of the flexural motion of a test specimen such as a dynamically scaled model of a missile.

The LaRC is responsible for a number of atmospheric sciences programs that involve the reduction of data obtained from instruments on board aircraft, unmanned satellites, sounding rockets and balloons, as well as ground test facilities. Data is used to deduce or infer physical and thermodynamic properties of the atmosphere and concentrations of chemical species. This includes the investigation of noise, of earth resources, of ocean state and pollutants, and of the aerosol and other constituents of the atmosphere, stratosphere, and ionosphere.

More advanced aspects of data reduction include statistical analysis ranging from the determination of means and standard deviations through regression analysis to the determination of covariance matrices. Error estimates are essential in order to assess the significance of observed variations in the data. Also inversion algorithms combine the mathematical model with observed data to determine the values of critical parameters in the model.

### **2.3 Development of Flight Software**

A number of projects at LaRC involve the use of computers on board aircraft and spacecraft for navigation, guidance, control, display, and the acquisition of data from instruments. The software that runs in these computers must be highly reliable and must be developed quickly at minimum cost. The discipline of software engineering with its associated software development and analysis tools is rigorously applied in these applications. The required software is broken down into modules. The specification of each module, including its interfaces to other modules, is carefully defined and reviewed. Modules are then developed and tested individually, then combined into the total software package. The preferred language for these applications is Ada, the DOD developed language for embedded computing systems.

### **2.4 Flight Simulation**

Flight Simulation involves the use of flight vehicle hardware in a ground-based laboratory setting with the translational and rotational motion of the vehicle, and the response of any flight hardware systems not physically implemented, being computed by high speed digital computers. In most cases, in order to provide a realistic evaluation of the performance of the flight systems being studied, an appropriate flight deck is included in the hardware and a pilot is "in the loop." In these cases the simulation must proceed in "real time;" that is, the computer program time is synchronized with the real world time and the computer must generate the motion and response of

Distributed computers are used for most small to moderate computational tasks and for almost all data reduction applications. ACD supports some distributed systems by providing system administration through the SCOMAC contract.

Flight simulation applications use the centrally located FSCS computers. The researcher works with ACD staff to develop and modify simulation programs and to schedule simulation runs.

The ability to exchange programs and data among different computers, and the ability of researchers to understand programs written by others and to be able to use different computers is considered to be very important. For this reason computer systems at LaRC are, to the maximum extent possible, "open" systems, meaning that the operating systems, data formats, and programming languages are not tied to a particular manufacturer. Personal computers are either DOS or Macintosh based, but almost all larger machines use a version of the UNIX operating system. The primary communications protocol is TCP/IP. FORTRAN is the programming language used for all scientific applications with the exception that C is used for some code segments requiring very high efficiency and Ada is used for embedded computer systems.

## Attachment 13

### TECHNICAL QUESTIONS

#### INTRODUCTION

The following questions are designed to solicit specific information in those areas which are of particular concern and importance to the successful performance of this proposed contract. The vendor should provide detailed and complete answers to the following questions.

#### GENERAL MANAGEMENT

1. Information Resources Management will change a great deal over the life of this contract. What are the top three technical and/or managerial challenges that will accompany this change? What particular change will have the greatest impact on a data center the size and scope of the CSCC?
2. Managing change is an important aspect of CSCC's business. Describe generally and specifically how your corporate knowledge will assist ACD and how your local management team will facilitate this process given the broad range of technological changes that could occur over the life of this contract. How do you propose to translate technological changes into organizational changes with minimal to zero disruption in service?
3. ACD initiates and tracks many projects/tasks at various priorities.
  - Describe your project/task management activities for tracking high and low priority projects.
  - How will your management define, control, and report project activities to ACD?
  - Do you propose any specific software tools for project planning, tracking and monitoring? If so, describe them and state why you have recommended each tool.
4. The CSCC provides central scientific computing support that is widely utilized by the LaRC research staff. This support is extremely important in enabling the researcher to meet time critical demands and in the effective utilization of LaRC resources. In the rare event that a latent design defect occurs in the CSCC processing equipment it will be essential that a resolution to this situation be implemented expeditiously in order to prevent excessive delays in this vital service. Describe your approach to deal with this situation and any plans and procedures that would have to be in place in the event this situation occurred.

## Attachment 12

**DISTRIBUTED COMPUTING AND DATA REDUCTION SYSTEMS  
CURRENTLY SUPPORTED**

<b>COMPUTER TYPE</b>	<b>OPERATING SYSTEM</b>
CONVEX 240	CONVEX OS 9.1
Decstation 3100/5000	Ultrix 4.2
HP 9000/320-375	HP-UX 5.22-7.0
HP 9000/720-730	HP-UX 8.05
HP 9000/835	HP-UX 7.0
IBM PC-386	SCO 1.1
Macintosh	MAC OS System 7.0
MODCOMP Classic	Maxnet IV
MODCOMP 32/87	MAX-32
NCD19C	HP-UX 8.05
PC's, XT, 286, 386, 486	MS-DOS 3.3-5.0
SGI Iris/Indigo	Irix 3.3.2/3.6.6
Solbourne Series 4	OS/MP 4.0A
Sun IPC	Sun OS 4.1.1
Sun IPX	Sun OS 4.1.1
Sun Sparc 1+	Sun OS 4.1.1
Sun Sparc 2	Sun OS 4.1.1
Sun 4/XX	Sun OS 4.0.3
Unisys 5000-95	System V
VAX 85-50	VMS 4.7
VAX Station 2000-3400	VMS 4.7-5.4
3COM Network	3COM Share 1.1

## Attachment 13

### TECHNICAL QUESTIONS

#### INTRODUCTION

The following questions are designed to solicit specific information in those areas which are of particular concern and importance to the successful performance of this proposed contract. The vendor should provide detailed and complete answers to the following questions.

#### GENERAL MANAGEMENT

1. Information Resources Management will change a great deal over the life of this contract. What are the top three technical and/or managerial challenges that will accompany this change? What particular change will have the greatest impact on a data center the size and scope of the CSCC?
2. Managing change is an important aspect of CSCC's business. Describe generally and specifically how your corporate knowledge will assist ACD and how your local management team will facilitate this process given the broad range of technological changes that could occur over the life of this contract. How do you propose to translate technological changes into organizational changes with minimal to zero disruption in service?
3. ACD initiates and tracks many projects/tasks at various priorities.
  - Describe your project/task management activities for tracking high and low priority projects.
  - How will your management define, control, and report project activities to ACD?
  - Do you propose any specific software tools for project planning, tracking and monitoring? If so, describe them and state why you have recommended each tool.
4. The CSCC provides central scientific computing support that is widely utilized by the LaRC research staff. This support is extremely important in enabling the researcher to meet time critical demands and in the effective utilization of LaRC resources. In the rare event that a latent design defect occurs in the CSCC processing equipment it will be essential that a resolution to this situation be implemented expeditiously in order to prevent excessive delays in this vital service. Describe your approach to deal with this situation and any plans and procedures that would have to be in place in the event this situation occurred.

## STATEMENT OF WORK TECHNICAL AREAS

### C.1 INTRODUCTION/BACKGROUND

1. The goal of the CSCC is to provide full availability of all elements of the Complex. Discuss your approach for achieving this goal.

### C.3.1 CSCC OPERATION

1. One of the requirements of this contract is the monitoring of system performance. What is your methodology to determine system performance? What is a specific example you can give to show this?
2. Scheduling and dispatching (at the operational level) the computer workload is very visible to the user in terms of response and throughput. What is your general operational philosophy in scheduling a mix of interactive and batch workloads?
3. With respect to scheduling a workload, specifically describe how you will propose handling a batch queued workload that is a total of 24 hours of work for 4 processors (96 hours in all). Work has arrived at various times in the last 24 hours. Mixture is 40 to 50 batch jobs, job process sizes range from 4 million words to 40 million words, and cpu requirements range from 10 minutes to 4 hours. Assume a 4-processor cpu and interactive work in the background. All interactive jobs are less than 10 million words. The machine has 122 million words of memory for jobs to use.
4. Describe how you will handle the following cases (a., b., c., and d.). An urgent request has been made for a very important batch job. The user will submit the job in the normal manner to the batch queueing system. The job is required as soon as possible.
  - a. Batch job of 10 million words and needs 3600 cpu seconds. Job is to be run on the CRAY-2.
  - b. Batch job of 10 million words and needs 3600 cpu seconds. Job is to be run on the CRAY Y-MP.
  - c. Batch job of 58 million words and needs 3600 cpu seconds. Job is to be run on the CRAY-2.
  - d. Batch job of 58 million words and needs 3600 cpu seconds. Job is to be run on the CRAY Y-MP.
5. What statistics do you think are meaningful to show equipment performance and usage? How will you present them to convey the appropriate intent?
6. After completing an upgrade to the operating system how will you show that performance has improved? Identify a specific possible improvement and shows how an improvement would be demonstrated.

### **C.3.2 OPERATING SYSTEMS SUPPORT**

1. How will you manage system configuration and operating system changes for the CSCC? Explain how changes will be incorporated into the operating systems. Discuss any software tools that will be used in this management process and how/why your process would be effective.
2. Explain your process for installing operating system upgrades and describe how you will verify the installation process.
3. Describe your operating system quality assurance process for vendor upgrades and local modification integration. How do you plan to implement and manage this process?
4. Identify areas where special programs/scripts/procedures will enhance operational support of the CSCC computing systems and describe how you will manage their implementation and use.
5. Describe your recommended procedures/process for the handling of critical software problems within the CSCC. Critical includes such events as a daily system crash, wrong answers (e.g., compiler problems), or loss of permanent files.
6. Describe what documentation you feel is important for the operations staff. How will you keep it up to date and ensure high quality?
7. Describe your process for coordinating operating system upgrades with the operations staff.

### **C.4 CSCC SYSTEMS MAINTENANCE**

1. Describe your approach for obtaining vendor proprietary replacement parts, field change orders, software updates, and documentation that is required for Appendix A items. Provide evidence of vendor commitments for providing these items.
2. If a hardware item is currently under remedial maintenance and a resolution or fix for the problem has not been provided within a reasonable time period, what will your course of action be? Also, how do you define a reasonable time period for remedial maintenance?
3. Describe your proposed plan for scheduling and conducting preventive maintenance.
4. What categories of spare parts will be in the local inventory? How will you obtain parts which are not in the local inventory?

## **C.5 COMMUNICATION NETWORKS**

1. Describe your approach for assignment and training of technicians to work on LaRCNET, LaTS, and LaRCVIN. Discuss the use of crosstraining and the use of different technician skill levels in your response.
2. Describe your approach for providing materials to maintain and expand LaRC's communication networks. What mechanism or procedures will you use to determine when new materials are needed?
3. Describe your approach for providing 24 hour/day, 7 days/week maintenance service for LaRC's communication networks.
4. Describe your procedures and organizational structure for handling communications service requests (requests to move, add, or change telephones, computer connections, or video connections) and communications trouble calls. Discuss the work flow from the time of contact with the user until the work is completed. Provide a flow diagram showing the various steps and personnel involved for both service requests and trouble calls
5. Describe your approach for providing general user support for LaRC's communication networks. How will the help desk be organized and staffed?
6. The LaRC computer network (LaRCNET) uses rapidly changing technology to maintain state-of-the-art performance to satisfy researcher requirements for high speed data communications. A number of leading-edge technologies are expected to play an important role in LaRCNET evolution. These technologies include FDDI, CDDI, ATM, and SMDS. What is your assessment of these new technologies in terms of their application in a scientific computing and networking environment? What other emerging network technologies, if any, do you foresee playing a significant role in LaRC's networking future?



ATTACHMENT 14

<u>Contract Number</u>	<u>Contractor</u>	<u>Services to be Incorporated into SCOMAC</u>	<u>Phase-In Date</u>
NAS1-18744	Cray Research, Inc.	Hardware and software maintenance for Cray 2, Cray Y-MP, Convex C210s, Storage Tek file systems and associated peripherals.	August 9, 1993
NAS1-18777	Unisys Corp.	Computer operations; analysis and programming support; communications network design and support; <del>facility monitoring</del> ; data reduction services; systems administration.	August 9, 1993
NAS1-19119	Unisys Corp.	Installation and maintenance of Langley's voice and data communications networks.	August 9, 1993
NAS1-18750	Control Data Corp.	Hardware and software maintenance for 3 Control Data Cyber 860s, Masstor file system and associated peripherals.	September 28, 1993
NAS1-19666	IBM Corp.	Maintenance of IBM laser printers and associated equipment.	October 1, 1993
NAS1-19069	Convex Computer Corp.	Hardware and software maintenance for Convex C3 series computer and associated peripherals.	December 18, 1994

**ACQUISITION DIVISION  
SOLICITATION/CONTRACT DISTRIBUTION SHEET  
(Excluding Construction)**

SOLICITATION NO.: <u>1-041-1100.1015</u> TYPE: <input type="checkbox"/> IFB <input checked="checked" type="checkbox"/> RFP			SOLICIT.	CONTRACT
CONTRACT NO.: _____				
1. <b>Contract Specialist:</b> Nancy M. Sessoms	<b>Ext:</b> 42471		<b>M-1</b>	<b>M-1</b>
2. <b>Project Engineer:</b>	<b>MS:</b>	<b>Ext:</b>	<b>M-1</b>	<b>M-1*</b>
3. <b>NASA Hq., Code K</b>			<b>M-1</b>	
4. <b>143/Patent Counsel, OCC, ODMO</b>				<b>A-1</b> <input type="checkbox"/>
5. <b>144/Bid Depository</b>				<b>A-1</b> <input type="checkbox"/>
6. <b>144/Industry Assistance Office, AOB, AD</b>			<b>M-2</b>	<b>A-1**</b> <input type="checkbox"/>
7. <b>377/Industrial Property Specialist, LMB, MSD</b>			<b>M-1</b>	<b>M-1</b>
8. <b>182/Security Services Branch, MSD</b>				<b>M-1</b>
9. <b>200/Tech. Util. and Appl. Office, RIAD</b>				<b>M-1</b>
10. <b>155/Center ADP Officer</b>			<b>A-1</b> <input type="checkbox"/>	<b>A-1</b> <input type="checkbox"/>
11. <b>429/Systems Safety, Quality and Reliability Division</b>			<b>A-1</b> <input type="checkbox"/>	<b>A-1</b> <input type="checkbox"/>
12. <b>356/Schedule Analysis Office, PD</b>			<b>A-1</b> <input type="checkbox"/>	<b>A-1</b> <input type="checkbox"/>
13. <b>105/Industry Relations Office, ODMO (Service Contract Act)</b>			<b>A-1</b> <input type="checkbox"/>	<b>A-1</b> <input type="checkbox"/>
14. <b>266/U.S. Army Aerostructures Directorate, USAARTA-AVSCOM</b>				<b>A-1</b> <input type="checkbox"/>
15. <b>447/Specifications &amp; Contract Coord. Office, FENGDD (PR Prefix 56 only)</b>			<b>A-2</b> <input type="checkbox"/>	<b>A-2</b> <input type="checkbox"/>
17. <b>NASA Center for Aerospace Information</b> Attn: Document Processing Section 800 Elkrigde Landing Road Linthicum Heights, MD 21090		<b>(R &amp; D Contract Only except SBIR)</b>		<b>A-1</b> <input type="checkbox"/>
18. <b>381/Transportation and Warehousing Section, Receiving (if deliverable hardware required)</b>				<b>A-1</b> <input type="checkbox"/>

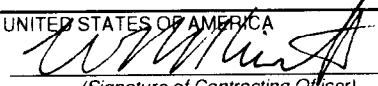
\*    **M-4 if PR Prefix 56**

\*\*    **If Subcontracting Plan Required**

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**Site Visitation Date:** \_\_\_\_\_

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE 1 OF 128 PAGES
2. AMENDMENT/MODIFICATION NO. <b>1</b>	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY <b>National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001</b>	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  <b>TO ALL CONCERNED</b>		( <input checked="" type="checkbox"/> )	9A. AMENDMENT OF SOLICITATION NO. <b>1-41-1100.1015</b>	
		( <input checked="" type="checkbox"/> )	9B. DATED (SEE ITEM 11) <b>12-1-92</b>	
			10A. MODIFICATION OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>				
<input checked="" type="checkbox"/> The above number solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning <b>1</b> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If Required)				
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>				
( <input checked="" type="checkbox"/> )	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.			
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).			
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:			
	D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) <b>SUBJECT: NASA Request for Proposal 1-41-1100.1015 - Scientific Computing Operations, Maintenance, and Communication (SCOMAC) Services.</b>  The purposes of this amendment are to (1) provide questions and answers; (2) provide a list of attendees at the preproposal conference; and (3) provide information presented at the preproposal conference held on December 16, 1992.  Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or Print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or Print) <b>W. R. Kivett</b>		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED <b>DEC 28 1992</b>	

## QUESTIONS/ANSWERS

**NOTE:**

The enclosed written answers represent the Government's official response to all questions received.

Any revisions/corrections required to the REP will be made in a subsequent amendment, to be issued shortly.

1. Reference: Cost Form D, Page 198

Q: The specified ODC values preprinted on Cost Form D are not consistent with the specified ODC values stated in Sections B.4 (page 3) and L.40 E.1.e (13) (page 173). Please clarify.

A: Form D will be corrected to reflect ODC values stated in Section B.4.

2. Reference: SOW C.4.7, Page 65

Q: The intent of the second paragraph of this section is unclear. The first section says the Contractor shall provide successor versions of the current Government licensed and installed system software. However, in accordance with the last sentence, it is the Government which is responsible for purchasing all initial and renewal software licensing agreements. In light of the Government's responsibility to provide should the Contractor's requirement be changed to install and maintain?

Similarly, C.4.6 states that the Contractor shall provide controlware updates. Again, should the Contractor's responsibility be to install and maintain, with the Government responsible to provide?

A: The Government will be responsible for purchasing all software licensing agreements. The Contractor shall notify the Government of the availability of updates and successor products to the current installed system software as well as the availability of applicable new products. The Contractor shall provide to the Government updates of the current Government-licensed and installed system software when no new license is required. This shall include corrective code and enhancements to the system software listed in Appendix A.

Task C.4.7 of the Statement of Work will be revised to clarify the above.

Installation and maintenance of software is covered under C.3.2.

3. Reference: SOW C.4.8, Page 65

Q: This section refers to Maintenance Documentation, yet the third paragraph states that the Contractor shall provide to the Government current and successor versions of software systems identified in Appendix A. This appears out of context for the topic of maintenance documentation, and implies the Contractor must purchase or otherwise acquire the inventory of existing software (current versions), and must purchase or otherwise acquire successor versions of software systems in Appendix A. However, the responsibility to provide this software rests with the Government per C.4.7. Please clarify.

A: Paragraph 3 of C.4.8 will be revised as follows: The Contractor shall provide to the Government documentation for current and successor versions of software systems identified

in Appendix A. Updates of these manuals shall be provided for each revision of the software systems.

4. Reference: Attachment 9, Page 242

Q: The last sentence of the subsection titled "Operational Areas" refers to Appendix III. What/where is Appendix III?

A: This sentence will be deleted.

5. Appendix A, Page 95

Q: Part 3 of Appendix A appears to provide only reference designations and not part numbers and OEMs. This information is critical for identifying maintenance, spares, documentation and other support requirements. If supplied by the OEM(s) for the major systems within the CSCC, were vendor maintenance manuals and documentation provided? If so, can this information be made available either as an amendment or in the Bidder's Library?

A: Pages 95 and 96 will be revised to include the OEM and part numbers where available. Maintenance manuals and documentation are not available from the Government.

6. Reference: L.35, Page 160 and Attachment 8, Page 236

Q: The Certificates of Maintainability for Convex, CDC, and IBM equipment were added to the Bidder's Library. Are Certificates of Maintainability available for Cray and the other equipment, and when will they be added to the Bidder's Library?

A: Current Certificates of Maintainability for equipment listed in Appendix A will be provided if required by the successful offeror prior to award. Certificates that are part of the Bidder's Library are for informational purposes only.

7. Reference: L.39, Page 160

Q: Small Disadvantaged Business Subcontracting Goal, states "The Contracting Officer has determined that a goal of 15 percent of the total cost plus fee of your proposal is a suitable minimum goal for small disadvantaged business, and that such a goal should constitute the minimum acceptable small disadvantaged business subcontracting goal for contract award." Do SDB dollars spent by subcontractors under a prime contract awarded for this solicitation count toward the achievement of the prime contract SDB goals?

A: NASA prime contractors can only count first tier subcontracting dollars toward the achievement of the 15 percent goal.

8. Reference: L.40.C.3, Page 162

Q: This section requests that each Volume structure adhere to the 'Factor headings' listed. In structuring our proposal in compliance with this, is it correct to assume that Items 1 and 2

C 4

under L.40.D, Mission Suitability Proposal, do not require separate and distinct proposal sections? Further, does the first paragraph under L.40.D.3 request a risk assessment be included with each subfactor section or only with those subfactor sections we consider to have risks that could affect the overall success of the program where mitigation should be addressed?

A: Yes. You should submit a risk analysis which identifies risk areas associated with each Mission Suitability Subfactor, as appropriate.

9. Reference: Disaster Recovery, L.20, Page 155

Q: The SOW refers to responsibilities for remedial and preventive maintenance efforts and ongoing operations, but there are not specific responsibilities for disaster recovery planning or support. Are there contractor management and support responsibilities in this area?

A: No.

10. Reference Section L, Page 173, Paragraph 13

Q: The amounts specified for ODCs (page 173) and inserted on Form D (page 198) do not agree. For example, for the Initial Period, page 173, the amount specified is \$4,450,000, but the amounts listed on Form D, page 198, for Years 1 and 2, which make up the Initial Period, total \$5,250,000.

We do not understand this inconsistency, please clarify.

A: See answer number 1.

11. Reference Page 249, LaTS

Q: RFP states that the ROLM Switch equipment was installed by ROLM and that system management and maintenance is handled by "LaRC in-house personnel."

Please clarify the term "LaRC in-house," i.e. Government or Contractor.

A: Attachment 10, Description of LaRC Communication Networks, page 249 will be revised as follows: Contractor personnel now manage and maintain the system, engineer system expansions and upgrades, and perform all telephone installation, relocations, and feature changes, with oversight by LaRC.

12. Reference Attachment 10, Page 250, and SOW C.5.6

Q: Mention is made in the LaRCVIN section, of the Program Support Communication Network (PSCN) staff, who provide and maintain the conference room equipment. Operations staff for the conference facility are provided by the Communications and Network Systems Branch.

Please clarify the relationship between PSCN operations staff and SCOMAC operations staff in the LaRCVIN, we don't understand the conflict between Attachment 10, page 250, and the SOW C.5.6.

A: Attachment 10, page 250, refers to provision and maintenance of the facility. The SOW C.5.6 refers to operation of the facility. The last sentence of paragraph 1 on page 250 will be deleted.

13. Reference RFP Paragraph L.40

Q: This letter is to request leniency in the word-count requirement as prescribed in RFP paragraph L.40, Proposal Preparation and Submission - Special Instructions, paragraph C.2, Proposal Format and Content. The referenced section requires bidders to place a word count by page and cumulative word count on each page of the proposal, inclusive of charts, tables, diagrams, captions, and figures. We request that a word count for these items be eliminated. The Government could stipulate in its instructions that figures are to be graphical representations that enhance the understanding of textual material, thereby ensuring that bidders do not place material that would normally be pure text inside a graphic box and label it as a figure. Graphics are intended to complement text and provide a benefit to the reader by their integration.

A: The proposal word count does apply to charts, tables, diagrams, captions, etc. If the word processing package you use does not count words on these pages, you may include the word count for these pages in a summary chart rather than including in the cumulative word count at the footer of each page.

The Table of Contents and List of Figures are excluded from the proposal word count.

14. Reference G.3, Award Fee Evaluations and G.5, Payments --Cost, Award Fee, and Fixed Fee

Q: How frequently will the Contractor's performance be evaluated under the Award Fee Evaluation Plan? How frequently will the Fee Determination Official (FDO) evaluate and make available award fee disbursements to the Contractor?

A: The award fee periods under this contract will be 6 months in duration. The FDO will evaluate and determine award fee after the end of each period (See B-3 and H-19).

15. Q: In order to provide a staffing level capable of supporting the workload, will the Government provide workload statistics for maintenance, installation, relocation, cabling, and cable repair for communications networks?

A: Some information on typical workloads for communications networks is available in the Bidder's Library (see page 235 of the RFP).

16. Reference Exhibit D, Installation-Provided Government Property

Q: Eight vehicles are listed here. Does the Government intend that one of these eight vehicles be used by the Contractor to provide shuttle vehicle pickup and delivery service between



LaRC and the Contractor's facility, or should the Contractor price its own vehicle to provide this service?

A: Exhibit D will be revised to include 11 vehicles, all of which are to be used for communications support only. The vehicles are not to be used for shuttle vehicle pickup and delivery service.

17. Reference Clause 18-52.242-72

Q: Clause 18-52.242-72 permits contractors to be reimbursed by the Government in the event of administrative leave necessitated by inclement weather, etc. This clause appears in the base contract, but not in Alternate II. Will the Government include clause 18-52.242-72 in the Alternate II contract?

A: The Observance of Legal Holidays clause (without Alternates I and II) will be included in the contract. The Government will reimburse allowable and allocable leave costs necessitated by inclement weather, etc. The Contractor must have an established company policy dealing with such leave.

18. Q: Does the Government anticipate that the Contractor will be required to generate and/or reproduce classified material in the offsite facility?

If yes, will the output be PC-generated paper copies, or magnetic tape output?

A: No.

19. Q: If reproduction of classified material is required in the offsite facility, will it be limited to paper copies?

A: Reproduction of classified material is not required in the offsite facility.

20. Q: Will the Contractor be required to have secured data lines for transmission of classified files in the offsite facility?

A: No.

21. Reference I.3, Clauses in Full Text and I.17, Report on NASA Subcontracts

Q: We request that the August 1992 edition of Clause 18-52.204-70 "Report on NASA Subcontracts" be substituted for the December 1988 edition.

A: The August 1992 edition of Clause 18-52.204-70 will be substituted for the December 1988 edition.

22. Reference L.40.C.2, Proposal Format and Content

Q: The 60,000 word limit excludes personnel resumes, cover pages, and dividers. Does this word limit also exclude tables of contents and lists of figures?

A: Yes. Section L.40.C.2 will be amended accordingly.

23. Q: Does the successful Contractor need to have a facility clearance in place at the time of contract award?

A: No.

24. Reference L.40.E.2, Relevant Experience and Past Performance

Q: For award fee contracts, the RFP requests the dollar value of the base fee and award fee available and the award fee received. For what period of the contract do you want this information?

A: Please provide the award fee data on a contract year basis.

25. Reference C.4.4, Spare Parts

Q: What, if any, automated inventory system is used to maintain the spare and repair parts inventory needed for equipment maintenance?

A: An automated inventory system is not required. Your approach for providing spare parts should be covered in your proposal.

26. Reference C.5.6, LaRC Distributed Computing and Data Reduction Support

Q: What, if any, automated problem tracking system is used currently at LaRC to track User Service inquiries and service requests?

A: The Government does not have such a system.

27. Q: Please clarify the statement made on page 61, number 4: "Provide to users organizational representatives a query capability to retrieve current accounting and validation information." Is the Contractor required to provide an on-line query capability that may be accessed by the representatives, or is the Contractor required to provide the accounting and validation information directly to the representatives in response to requests for information?

A: An on-line query capability exists. The Contractor is required to support this capability and to identify, develop, and implement computer programs to update and improve this capability as appropriate. The Contractor is not required to provide the accounting and validation information directly to the representatives in response to requests for information.

28. Reference L.40.C.2, Proposal Format and Content

Q: Will the Government eliminate the requirement to include the words within charts and graphs in the 60,000 word limit?

A: No. See answer to number 13 above.

29. Reference L.40.E.1.e.1, Page 169, Direct Productive Level of Effort (LOE) Hours

Q: The table contained in this section specifies LOE Hours by contract period which were derived using the 170 positions on Attachment 6 and a productive man-year of 1875 hours. The narrative which follows states, "However, it should clearly be understood that the estimated staffing in Attachment 6 is provided for your information only and is not restrictive for proposal purposes. You should propose the staff you consider optimum for contract performance." Please clarify if the offeror may propose a staffing which differs in skill mix and productive year to result in a lower number of LOE hours.

A: You may propose a skill mix and productive year different from that included in the RFP; however, you must propose a staff to meet the Government's level of effort requirements.

30. Reference L.40.E.1.e.3, Page 170, Labor Rates

Q: The table detailing the conformed classes of service employees lists the same DOL Class and level for each level of the Communication Systems Specialist. Please confirm the DOL Class for the Communication System Specialists as being those stated in the RFP or provide any clarifications.

RFP Job Title	RFP Stated DOL Class	Should be DOL Class
Communications Systems Specialist I	Technician III	Technician I
Communications Systems Specialist II	Technician III	Technician II
Communications Systems Specialist III	Technician III	Technician III

Secondly, please explain the significance of the WD Conformed Category Rate. Does this rate reflect the actual labor rate on the current contracts?

A: The DOL Class as stated on page 170 is correct. The WD Conformed Category rate represents the minimum conformed rate for the categories, not necessarily the actual labor rate on the current contracts. (See Clause I-12, paragraph (C)).

31. Reference B, Supplies or Services and Price/Costs

Q: Please provide clarification of this section as follows:

B.1.A refers to Exhibit A, SOW, dated 9/18/92. Exhibit A included in the RFP is dated 10/23/92. Is the latter the correct document?

B.1.B establishes that SOW C.6 will be directed by Work Orders.

B.2.A establishes the Level of Effort for the SOW excluding C.4.

Consequently:

C.6 is true Level of Effort ordered by Work Orders

C.4 is Fixed Price on a mission basis

C.3, C.5, and C.7 are on a mission basis with a Level of Effort and will not be ordered through Work Orders.

If the above is true, how will the expenditure of hours against the mission part of the contract be determined (mission contracts are usually not LOE).

If the above is not true, please explain the intent of B.1 and B.2.

A: B.1.A will be corrected to refer to a SOW dated 10/23/92.

B.1.B is correct as written.

B.2.A is correct as written.

Consequently:

C.6 is covered by the Level of Effort and will be directed by Work Orders

C.4 is fixed price, not covered by the Level of Effort or Work Orders

C.3, C.5, and C.7 are covered by the Level of Effort and will not be directed through Work Orders

It is felt that the work described in all SOW tasks except C.6 are sufficiently defined as not to require written direction through Work Orders. However, all tasks of the SOW are Level of Effort except for Task C.4. The Contractor will be required to track and report man-hours expended against all tasks except C.4.

### 32. Reference C.3.3.3, Facility Management Documentation Support

Q: Does the GDCM program run stand alone, or does it interface to other database programs or files for information? If others, what does it interface to? Also, what types of format are the GDM drawings stored in?

A: The GDCM program runs stand alone. The GDCM system creates files in a HPGL format. The files are converted to a DI3000 metafile format prior to plotting and storage on the SNS file system.

### 33. Reference C.5.1, Corrective and Preventive Maintenance

Q: What are the policies for availability of prescheduled network downtime?

A: There is no prescheduled network downtime.

#### 34. Reference C.5.6, User Services

Q: Will the Communication Networks "help desk" participate in cooperation with other help desk facilities?

Will this help desk handle calls made directly by end users, calls routed by other help desks, or both?

To what extent will the user services part of Communication Networks provide end user consultation? Will it be within the scope of existing facilities, or will it include issues requiring application of "non-LaRC standard" solutions?

A: The approach to providing help desk services is to be proposed by each offeror and will be evaluated. The help desk will handle calls made directly by end users and calls routed by other help desks.

The Communications Networks help desk will handle inquiries received related to the network infrastructure and computer/network interfaces, but will not provide user support for applications (e.g, e-mail) that run on the network. The help desk will not provide support for non-LaRC standard solutions.

35. Q: Comparison of CSCC Bidder's Library Document A-1e and Figure 1, page 246, of the RFP indicates that CDC computers "A", "R," and "T" of the NOS computing subsystem have been removed. Is removal and/or replacement of all NOS based systems planned? If so, what hardware platform class is anticipated as a replacement, and on what general schedule? How will this change impact CSCC configuration and SCOMAC responsibilities?

A: The NOS computer systems are considered to be mature systems. Their life expectancy within the CSCC is uncertain; however, there is a high probability that they will be phased out during the life of the SCOMAC contract. The removal of these systems should have minimal impact on the contract effort. Work currently being performed on these computers will probably be transitioned to UNIX based computers and workstations.

36. Q: The RFP-SOW seems to describe SCOMAC support requirements for ARTSS, GEOLAB, and the DVAL Image Processing System (CCNS Operation, page 60, 1st and 6th bullets, and page 62, top two bullets). Table 1 of Attachment 9; however, indicates no SCOMAC operation or maintenance responsibilities for these facilities. Can you clarify the SCOMAC support requirements for these facilities?

A: SCOMAC Support in these areas is limited to maintenance and operation of the Scientific visualization system (see table 1 on page 243) and for software subsystems support for ARTSS (see page 60 of the RFP).

37. Q: Figure 2, page 4 of Bidder's Library Document A-1e illustrates an IBM 4381 ("Jenny") as a controller for the SNS MASSTOR system. This controller is not listed in RFP

Attachment 9, description of the CSCC. Attachment 9 does; however, list an IBM 9730 as a part of the SNS, but does not indicate its use. Please clarify.

A: The IBM 4381 computer has been removed. The IBM 9730 listed as part of the SNS in Attachment 9 should read IBM 9370 and is a controller for the laser printers. This is described on page 249 (where it is identified incorrectly as an IBM 9375).

38. Q: RFP Attachment 12 (page 257) lists distributed and data reduction computer and operating system types currently supported by SCOMAC, and SOW Section C.6 delineates types of support to be provided. Please clarify the quantity of such systems that are to be supported by SCOMAC, and the typical workload associated with this support (such as was indicated in RFP Attachment 9, Table 2 (pages 243-245 for CSCC).

A: Attachment 9, Table 2 information is not available for distributed computing and data reduction systems. Attachment 12 reflects the systems currently supported in this area. Because the work described in SOW C.6 is variable, depending on researcher needs, work is defined in written work orders.

39. Reference L.39

Q: Is "the total value of your proposal." defined as the estimated cost of the contract \$\_\_\_\_\_, exclusive of the award fee of \$\_\_\_\_\_ and fixed fee of \$0 to which the goal of 15 percent applies?

A: The total value of your proposal is the total estimated cost, award fee, fixed fee, and the \$35,000,000 Systems Maintenance Pool. A goal of 15 percent of the total cost plus fee of your proposal should constitute the minimum acceptable small disadvantaged subcontracting goal for contract award. L.39 has been revised.

40. Reference L.40, paragraph C.2

Q: The word count rules used by some commercial word processing software packages, e.g., Microsoft Word, do not count charts, tables, diagrams, captions and figures in the word count. Will the Government accept the Microsoft Word word count rules?

A: Yes, see answer to number 13 above.

41. Q: What OEM vendors maintain on-site space for providing maintenance support?

A: Cray Research, Inc. and Control Data Corp.

42. Q: LaTS operations and maintenance by LaRC personnel? Is this NASA LaRC employees only or is it contractor supported in any way? If contractor currently, what contract and when does it expire?

A: The overall responsibility for LaTS operation and maintenance is with the Government. The Government utilizes contract personnel to operate and maintain the LaTS systems. Contractor support for LaTS operation and maintenance is currently provided by Unisys under contract NAS1-19119.

43. Q: Does it satisfy the 10 minute response time if the contractor's engineer or technician respond first?

A: SOW C.4.1 clearly states that response time is satisfied by the arrival of a "technically-qualified" contract employee.

44. Q: Is the Government presently handling any of the dew point monitors, 400hz motor generator sets or condensing units listed in Appendix A. If not, then who is (there are no vendors listed)?

A: All Appendix A CLIN(s) are currently maintained by contractors. See answer to number 5 above.

45. Q: How much space is available for on-site spares?

A: RFP section H.5(N)(a) states that 1,300 square feet is available for maintenance work areas which would include storage of any on-site spares.

46. Q: Pages A21 - A25 of Appendix A have N/A for status. How should it be treated?

A: Your proposal should provide your approach for software support.

47. Q: Pages A26 and A27 of the appendix have no status listed. How should this be treated?

A: Environmental Support Equipment is used to support CSCC hardware listed in Appendix A, part 1. Support for the Environmental Items should be provided in a manner that is consistent with your approach for support of Appendix A, part 1 items. Appendix A, part 3 has been modified to add the status.

48. Q: Any time frame for completion of review of solicitation by NASA Headquarters. Obviously a major effort is underway by each offeror. They may or may not be focused in the right directions.

A: We do not anticipate that NASA Headquarters' review will have a major impact on your proposal or the schedule.

49. Q: Does the \$35 million dollar set aside count as part of the SDB 15 percent requirement?

A: The \$35,000,000 referred to in H.20 is a defined cost pool to effect system maintenance changes over the entire contract term. This price pool is not to be included in the estimated cost plus fee of the contract. Systems Maintenance Pool is added after cost plus fee (see Form A-3). A goal of 15 percent of the total cost plus fee of your proposal should constitute the minimum acceptable small disadvantaged subcontracting goal for contract award. L.39 has been revised.

50. Q: Can subcontractors submit detailed cost proposals to NASA Langley directly?

A: Yes. However, NASA prefers that subcontractor's cost and pricing data be submitted by the subcontractor through the prime contractor. Refer to FAR 15.806.

51. Q: Are the cost of Field Change Orders (FCO) included in the system maintenance monthly charges?

A: Yes.

52. Q: What percent of CSCC applications will be moved to smaller distributed processors over the next few years?

A: This is impossible to predict. The use of distributed systems and the implementation of applications software on the distributed systems is totally up to the Researcher.

53. Q: Is there an on-site support person from Cray?

A: Yes.

54. Q: Where was Cray console operations performed?

A: From workstations within the CSCC.

55. Q: H.5 of the RFP indicates that 1300 square feet of maintenance area will be made available to the contractor. With the consolidation of all CSCC support requirements this is not sufficient space for maintenance areas, spares storage, office spaces, etc., needed to support these requirements. As such, will all spaces presently occupied by incumbent OEMs be made available for contractor use under C.4? If so, is any of this space secure areas where contractor owned spares, repair parts, tools, etc. can be stored?

A: Current maintenance square footage is approximately equal to 1300 and the Government believes that this is adequate for SOW C.4 SCOMAC maintenance support. The space currently occupied by OEMs will not be utilized. A different area will be utilized for the SCOMAC maintenance. Some areas are access protected. It will be possible to access protect any maintenance area that the SCOMAC contractor requests.

56. Q: When will facility management 8(a) set aside RFP be issued?

A: The 8(a) set aside that you are referring to will be for facility monitor support and not facility management. It is expected that NASA will be coordinating this requirement with SBA and conducting informal assessments of interested 8(a) firms capabilities during January/February 1993.



57. Q: Which portion of Facility Management has been set aside for 8(a) companies?

A: Facility Monitoring.

58. Q: When is the facility monitoring RFP going to come out?

A: See answer to number 56 above.

59. Q: Who do we need to contact to be on bidder's list?

A: Any 8(a) firm interested in being considered for this requirement should contact Linda Fitzgerald in the NASA Industry Assistance Office at 804-864-2461 or Carolyn Wells in the Services Contracts Branch at 804-864-2529; NASA Langley Research Center or their cognizant SBA office.

60. Q: Does word/page count apply to required/executed copies of subcontract documents stated in modification/amendment? (subcontracts exceeding \$50K)

A: It appears that this question refers to the cost proposal instructions on page 167. The word count limitation applies to the mission suitability proposal only.

61. Q: What software is used to track trouble tickets between point of notification and point of maintenance resolution?

A: There is no software system to track this process.

62. Reference: Solicitation No. 1-41-1100.1015

Q: CLIN's 1126 and 1127 listed in Appendix A do not indicate model numbers. First, are these items covered under an existing workstation maintenance contract? Second, if not, what are the SUN model numbers of these systems?

A: The model number for CLIN 1126 is 3/160S and for CLIN 1127 it is 3/160S-P8. Appendix A has been modified to reflect this change. These two CLIN(s) are currently maintained under contract NAS1-18744.

63. Q: CLIN's 1368 through 1396 in Appendix A list transition dates of "TBD." What is the transition date, if any?

A: It is impossible to specify the actual transition date at this time. For proposal preparation assume the transition date is August 9, 1993.

64. Q: Do prior maintenance records exist for the items listed in Appendix A and are they available for review?

A: The Government does not have maintenance records for Appendix A items.

65. Q: Will any spare parts for equipment listed in Appendix A be provided by the Government to the successful bidder? What are they?

A: No.

66. Reference: Section C.4.7, Page 65

Q: Will all current CSCC software licensing agreements remain in place for SCOMAC?

A: All current software license agreements that the Government has in place and listed in Appendix A will remain in place, under SCOMAC, for as long as the software package is in use within the CSCC.

67. Reference: Section C.4.7, Page 65

Q: Are OEM software updates, corrections and enhancements obtained as part of Government-purchased software licensing agreements for CSCC?

A: The Statement of Work, Section C.4.5, will be updated to reflect the following change: "The Government will be responsible for purchasing all software licensing agreements. The Contractor shall notify the Government of the availability of updates and successor products to the current installed system software as well as the availability of applicable new products. The Contractor shall provide to the Government updates of the current Government-licensed and installed system software when no new license is required. This shall include corrective code and enhancements to the system software listed in Appendix A."

68. Reference: Section C.4.5, Page 65

Q: Are Field Change Orders (FCOs) obtained as part of Government-purchased software licensing agreements for CSCC?

A: FCOs are to be provided by the SCOMAC contractor as part of the monthly maintenance charge for upgrades to hardware CLIN(s) listed in Appendix A, part 1. FCOs relate to hardware updates and not to software.

69. Reference: Section C.4.5, Page 65

Q: Do FCOs include software updates, corrections and enhancements?

A: FCOs do not relate to software support, but to hardware. See answer to number 68.

70. Q: NASA has established a proposal size limit that is expressed in terms of words, inclusive of text, graphics, and miscellaneous titles and captions. We realize that this very specific requirement will help structure prospective offeror's responses, however; this approach is unreasonably difficult, burdensome, and costly for both NASA and its offerors.

- Words, particularly those within graphics, must be counted manually, yielding the possibility of a proposal that is noncompliant because of a miscounted word.
- The definition of a "word" is obscure; for example is "12,000" a word? Is "four-step" one word or two? Is "Figure 1" one word or two?, etc.
- Even minor editing changes on a single page will require changes on all subsequent pages because of the necessity to reflect a cumulative word on each page.
- NASA can determine compliance only by manually counting each word in each proposal, a task that is difficult, expensive, and error-prone.

NASA's objective of limiting proposal size can be met with a much simpler approach. Accordingly, we suggest the following:

- Establish a page limit (the 150 page-limit mentioned in the draft RFP is acceptable).

Establish text formatting rules that have the effect of limiting the number of words per page. For example, a rule of "12 point type, double-spaced, with 1-inch margins" for text will yield approximately 250 words per page (the paper size, font size, line spacing and margin size referenced in the draft RFP is acceptable), or a total proposal length of approximately 37,500 words of text, excluding graphics.

- Establish a general "legibility" rule for graphics (figures and tables), but do not attempt to limit word-count or size. The assumption is that the difference between the desired 60,000 word size and the 37,500 words resulting from the text limit will be used in graphics.

These suggested rules of limiting the proposal size, as expressed in terms of page length only, are used frequently and effectively in other NASA RFPs to limit the size of the proposal and yet avoid burdensome overhead on the part of both NASA and the offerors. We believe they are the most advantageous to NASA and its prospective offerors.

A: Section L.40 C., Paragraph 2., of the RFP will be revised to read as follows:

Two options are available for formatting your mission suitability proposal. You may choose the one that you consider most advantageous. You must specify in your proposal which option you have selected. Regardless of the option you choose, the limitation is inclusive of charts, tables, diagrams, captions, and figures, but exclusive of personnel resumes, cover pages, dividers, table of contents, and list of figures. All text will be printed black on white, double-spaced, and preferably double-sided. Additionally, offerors are requested to refrain from using script-style or other non-standard type fonts, but instead use fonts such as Courier 10-cpi or CG Times 12 points, so as to insure readability of proposals.

Option 1. Based on word count:

In order to permit flexibility in formatting while holding the amount of information presented by each offeror to an approximately equal amount, a limit of 60,000 words is imposed on your mission suitability proposal.

You should indicate in the footer of each page the word count for that page and the cumulative word count up to the end of that page. The word-count rules used by any commercial word-processing software package are acceptable. If the word processing package you use does not count words in charts, tables, diagrams, captions, and figures, you may include the word count for these pages in a summary chart rather than including in the cumulative word count at the footer of each page. Any information that is determined to be beyond the word-count limit will not be evaluated.

Option 2. Based on page count:

The number of pages is limited to 175. Each "page" is one side of one sheet, 8-1/2" by 11" with at least one-inch margins on all sides. Foldouts count as an equivalent number of 8-1/2" by 11" pages. Type shall be no smaller than 12 points. Text shall be double-spaced (no more than 3 lines per inch) and either variable pitch or fixed pitch of no more than 12 characters per inch. The text contained on charts, figures, and tables should follow the text formatting guidelines stated above for Option 2. Any page(s) exceeding the 175 page limitation will not be evaluated.

71. Q: H.18 and L.40E.e(12). These paragraphs require Firm Fixed Prices for the items listed in Appendix A. The solicitation does not contain FAR clauses applicable only to the Fixed Price portion of this contract. For example, Inspection of Supplies - Fixed Price, Payments, Changes - Fixed Price. Should the appropriate Fixed Price clauses be incorporated in the solicitation?

A: We have structured the RFP to be a cost-plus-award-fee (CPAF) contract with not to exceed priced items. The items will be allowable costs under the contract if they meet the contract requirements (an analogy would be a fixed price subcontract or interdivisional transfer costs, which are allowable costs on a cost type contract). We believe the RFP approach is best for contract administration purposes and contractor accountability. Accordingly, H.18 is included for the purpose of negotiating an advance agreement on those maintenance line items and L.40E.e(12) provides instructions on proposing the maintenance portion on the overall CPAF amount.

72. Q: H.20, L.39 and Cost Proposal Form A. The Systems Maintenance Price Pool is \$35,000,000 for seven and one-half years. Does the minimum goal of 15 percent of the total dollar value of your proposal include the \$35,000,000? If yes, is the \$35,000,000 spread over seven and one-half years?

A: No. L.39 has been revised to clarify this.

PREPROPOSAL CONFERENCE ATTENDEE LIST



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**PLEASE SIGN IN**

**SCIENTIFIC COMPUTING OPERATIONS,  
MAINTENANCE AND  
COMMUNICATIONS SUPPORT SERVICES  
(SCOMAC)**

**PRE-PROPOSAL CONFERENCE**

**DECEMBER 16, 1992**

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<u>ERIC P. WHITTON</u> <u>(804) 486-5889</u>	<u>INTECS INTERNATIONAL INC</u> <u>509 VIKING DR, SUITE I</u> <u>VA BEACH, VA 23452</u>
<u>EMIL SHULSINGER</u> <u>(703) 289-9392</u>	<u>Hughes Technical Services Co.</u> <u>1100 Wilson Blvd.</u> <u>Arlington Va 22209</u>
<u>MANNY KATHURIA</u> <u>703 752-4274</u>	<u>IBSI</u> <u>3900 UNIVERSITY BLVD</u> <u>SUITE 218 D</u> <u>FAIRFAX VA 22030</u>
<u>Marcia McLaughlin</u> <u>(703) 620-0100</u>	<u>Software AG - Federal Systems</u> <u>11130 Sunrise Valley Dr.</u> <u>Reston, VA 22091</u>
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**COPIES OF PREPROPOSAL CONFERENCE VIEW-GRAPHS**

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# **SCOMAC**

**Scientific Computing Operations, Maintenance, and  
Communications Services**

**RFP 1-41-1100.1015**

**Pre-Proposal Conference**

**December 16, 1992**

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# AGENDA

- 8:30 a.m. Welcoming Remarks** Dr. H. Lee Beach, Acting Director
- 8:40 Introductions, LaRC Overview, and Computing Environment** Dr. John N. Shoosmith, SEB Chair.
- 9:10 SCOMAC Requirements** Samuel A. McPherson, COTR
- 9:45 The Procurement Process** Nancy M. Sessoms, Contract Spec.
- 10:00 Break**
- 10:10 Tour of Facilities**
- 11:30 Reconvene to Address Questions**
- 12:00 Adjourn**

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## **GENERAL GUIDANCE**

- . All questions and answers, copies of viewgraphs, and an attendance list will be forwarded to all firms on bid list as Amendment 1 following this conference**
- . All revisions to the RFP will be in writing: nothing said here today should be construed as a revision unless subsequently confirmed by written amendment**
- . Written questions will be collected during the break; previously submitted questions, plus today's (if possible) will be addressed after the break**
- . All communication in reference to this RFP must be directed to Nancy M. Sessoms, Contract Specialist, (see Section L.29 in the RFP) or, in her absence, Mary Jane Yeager, Assistant Branch Head, Services**

---

# **SOURCE BOARD MEMBERSHIP**

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**Eric L. Everton**

**ACD**

**Dr. James R. Schiess**

**ACD**

**Dr. Robert P. Weston**

**FLDMD**

**Nancy M. Sessoms**

**AD**

## **SEB Recorder:**

**J. Lee A. Lillard**

**ACD**

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<b>Anthony R. Fecondo, ACD</b>	<b>Facility Management</b>
<b>Joseph W. Young, ACD</b>	<b>Operating Systems and Distributed Systems Support</b>
<b>Edwin P. Riddle, ACD</b>	<b>Communications</b>
<b>Joseph D. Nolan, ACD</b>	<b>Communication Operations, and User Services</b>
<b>Joseph M. Drozdowski, ACD</b>	<b>Supercomputing Operations</b>
<b>Stephen D. Derry, ACD</b>	<b>LaRCNET</b>

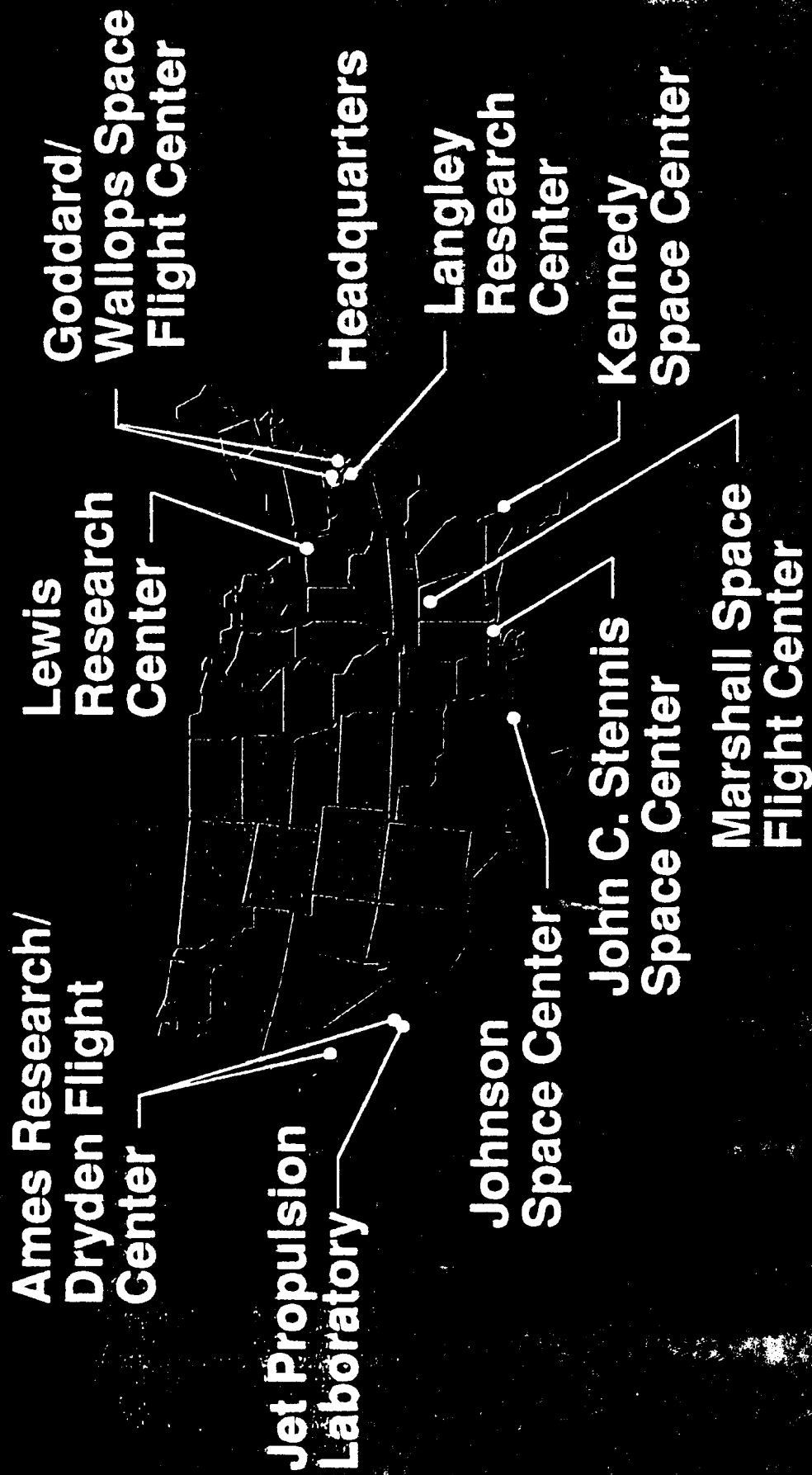


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<b>David F. Caplan, OCC</b>	<b>Michael F. Cavelli, AD</b>
<b>Jeanne D. Covington, AD</b>	<b>James W. Cresawn, AD</b>
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<b>Samuel A. McPherson, III, ACD</b>	<b>Maurice K. Morin, ACD</b>
<b>Robert R. Moore, MO</b>	<b>Sidney F. Pauls, OD</b>
<b>Mickey G. Rowe, ACD</b>	<b>John F. Stokes, MO</b>
<b>Dr. Frank C. Thames, ACD</b>	<b>Mary Jane Yeager, AD</b>

# NASA INSTALLATIONS



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# NASA LANGLEY RESEARCH CENTER

**Founded in 1917**

**Capability**

- First civil aeronautical research laboratory**
- People: 2960 civil servants**
- Facilities: \$1.6 billion replacement value**

**Mission: Aeronautics and Space Research**

**Aeronautics**

- Full range of disciplines**
- 60% of resources**

**Space**

- Selected disciplines and atmospheric science**
- 40% of resources**

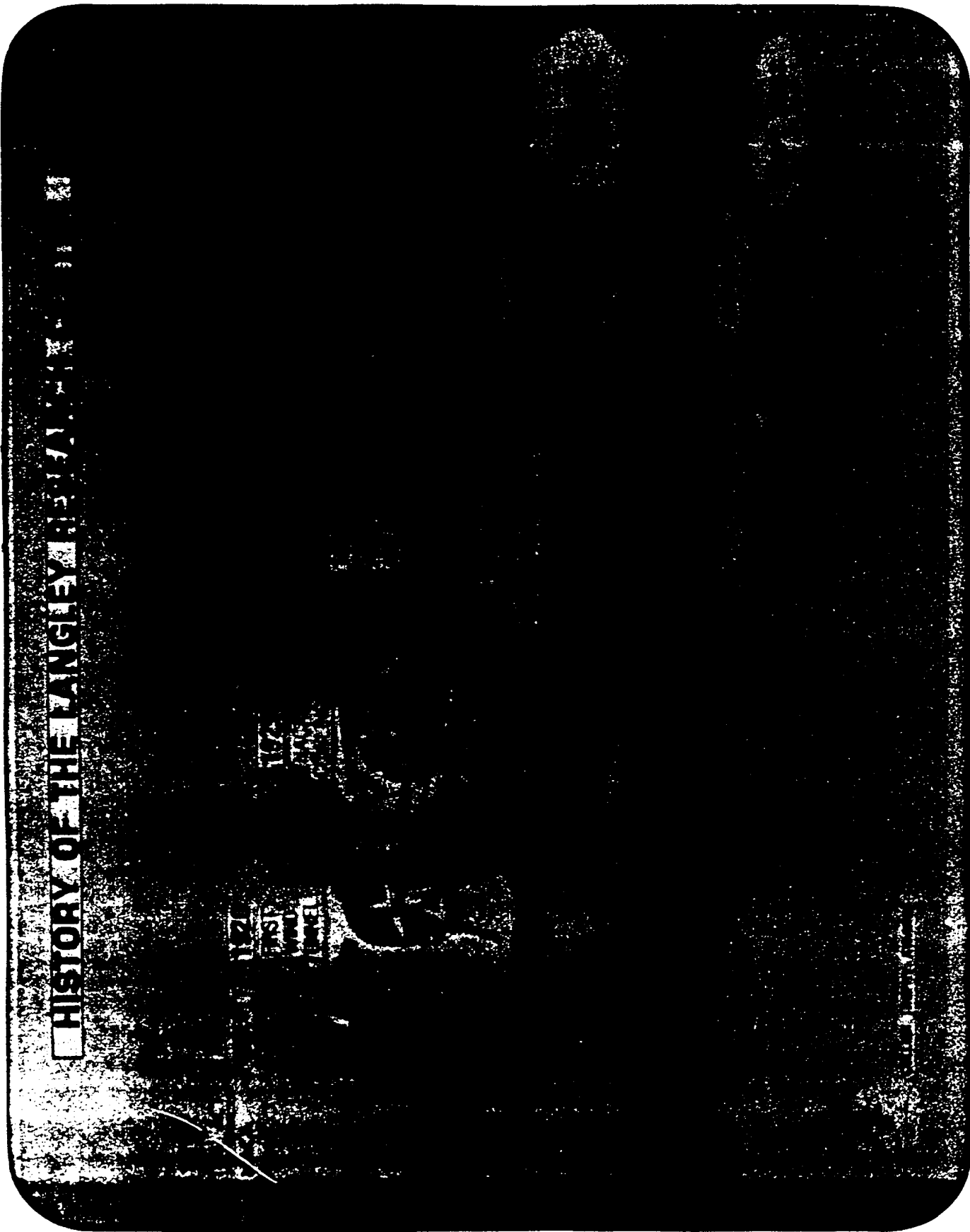
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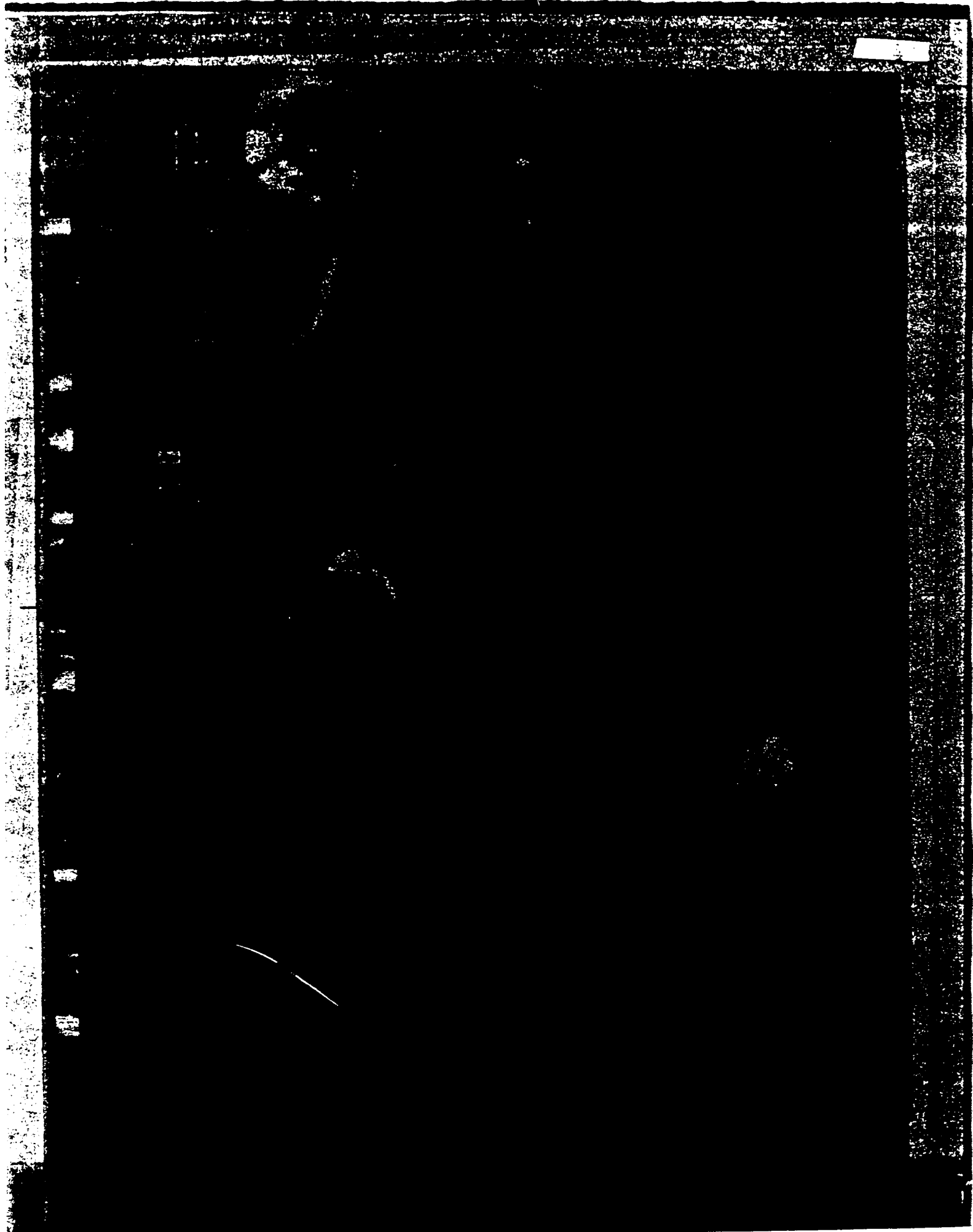
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- **To perform innovative aerospace research that is relevant to National needs and Agency goals**
- **To transfer the research results to the user communities in a timely manner**
- **To provide development support to other government agencies, industry, and other NASA centers**

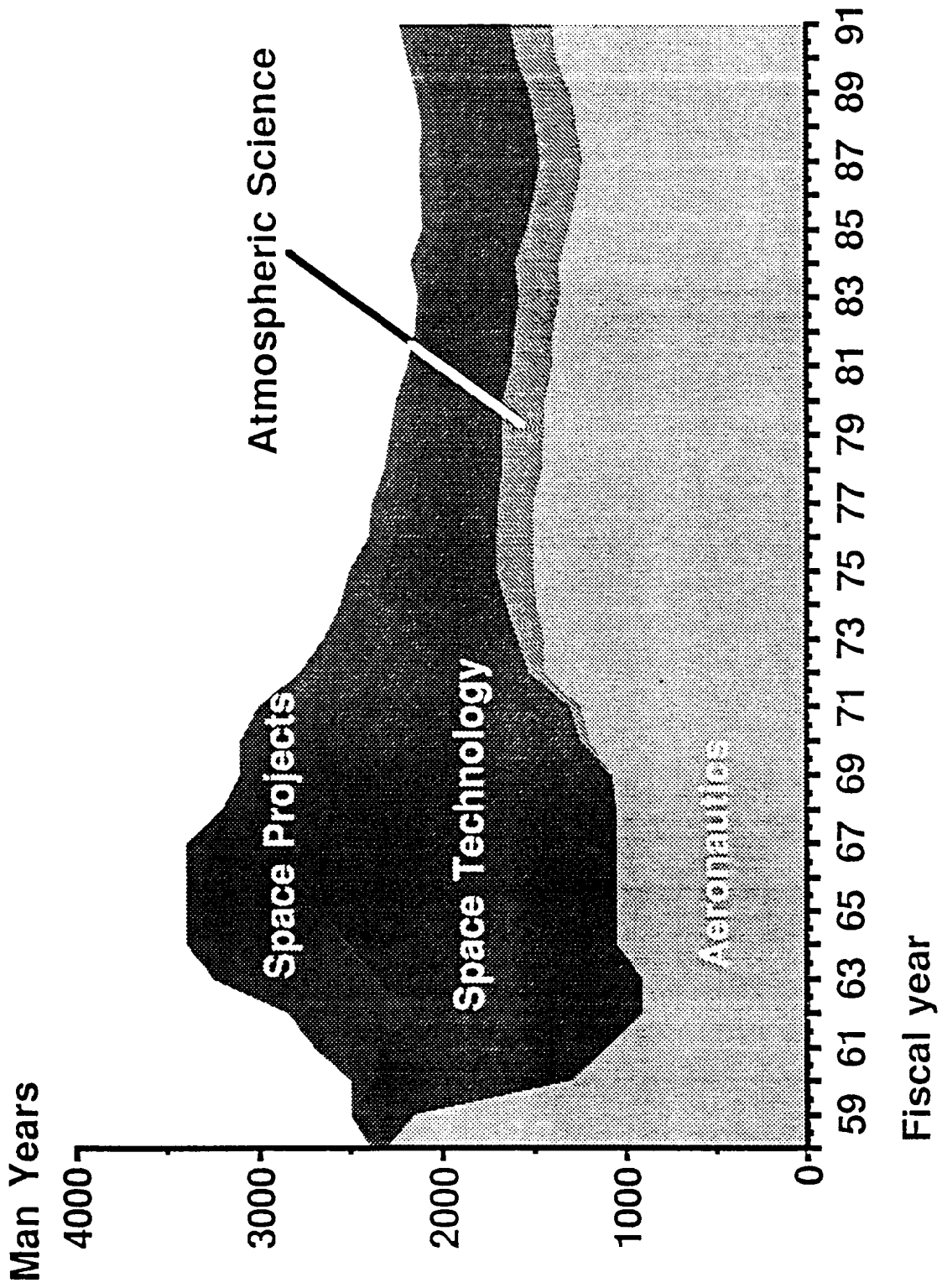


National Aeronautics and  
Space Administration

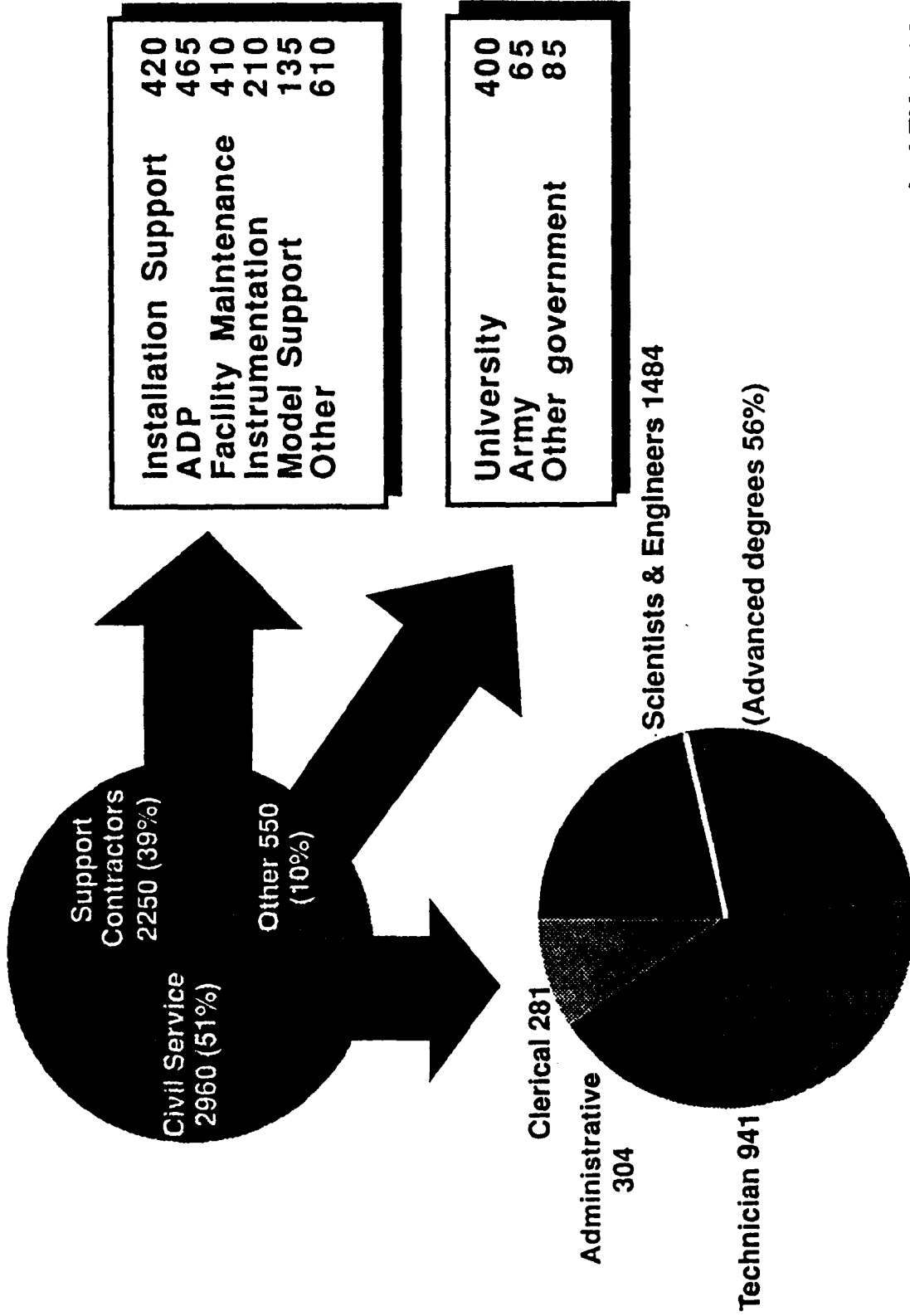




# LANGLEY PROGRAMMATIC MANPOWER



# PEOPLE at LANGLEY RESEARCH CENTER

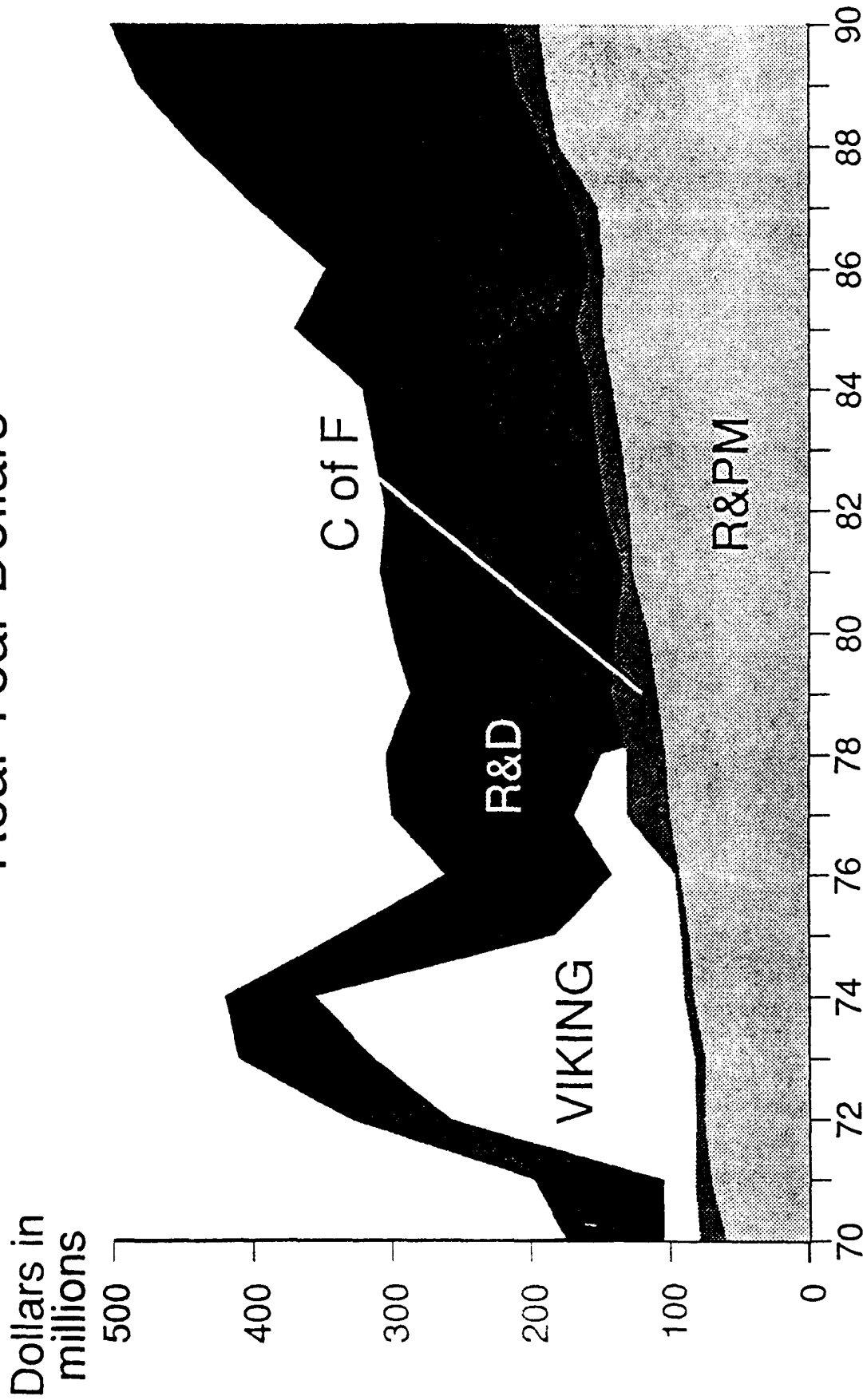


end of FY 1990



# LANGLEY TOTAL FUNDING HISTORY

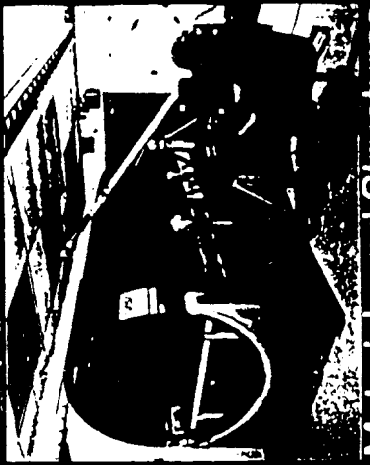
Real Year Dollars



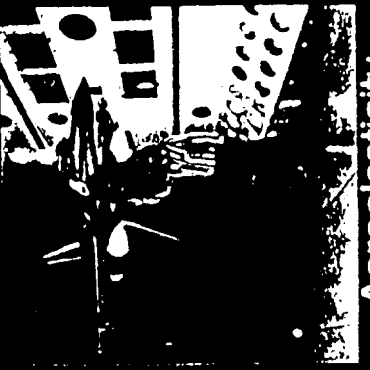
# AERONAUTICAL RESEARCH DISCIPLINES AT LaRC



Aerodynamics



Materials and Structures



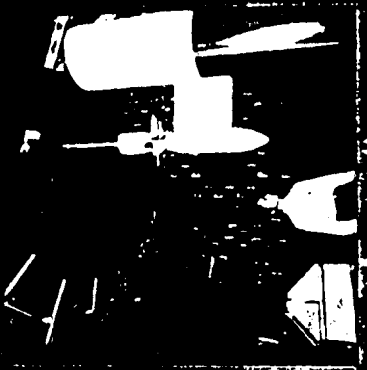
Aeroelasticity



Computational Fluid Dynamics



Flight Management



Acoustics



Propulsion Integration



Controls

# APPLICATION OF RESEARCH TO AERONAUTICAL SYSTEMS

## Transports

## General Aviation/Commuters

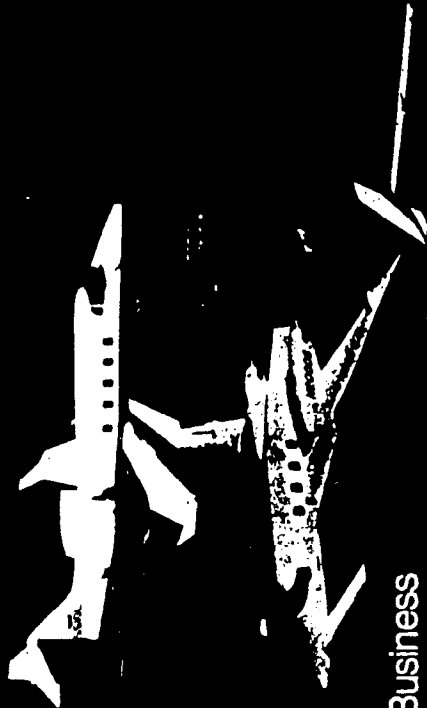
Subsonic



Supersonic



Business



Hypersonic

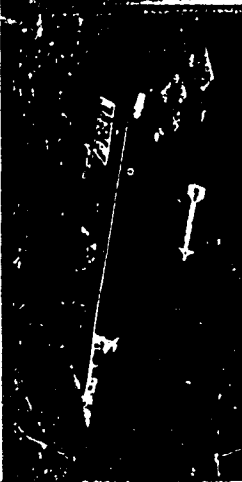


Commuter



## Military

Fighters



Missiles



OVERVIEW 28

# SPACE RESEARCH DISCIPLINES AT LaRC

## Space Technology Disciplines



Aerothermodynamics



Structures and Materials



Controls



Robotics

## Atmospheric Sciences



Radiation Balance



Atmosphere Sensing

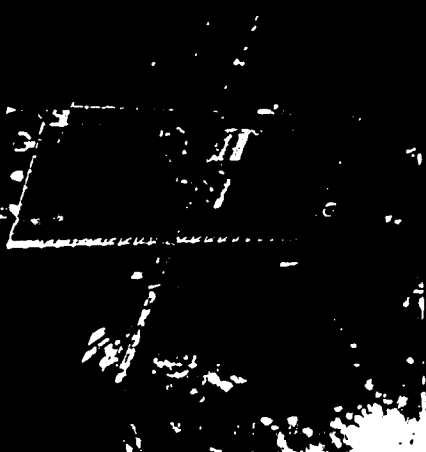


Theoretical Modeling

# APPLICATION OF RESEARCH TO SPACE SYSTEMS AT LaRC



Space Transportation Systems



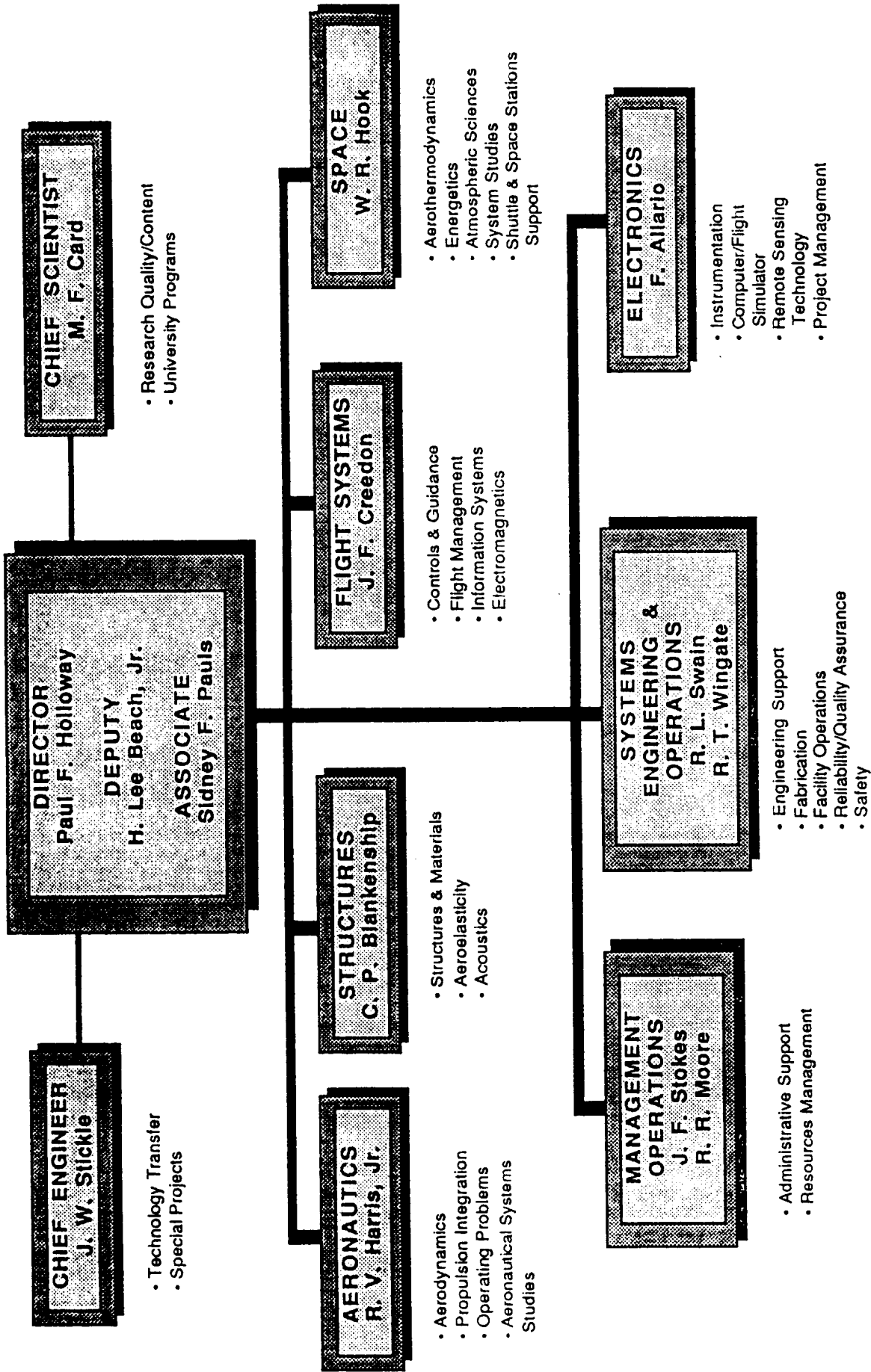
Space Station



Large Space Systems

OVERVIEW 37

# LANGLEY RESEARCH CENTER



# THE CENTRAL SCIENTIFIC COMPUTING COMPLEX

A large, state-of-the-art, centrally located complex of equipment for meeting Langley Research Center needs for

- Large-scale computing
- Computer graphics and image processing
- Data transcription and processing
- Real-time flight simulation
- Mission software development

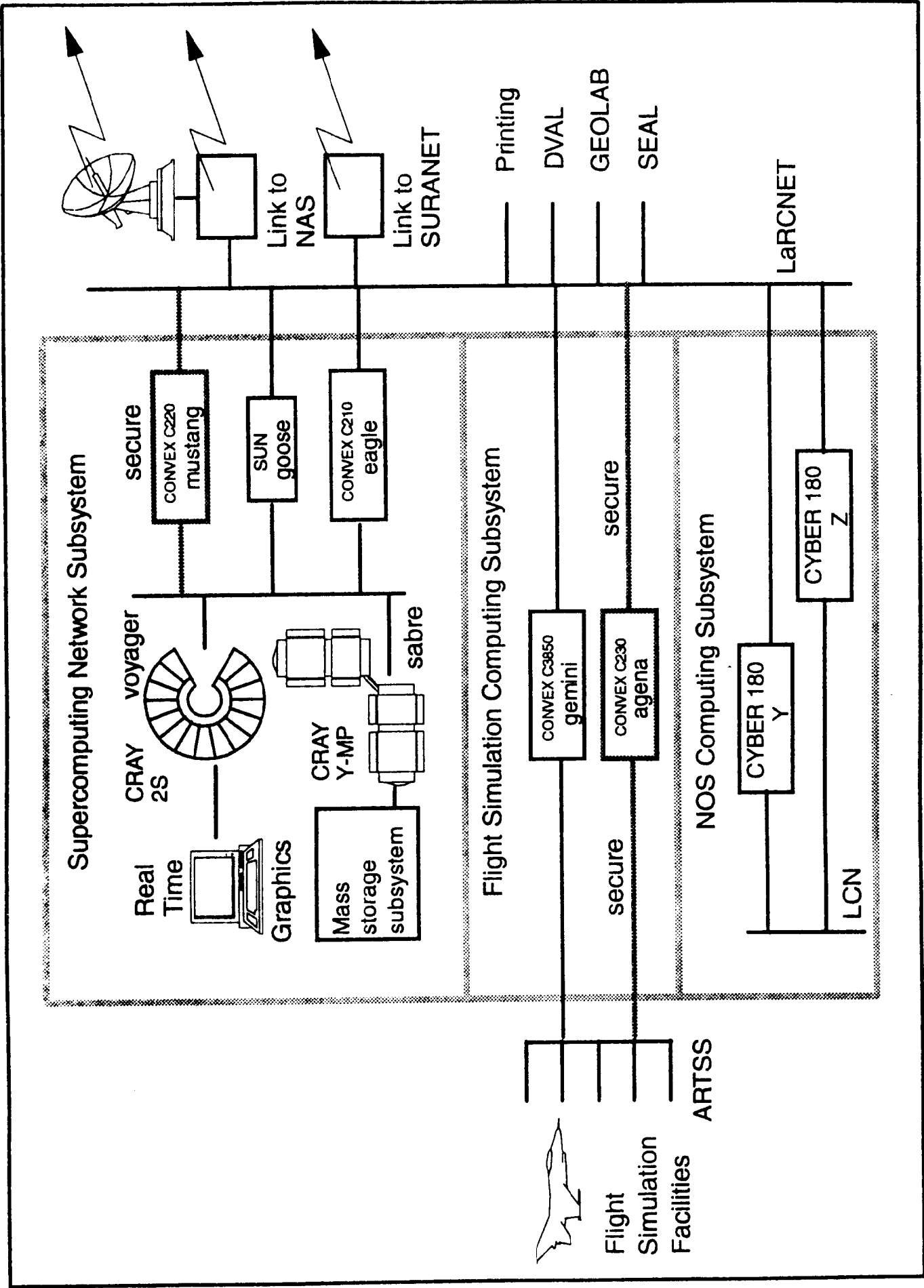
**Interconnected and accessible through electronic networks**

0890-1402-002

NASA  
L-81-4505

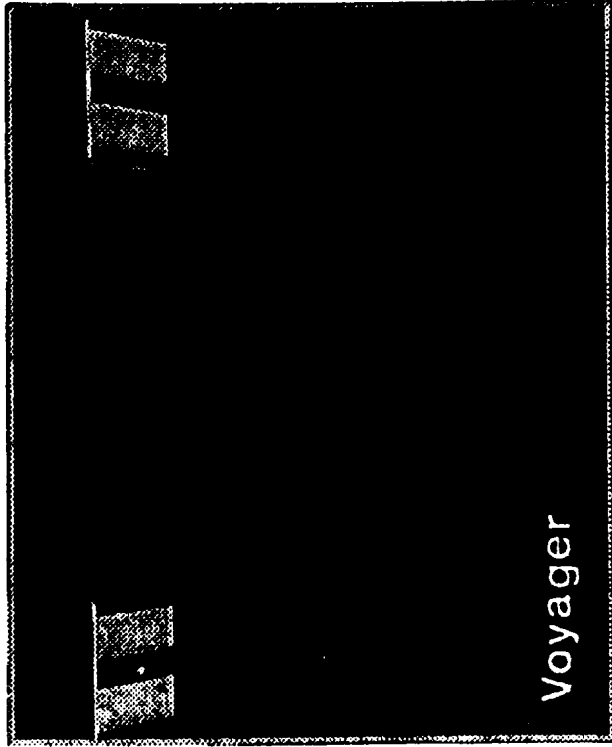




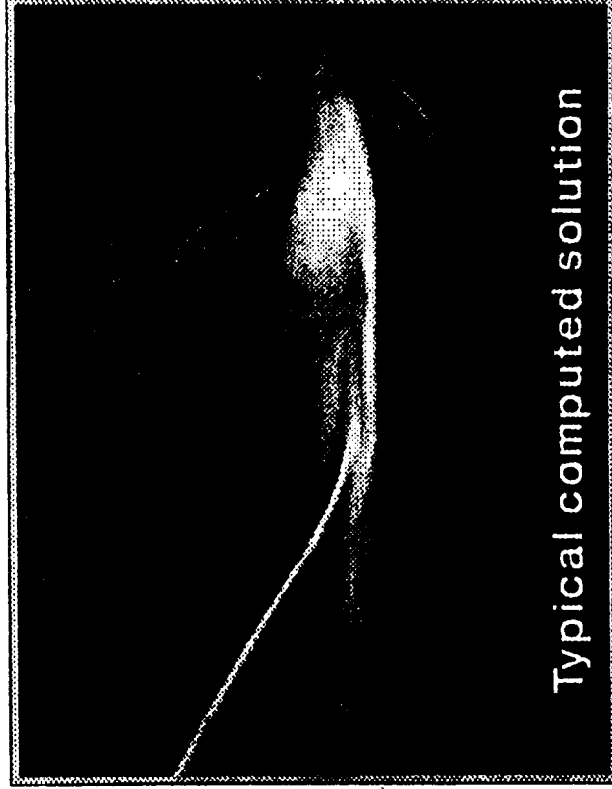


The LaRC Central Scientific Computing Complex

# SUPERCOMPUTING



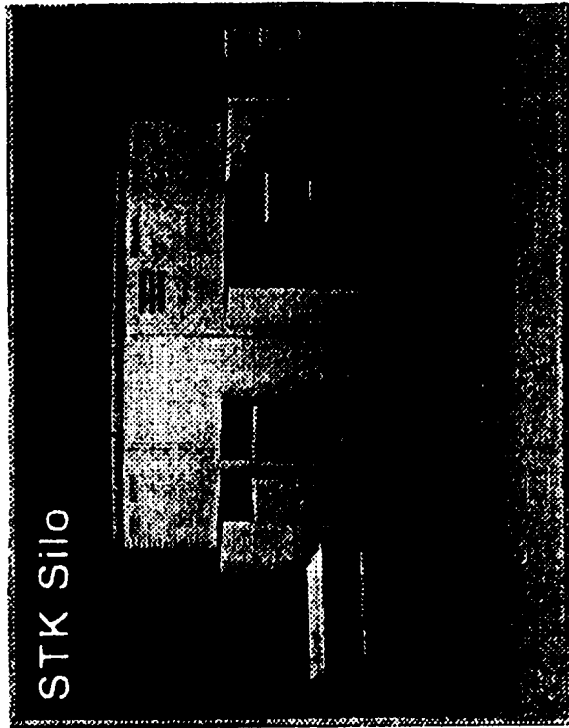
- CRAY-2S with 4 processors
- 128 Mwords central memory
- Can achieve over one billion ops/sec



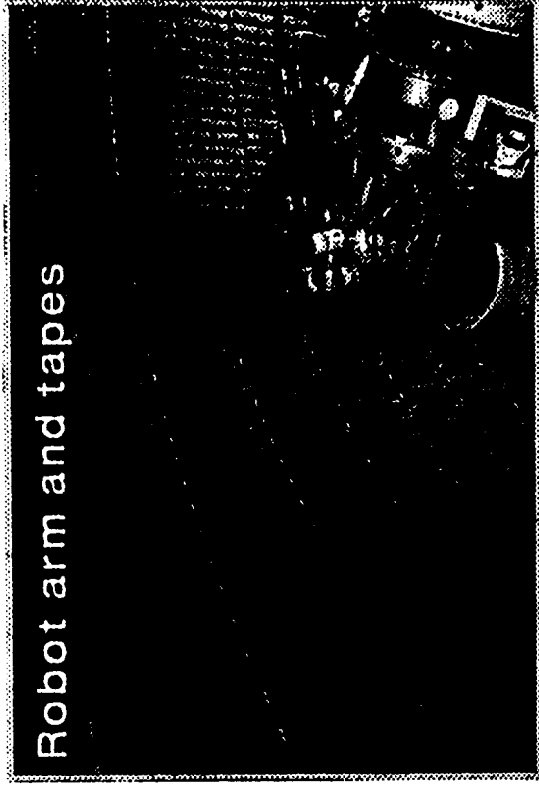
- Computational fluid dynamics
- Computational structures
- Complex 3-D geometries and realistic physics

Computing capacity to meet LaRC needs in the 90's

# DATA STORAGE



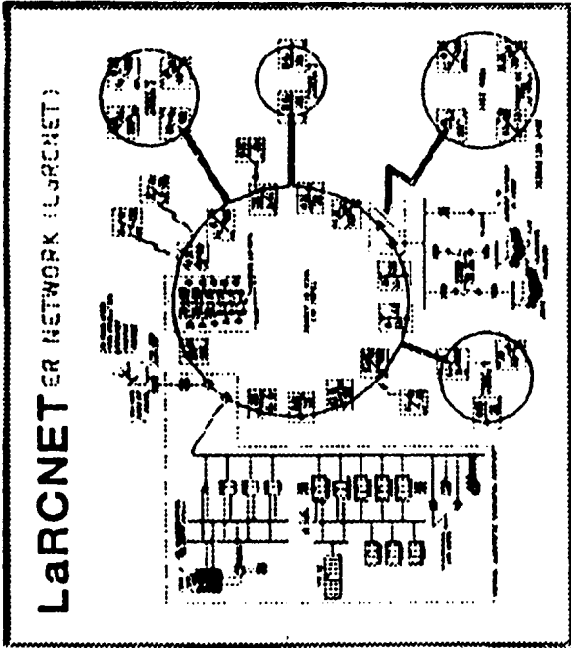
- Automated tape systems
- 1.6 Terabytes of storage
- Can access any tape in 5-25 seconds



- Used by central computers as well as over 100 distributed machines
- Used for long-term storage, CRAY file backups, temporary storage, and file sharing

Storage capacity to meet LaRC needs

# ELECTRONIC COMMUNICATIONS



- Ethernet (10 Mbps) local nets within buildings
- Fiberoptic backbone network (100 Mbps)
- Connections to over 2,000 computers (1990)



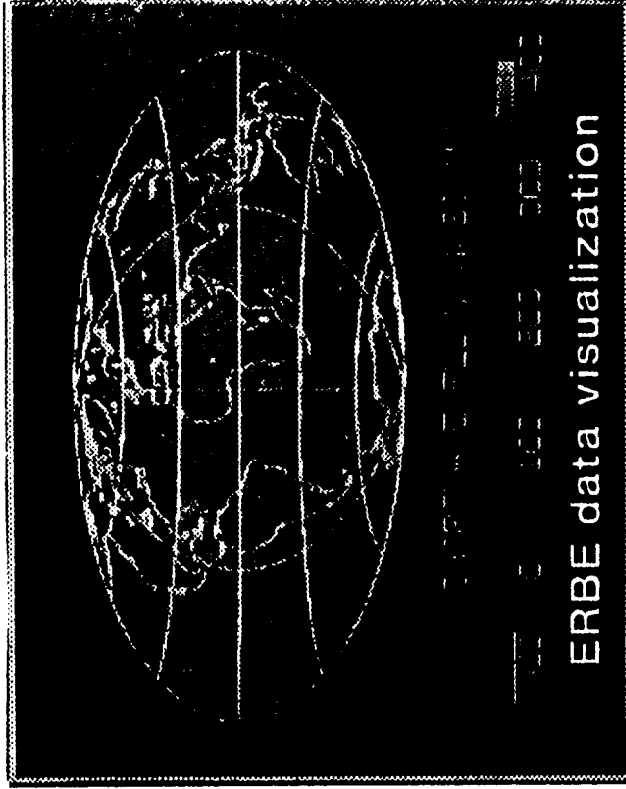
- File transfer, electronic mail, print and file sharing
- Gateways to worldwide computer networks

Center-wide network connecting the full range of computers from personal computers to supercomputers

# SCIENTIFIC VISUALIZATION



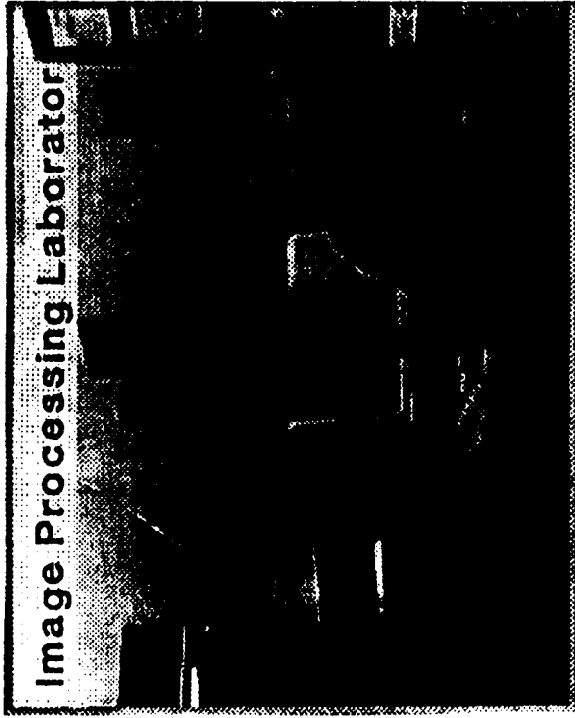
- Supercomputer graphics
- Workstation applications



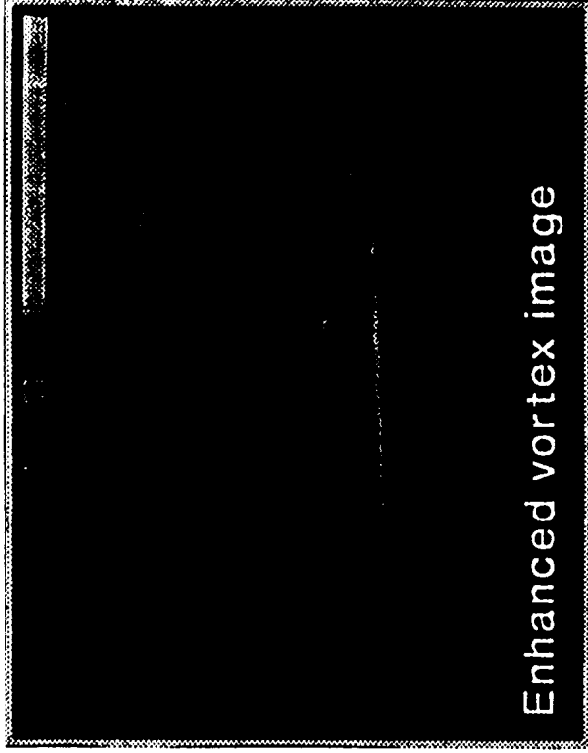
- Computer animation
- Analysis and insight

Graphics for computational and experimental science

# DIGITAL IMAGE PROCESSING



- Video rate acquisition and processing of video recorded data
- Interactive enhancements



- Enhanced experimental flow field image
- Improved visual quality for analysis and publication

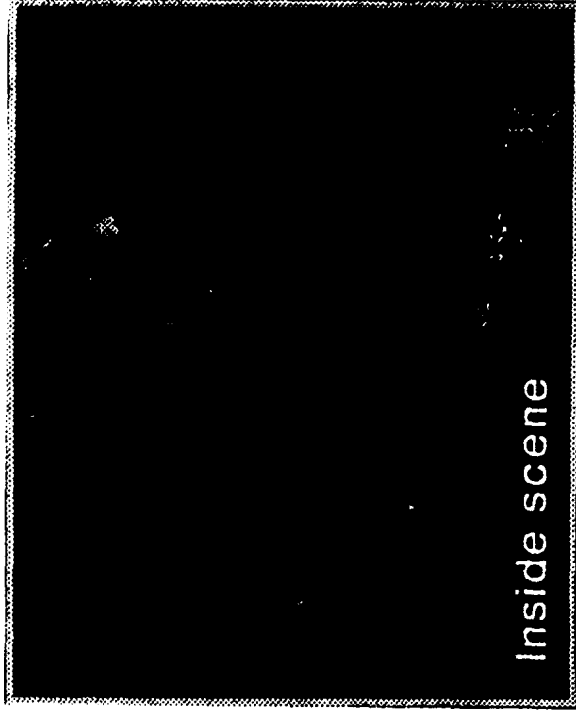
Image processing facility to support LaRC research

GS90-1402.008

# FLIGHT SIMULATION



- New technology real-time computers
- Multiple concurrent simulations
- Dynamic configuration of equipment



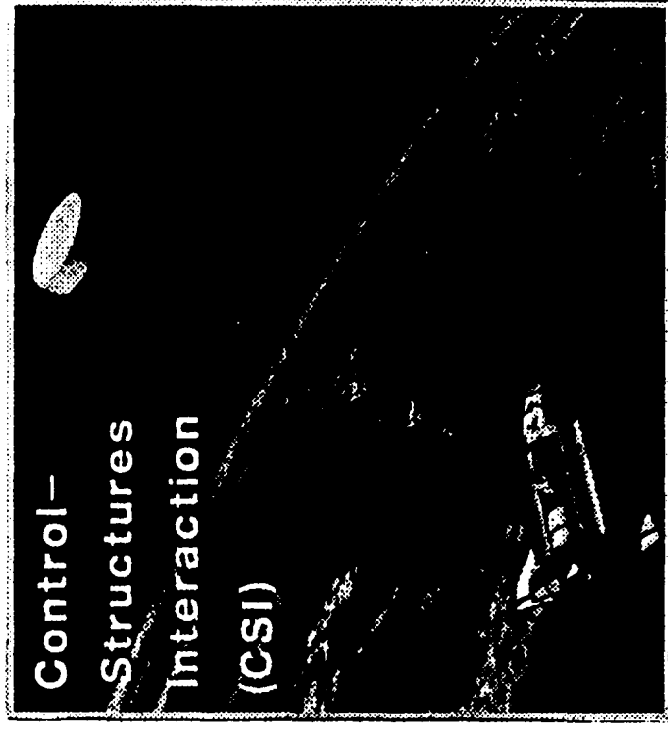
- Computer-generated visual scenes
- Multi-aircraft simulations
- Transport, fighter, general aviation aircraft

**Integrated complex of state-of-art flight simulators  
and support equipment**

# MISSION SOFTWARE DEVELOPMENT



- Reusable flight and ground support software modules
- Rapid and cost-effective development of highly reliable software systems

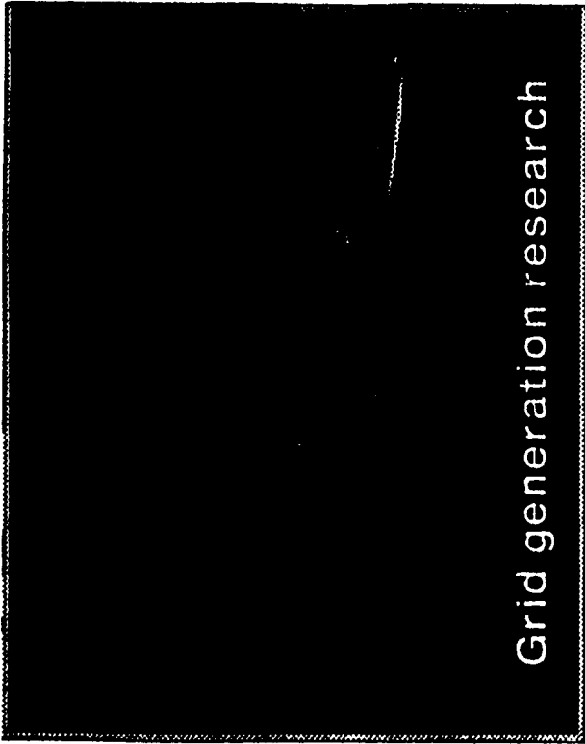


- Real-time embedded control systems
- Modern software engineering methods and tools

Software Engineering and Ada Lab (SEAL)



# GRID GEOMETRY



- Surface representation and smoothing
- Volume grids
- Adaptive techniques



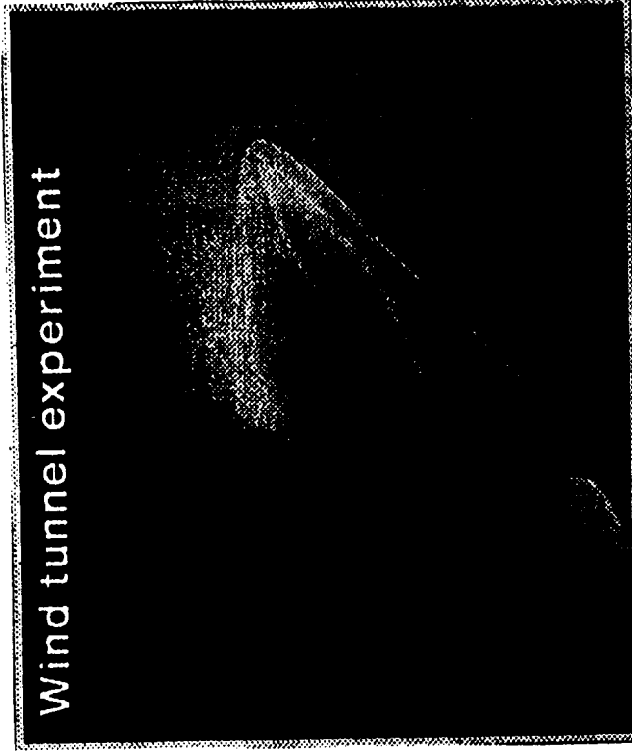
- Research and research support
- Develop software tools
- Maintain codes/database

**Geometry research and support for scientific computing applications**

# DATA PROCESSING



- Analog/digital transcription
- Quick-look analysis



Wind tunnel experiment

- Support for research site computers
- Data reduction
- Database management

Facilities and programs for reducing and analyzing ground and flight data

---

## **PURPOSE**

- **Operate most of the Central Scientific Computing Complex (CSCC)**
- **Maintain most CSCC Equipment and Operating System Software**
- **Install, Operate, and Maintain Voice, Data, and Video Communication Networks**
- **Provide Distributed Computing and Data Reduction Support**
- **New Technology Support**
- **Documentation**

---

## **EXISTING CONTRACTS TO BE CONSOLIDATED**

- **Scientific Computer Operations, Programing, & Analysis Support (SCOPAS), Unisys, 8/9/93**
- **Simulation, Communication, and Data Systems Support (SCADS), Unisys. Transition communcations portion 8/9/93**
- **SNS Maintenance, Cray, 8/9/93**
- **Control Data Systems Maintenance, CDC. Phase-in 9/28/93**
- **Laser Printer Maint., IBM. Phase-in 10/1/93**
- **FSCS Maint., Convex. Phase-in 12/18/94**

# TECHNICAL REQUIREMENTS OVERVIEW

**Scientific Computing Operations, Maintenance and  
Communications Support Services (SCOMAC)**

---

**GENERAL CONTRACT REQUIREMENTS**

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- **Place of performance**
- **Operating hours**
- **Performance criteria**
- **Courier service**
- **Personnel clearances**

**Scientific Computing Operations, Maintenance and  
Communications Support Services (SCOMAC)**

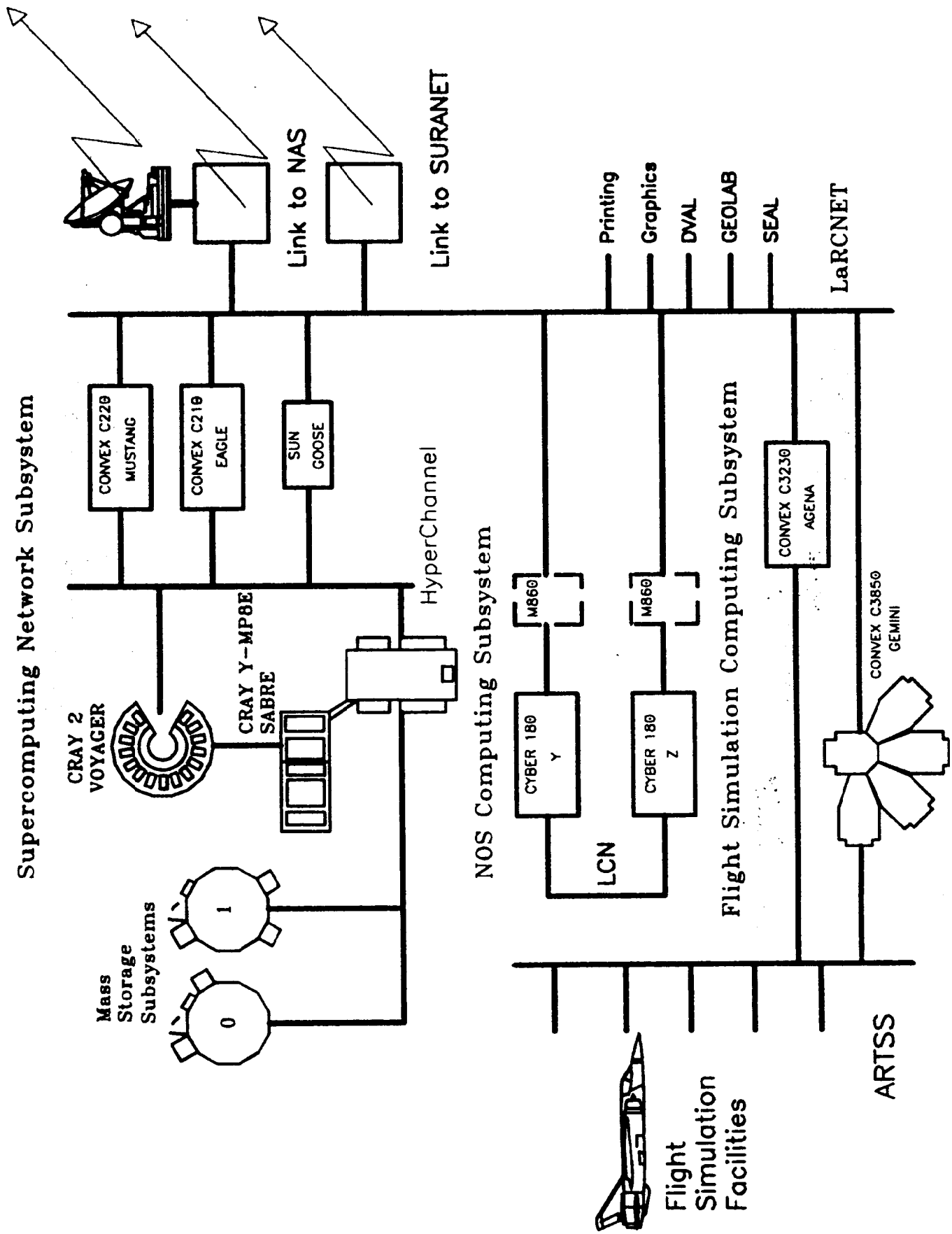
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**MAJOR FUNCTIONAL SUPPORT AREAS**

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- **Equipment operation**
- **Operating systems**
- **Facility management**
- **Systems maintenance**
- **Communication networks**
- **Distributed computing and data reduction**

# THE LaRC CENTRAL SCIENTIFIC COMPUTING COMPLEX





# EQUIPMENT OPERATION

**Scientific Computing Operations, Maintenance and  
Communications Support Services (SCOMAC)**

---

**COMPUTING EQUIPMENT OPERATION**

---

- Work area overview
- Centralized Operations Control
- Operating hours
  - three shifts
  - weekend/holidays
- Equipment operation
  - computers
  - peripherals
  - miscellaneous support equipment
  - graphics
- Magnetic tape management
  - library management
  - magnetic tape maintenance
- File management
- Supply management

# Operating System Support

## Operating System Support

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### Outline

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- System Software Support
- Computer Operations Support
- Resource Accounting Support
- New Technology Support
- General System Software Maintenance
- Standard System Software Maintenance
- System Generation
- Continuing System Support

## System Software Support

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### Requirements

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- Software Engineering
- Quality Assurance
- Software Development
- Initiate/Define/Recommend Requirements
- Maintain Local Software
- User Services - System Software

## Computer Operations Support

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### Requirements

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- Computer Malfunction Analyses
- Unix System Administration
- Interpret New Software for Operations Staff and Train Operators in its Use
- Develop/Maintain/Document Operational Procedures
- Initiate/Define/Recommend Improved Operational Functionality
- User Services - Operations

---

## Resource Accounting Support

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# Requirements

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- Account for Computer Usage  
Develop Required Systems  
Provide Management Reporting System  
Maintain Accounting Software System
- Maintain User Data Base  
Add/Delete User
- Access Security  
Manage Password System  
Ensure Secure Passwords
- Validate Accounting System with Each Software Upgrade
- User Services - Resource Accounting

## New Technology Support

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# Requirements

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- Keep Abreast of New Technology  
Computer Architecture  
Software  
Storage Systems  
Network and Communications
- Analyze Future Trends in the Computing Industry
- Recommend Future Directions
- Recommend Software Development Projects



## General System Software Maintenance

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### Requirements

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- Dump Analysis and Problem Resolution
- Develop Programs and Procedures
- Documentation of Problems
- Perform Corrective Action
- Update Documentation

## Standard System Software Maintenance

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### Requirements

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- Problem Documentation
- Provide Support for Corrective Action
- Maintain a File of Problems and Their Status
- Analyze/Understand/Implement Corrective Action

## System Generation

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# Requirements

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- Transition/Validate/Install Non-vendor Supplied Code: ARTS  
Local Modifications
- Provide Generated Systems for Testing and Installation
- Validate the System Generation Process
- Recommend/Provide Enhancements to Improve Performance and Functionality
- Install into Production Operations

## Continuing System Support

---

# Requirements

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- Provide System Updates
- Review Problem Reports to Verify and Clarify Problem Resolution
- Provide Documentation Updates
- Appraise Government Personnel of New Releases: Content and Schedules
- Maintain the Source Code

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# FACILITY MANAGEMENT SUPPORT

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# **Facility Management Support**

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## **OVERVIEW**

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**Provide Facility Management Support in the Following Areas:**

- **Access Control System Data Base Management Support**
- **Environmental System Monitoring Software Support**
- **Facility Management Documentation Support**

## **Facility Management Support**

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# **ACCESS CONTROL SYSTEM DATA BASE MANAGEMENT SUPPORT**

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- **Data base maintenance**
- **Modify software**
- **Update software to add/delete card readers to and from system**
- **Generate periodic reports**
- **Issue and track card keys**

## **Facility Management Support**

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# **FACILITY ENVIRONMENTAL SYSTEM MONITORING SUPPORT**

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- **Support for operation of Facility Environmental Monitoring System**
- **Periodic reports of facility environmental conditions**
- **Everex 386/25 PC**
- **Powers 600 INTEL software**



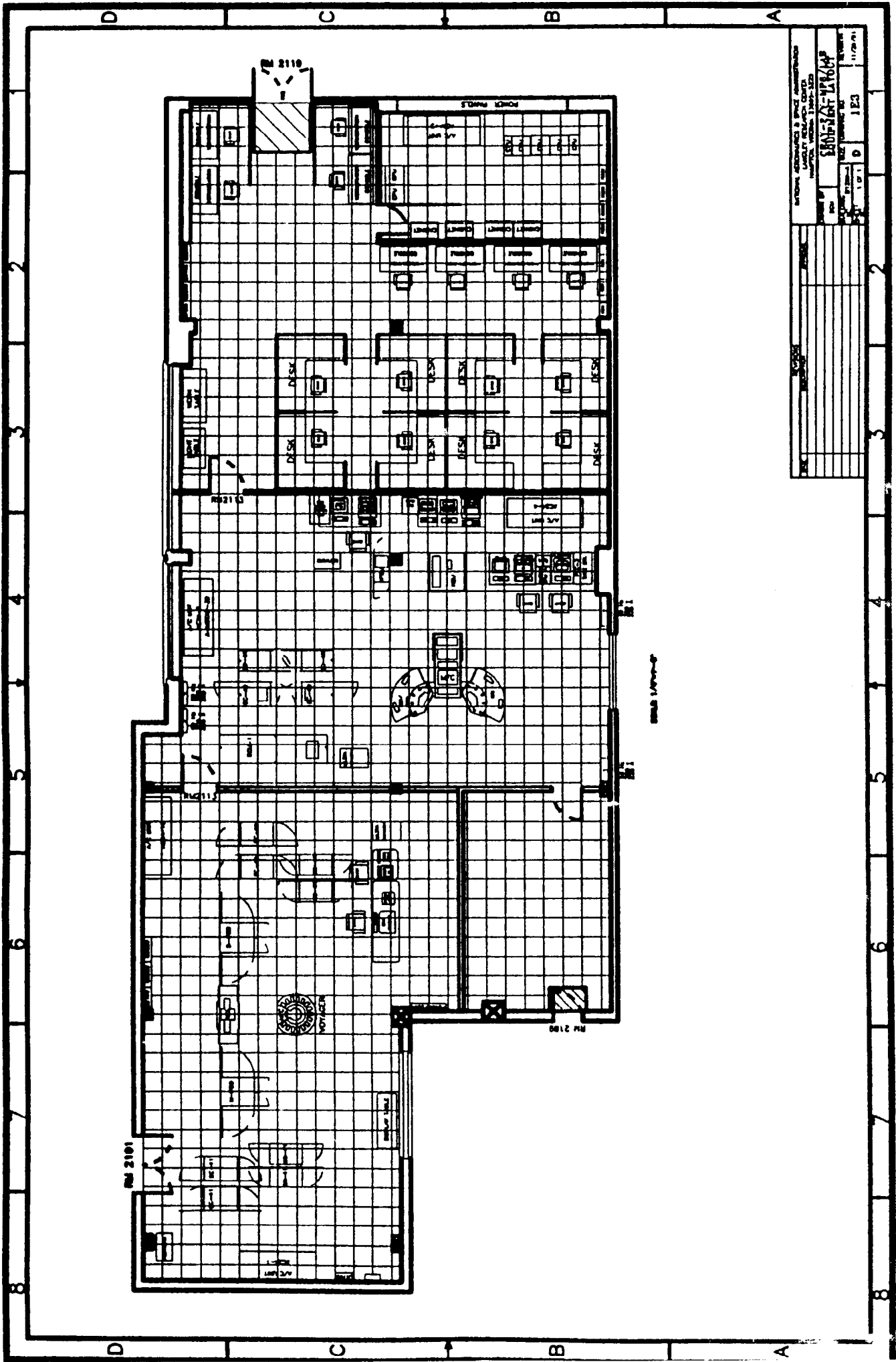
## **Facility Management Support**

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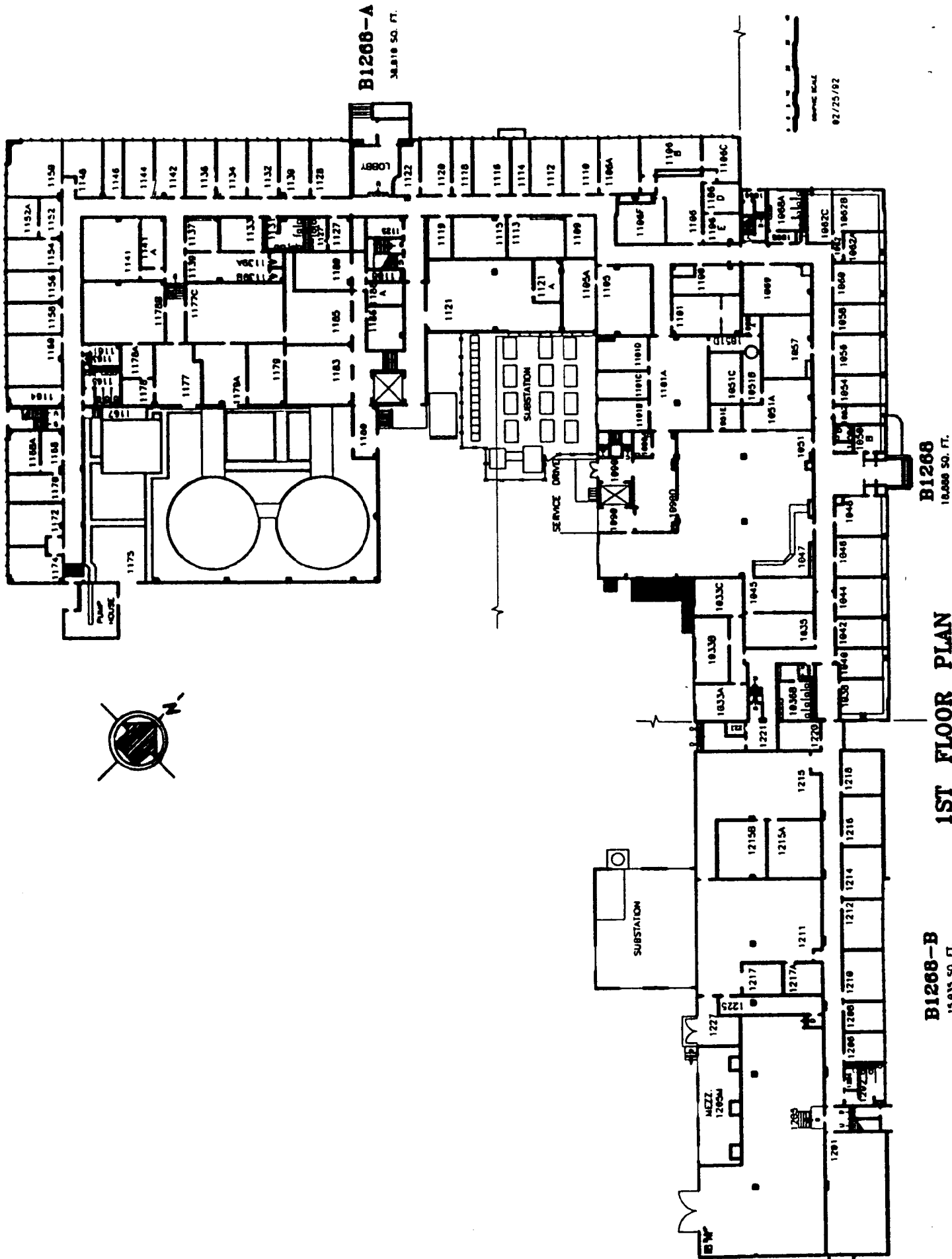
# **FACILITY MANAGEMENT DOCUMENTATION SUPPORT**

---

- **Provide computer room layout drawings**
- **Maintain update facility floor plan drawings**
- **Data base maintenance**
- **IBM Compatible 486/33**
- **GDCM software package**



INTERNET ACCESS & PRICE ASSISTANCE USURY REDUCTION BOARD			
DATE	BY	NO. OF PAGES	NO. OF PAGES
08/01/04	123	123	123
1.01	D	123	123



# SYSTEMS MAINTENANCE

# **Scientific Computing Operations, Maintenance and Communications Support Services (SCOMAC)**

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## **SYSTEMS MAINTENANCE**

---

- **Work area overview**
- **Hardware, software, environmental protection and power equipment**
- **Performance criteria**
- **Approximately 525 items**
- **Major systems**
- **Parts and labor**
- **Parts storage**
- **Maintenance coverage**
- **Preventive maintenance**
- **Field Change Orders**
- **Controlware**
- **System manuals and documentation**

CSCC - Major Systems						
System Name	Model	CPUs	Memory	Disk	Operating System	
sabre	Cray Y-MP8E/8256	8	256 MW	160 GB 512 MW SSD	UNICOS V6.1.6	
voyager	CRAY-2S	4	128 MW	40 GB	UNICOS V6.1.6	
eagle	CONVEX 210	1	256 MB	7.9 GB	ConvexOS V9.1	
mustang	CONVEX 220	2	512 MB	2.6 GB	ConvexOS V9.1	
agena	CONVEX 3230	3	256 MB	5.4 GB	Convex UXE 1.2	
gemini	CONVEX 3850	5	512 MB	12 GB	Convex UXE 1.2	
winniamae	Sun 4/330	1	16 MB	600 MB	SunOS V4.1.1	
STK-0	StorageTek 4410	---	---	1.2 TB	---	
STK-1	StorageTek 4410	---	---	1.2 TB	---	
Z	Cyber 860	1	8 MW	19.1 GB	NOS V2.6.1	
Y	Cyber 860	1	2 MW	19.1 GB	NOS V2.6.1	

**Scientific Computing Operations, Maintenance and  
Communications Support Services (SCOMAC)**

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**MAINTENANCE COVERAGE**

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	<u>RESPONSE TIME</u>		
<u>STATUS</u>	<u>PPM</u>	<u>PPM</u>	<u>NON-PPM</u>
1	0000-2400	10 minutes	2 hours
2	0800-2400	10 minutes	2 hours
3	0800-1700	10 minutes	2 hours
4	0800-1700	2 hours	N/A
5	On-Call	2 hours	2 hours

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# COMMUNICATION NETWORKS

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## Communication Networks

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# REQUIREMENT

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- Provide engineering, maintenance, and operations support services for Center-wide voice, data, and video communication networks at Langley Research Center

## **Communication Networks**

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# **LaRC ENVIRONMENT**

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- 200 buildings located in West Area of Langley Air Force Base
- 12 buildings in East Area
- 6000 employees
- Central communication services personnel and equipment housed in 2 buildings (1268 and 1201)
- On-site support personnel required during normal working hours
  - On-call support personnel required after normal working hours

## Communication Networks

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# CENTER-WIDE COMMUNICATION NETWORKS

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- Langley Computer Network (LaRCNET)
  - Current equipment value \$4,000,000
- Langley Telephone System (LaTS)
  - Current equipment value \$6,000,000
- Video Network
  - Current equipment value \$250,000

# Communication Networks

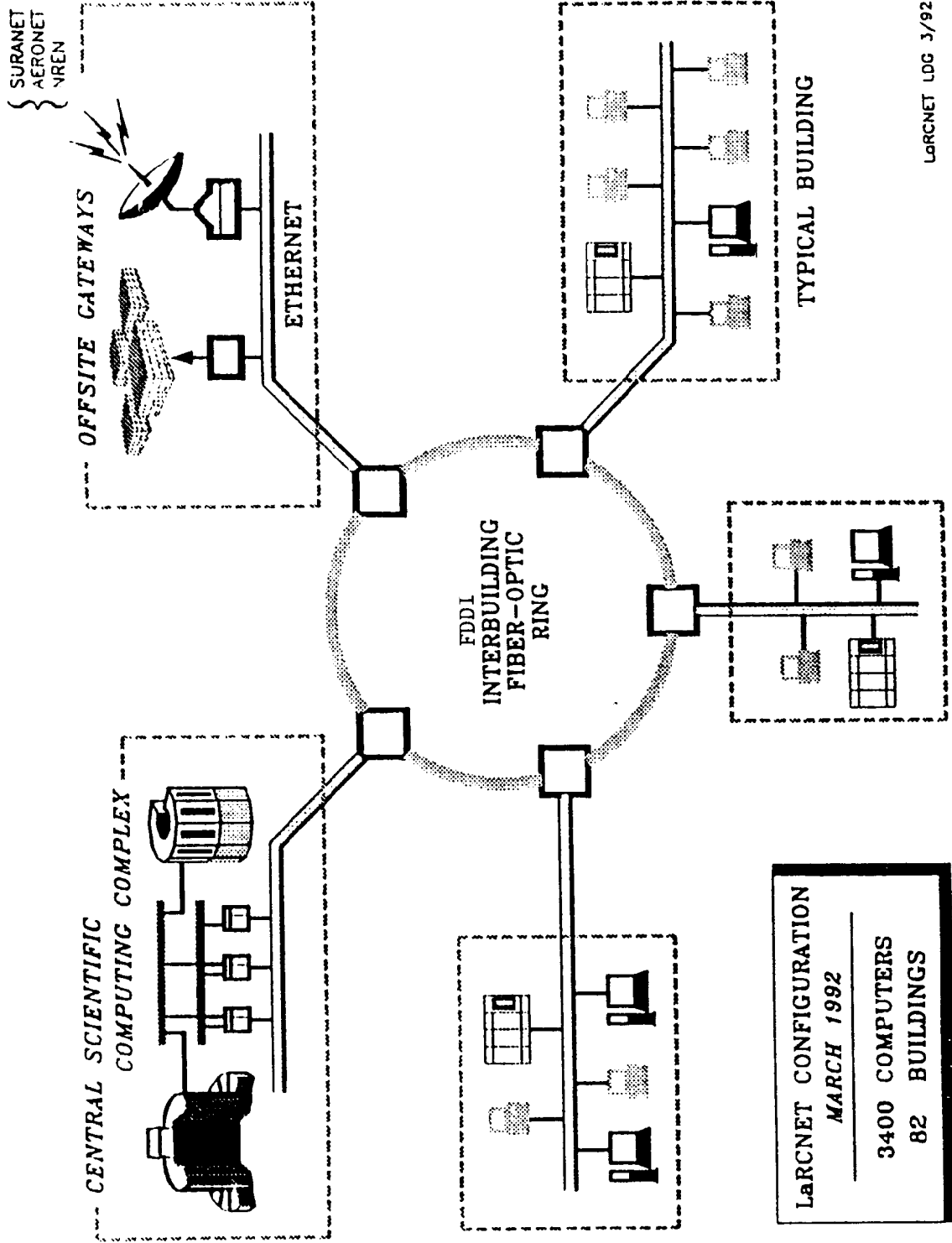
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## LaRCNET 1992

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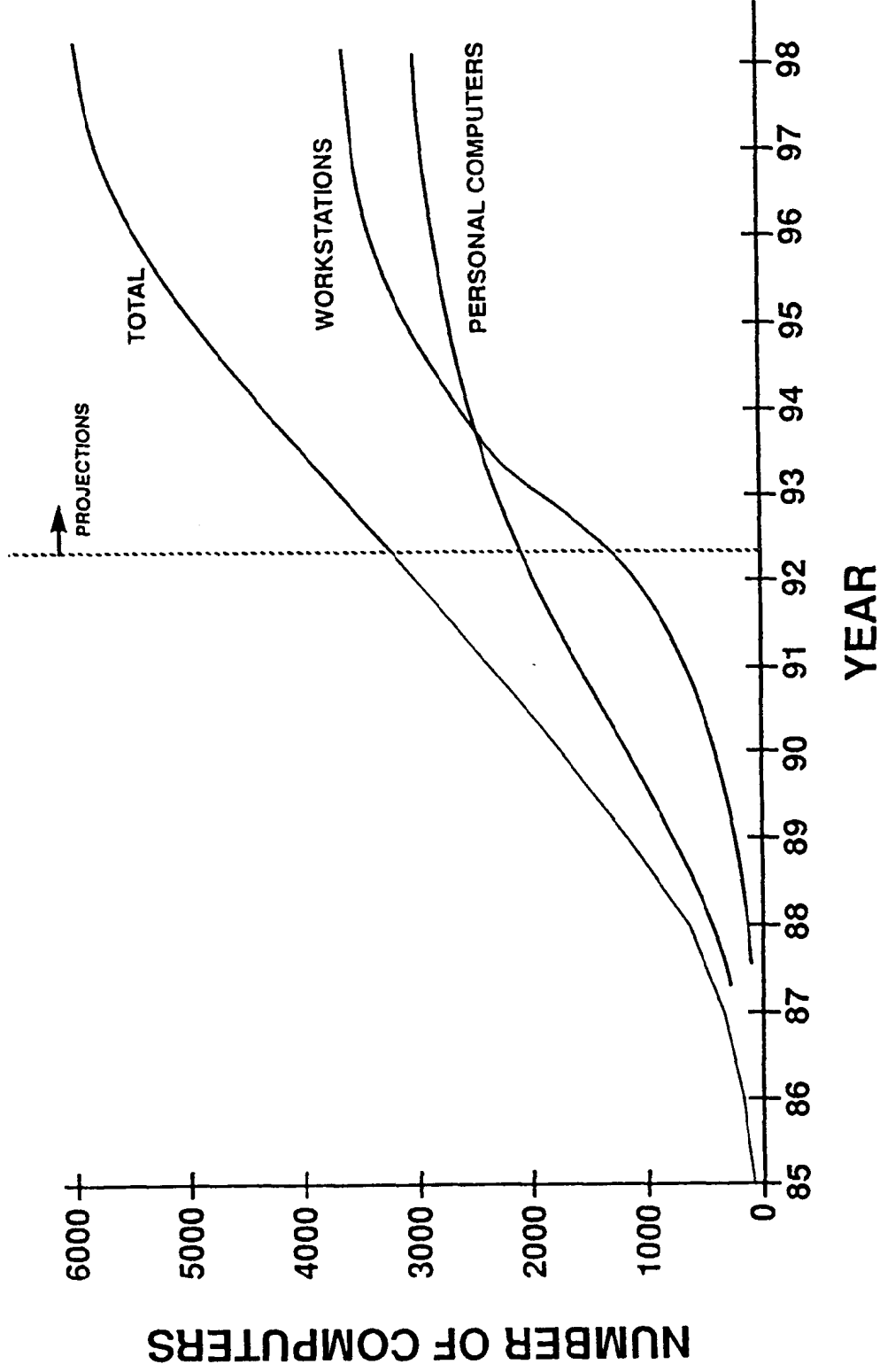
- LaRCNET technology
  - Ethernet (10 mbps) local nets within buildings
  - FDDI (100 mbps) fiberoptic network between buildings
  - TCP/IP network protocol
- LaRCNET local connections
  - 3,400 multi-vendor computers
  - 82 buildings
- LaRCNET external connections
  - Off-site contractors (CSC, Unisys, STX, Lockheed)
  - SURANET (INTERNET)
    - Linking over 10,000 computers around the world
  - AERONET (NASA high performance network)

# LaRCNET



# Communication Networks

## LaRCNET GROWTH



# Communication Networks

## COMPUTERS ON LARCNET

MARCH 1992

Personal computers	2106	(62%)
IBM & compatibles (1320)		
Apple Mac (650)		
PS/2 (136)		
Workstations	1041	(30%)
Sun (602)		
DEC (160)		
IRIS (147)		
Misc. (132)		
Minicomputers	229	(7%)
DEC (187)		
CONVEX (6)		
Misc. (36)		
Mainframes	10	(1%)
CDC (5)		
IBM (3)		
CRAY (2)		
Total	<u>3386</u>	

## Communication Networks

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# LaRCNET EVOLUTION (1992-1997)

---

- Network expansion will continue at rate of 700 computers/year
  - 5,000 computers, all buildings in 1995
  - Workstation will be predominant resource
- Network traffic will continue to double each year
- Network bandwidth will be upgraded from 10 mbps to 1 gbps
  - Fiber to the desk in 1995-1997 timeframe
- High performance links will be implemented to external networks
  - AERONET
  - NREN
- Maturing network standards will be implemented
  - FDDI, Fiber Channel, OSI/GOSIP
  - Will provide improved computer interoperability



# Communication Networks

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## LaTS 1992

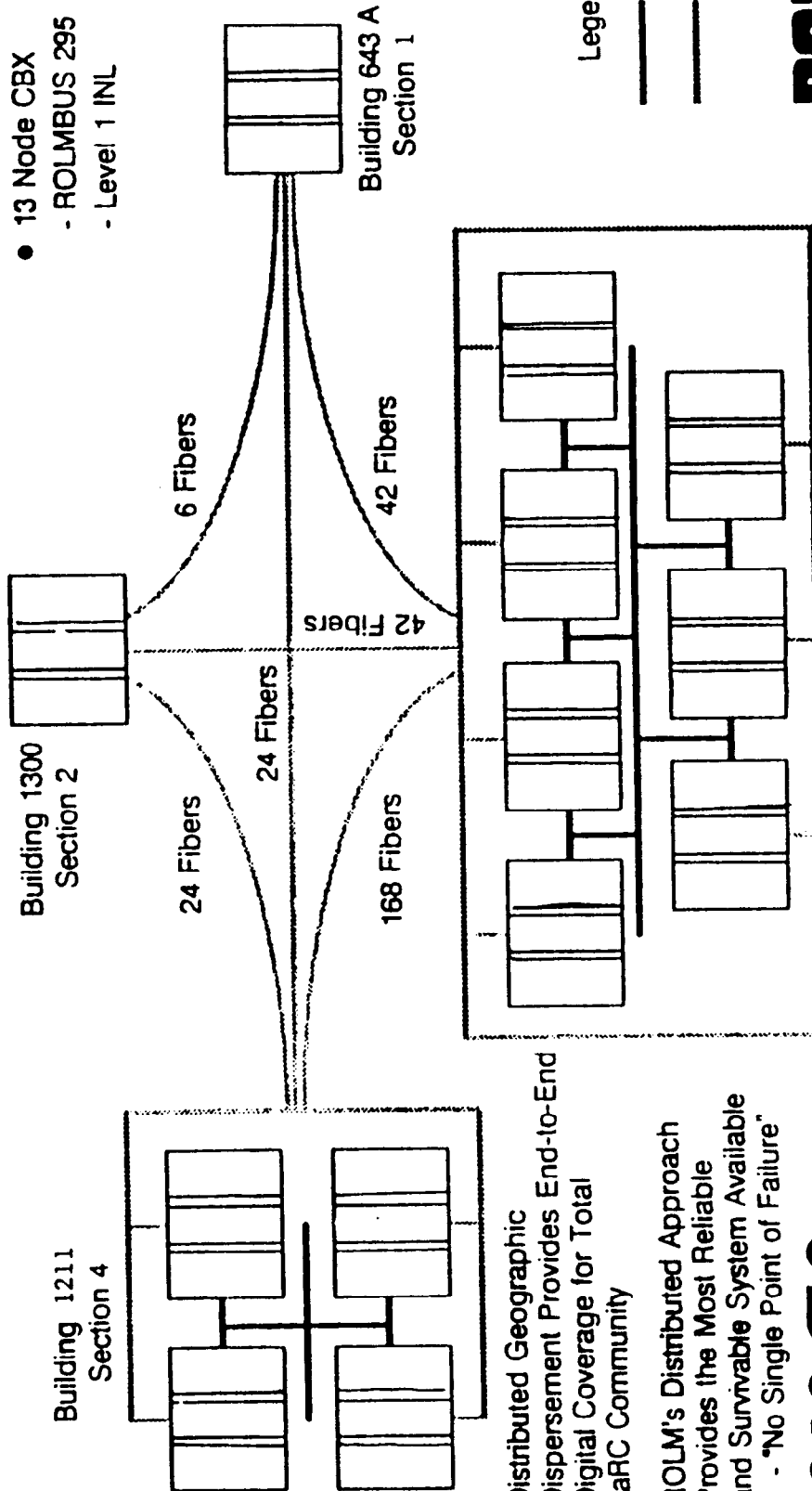
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- NASA-owned ROLM 9751 CBX on-premise integrated voice/data telephone system
  - Cutover at LaRC in January 1989
  - Managed and maintained by LaRC personnel
  - Asynchronous data rates to 19.2 kbps
  - 13 fully redundant processors distributed among 4 switchrooms
  - PhoneMail voice messaging system
- Cable plant
  - Fiber optics between processors
  - Copper from processors to users
- Current configuration
  - 5120 voice/data lines
  - 1250 voice-only lines (digital)
  - 1250 data-only lines
  - 750 analog lines
  - 264 C&P local trunks
  - 18 C&P foreign exchange trunks
  - 1550 PhonMail users

# LaTS ARCHITECTURE

## NASA-Langley Research Center (LOGICAL SYSTEM DIAGRAM)

- 13 Node CBX
- ROLMBUS 295
- Level 1 INL



• Distributed Geographic Dispersment Provides End-to-End Digital Coverage for Total LaRC Community

• ROLM's Distributed Approach Provides the Most Reliable and Survivable System Available - "No Single Point of Failure"

# NASA

# ROLM

## Communication Networks

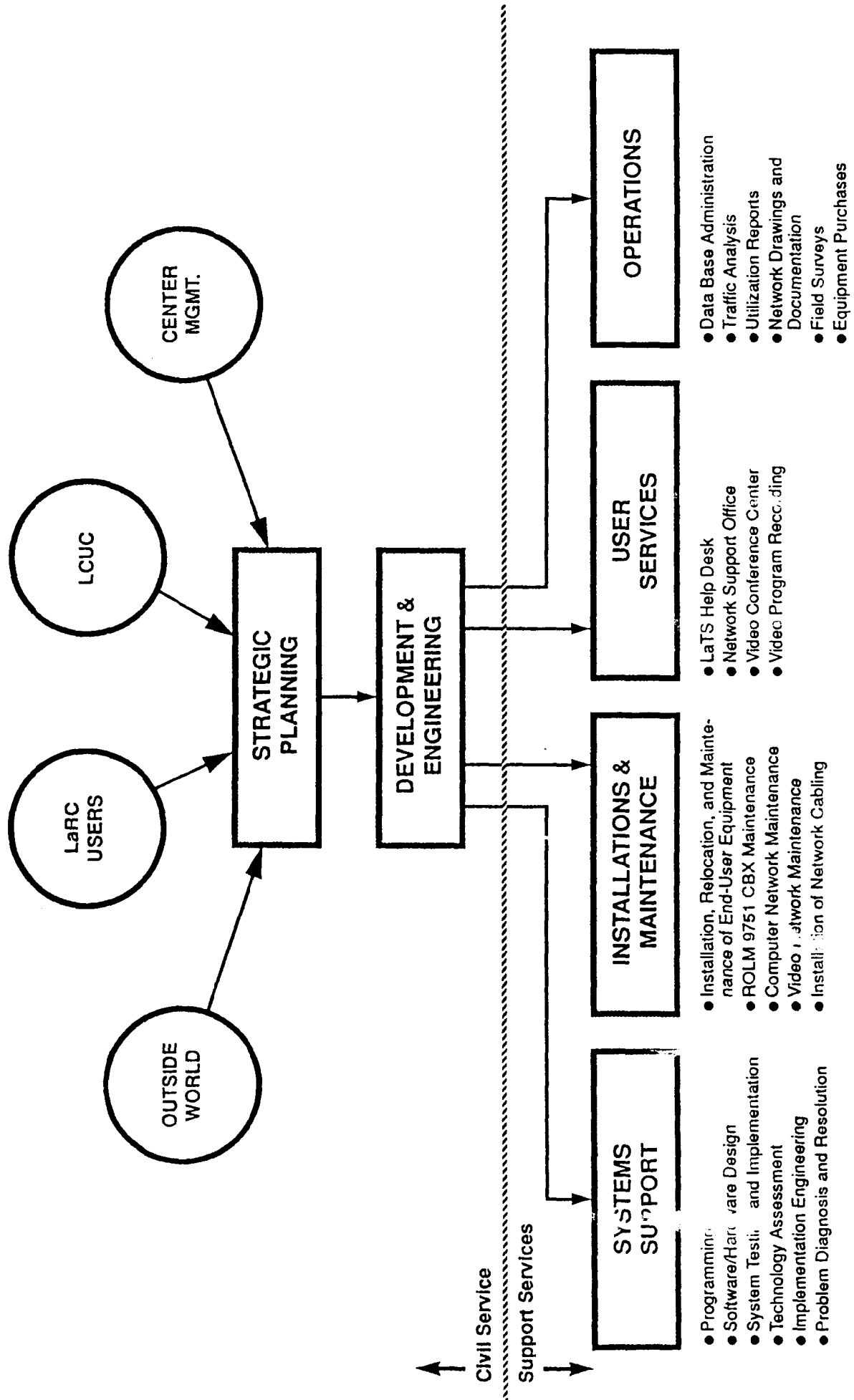
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# VIDEO NETWORK 1992

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- Broadband CATV distribution system
  - 42 buildings in west area
  - 100 taps
  - Satellite dishes to receive NASA-Select, weather, CNN and educational/training broadcasts
  - To expand to East Area in CY 1993
- Video Confererence Facility
  - Located in building 1201
  - LaRC provides operations services only
    - Maintenance services provided under PSCN contract

# COMMUNICATIONS AND NETWORK SYSTEMS BRANCH



## Communication Networks

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# SUPPORT REQUIREMENTS

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- Systems support
- Installations and maintenance
- User services
- Operations

## **Communication Networks**

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# **SYSTEMS SUPPORT**

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- **Programming**
- **Software/hardware design**
- **System testing and implementation**
- **Technology assessments**
- **Implementation engineering**
- **Problem diagnosis and resolution**

## Communication Networks

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# INSTALLATIONS AND MAINTENANCE

---

- Installation, relocation, and maintenance of end-user equipment
  - 143 work orders/week
  - 46 trouble calls/week
- LaTS ROLM 9751 CBX preventative and corrective maintenance
- LaRCNET infrastructure preventative and corrective maintenance
- Video Network preventative and corrective maintenance
- Installation of network cabling

## Communication Networks

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# USER SERVICES

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- LaTS Help Desk
  - 104 work orders/week
  - 77 inquiries/week
  - 27 trouble tickets/week
- Network Support Office (LaRCNET)
  - 39 work orders/week
  - 111 inquiries/week
  - 19 trouble tickets/week
- Video Conference Center
  - 10 conferences/week



## Communication Networks

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# OPERATIONS

---

- Data base administration
- Traffic analysis
- Utilization reports
- Network drawings and documentation
- Field surveys
- Equipment purchases

# **DISTRIBUTED COMPUTING AND DATA REDUCTION SUPPORT**

**Scientific Computing Operations, Maintenance and  
Communications Support Services (SCOMAC)**

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**DISTRIBUTED COMPUTING AND  
DATA REDUCTION SUPPORT**

---

- **Work area overview**
- **Direct support to research facilities**
- **Distributed ADPE systems**
- **Data reduction/acquisition systems**
- **Typical support requirements**
  - **system administration**
  - **operation**
  - **programming**
  - **general system support**

## LaRC DISTRIBUTED SYSTEMS AND DATA REDUCTION SYSTEMS

COMPUTER TYPE	OPERATING SYSTEM
HP 9000/720-730	HP-UX 8.05
SUN Sparc 1+	Sun OS 4.1.1
Sun Sparc 2	Sun OS 4.1.1
Sun IPC	Sun OS 4.1.1
VAX Station 2000-3400	VMS 4.7-5.4
Sun 4/XX	Sun OS 4.0.3
Sun IPX	Sun OS 4.1.1
SGI Iris/Indigo	Irix 3.3.2/3.6.6
Solbourne Series 4	OS/MP 4.0A
Convex 240	Convex OS 9.1
NCD19C	HP-UX 8.05
Decstation 3100/5000	Ulrix 4.2
IBM PC-386	SCO 1.1
Macintosh	MAC OS System 7.0
PC's, XT, 286,386,486	MS-DOS 3.3-5.0
Unisys 5000-95	System V
3COM Network	3COM Share 1.1
HP 9000/320-375	HP-UX 5.22-7.0
MODCOMP Classic	Maxnet IV
MODCOMP 32/87	MAX-32
HP 9000/835	HP-UX 7.0
VAX 85-50	VMS 4.7
PC 386	MS-DOS 5.0

# SCOMAC

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## FACILITY TOUR

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- Building 1268
- Building 1201
- Building 1212

# ACQUISITION OVERVIEW

**REQUIREMENT:** Scientific Computing Operations, Maintenance,  
and Communication (SCOMAC) Services

**CONTRACT TYPE:** Cost-Plus-Award Fee

**PERIOD OF PERFORMANCE (POP):**

**INITIAL PERIOD**

**8/9/93 - 7/31/95**

**FIRST OPTION PERIOD**

**8/1/95 - 7/31/97**

**SECOND OPTION PERIOD**

**8/1/97 - 7/31/00**

**THIRD THROUGH EIGHTH  
OPTION PERIODS**

**8/1/00 - 1/31/01**

**SCOMAC**

## CONTRACT SPECIFICS

- **Cost Plus Award Fee with Fixed Price Line Items**
- **Up to 7 1/2 year performance period**
- **Base contract period plus option periods**
- **Level of effort for direct productive labor**
- **Work Orders issued for Distributed Systems & Data Reduction**
- **Maintenance on fixed price line item basis**
- **Additional level of effort options**
- **Estimated Staffing Requirement**
- **Certain Government ODC's specified**
  - **material**
  - **equipment**
  - **software**
  - **travel**
  - **training**
  - **fixed-price specialized services**
- **Bidder's library**

**MAJOR CHANGES/CLARIFICATIONS TO RFP  
SINCE RELEASE OF THE DRAFT RFP  
MAILED TO INDUSTRY ON AUGUST 14, 1992**

- Facility monitoring was deleted from the SOW and will be handled as an 8(a) set aside. A separate procurement will be conducted.
- B.2 - Reduced the level of effort by approximately 9 man-years annually as a result of deleting facility monitoring.
- B.4 - A small disadvantaged business will furnish PC's and work-stations valued at approximately \$400K annually. The Governments' estimated Other Direct Costs were reduced accordingly.
- L.39 - The Small Disadvantaged Business Goal was increased. A goal of 15 percent of the total cost plus fee of a proposal should constitute a minimum acceptable small disadvantaged business subcontracting goal for contract award.
- H.21 - Added a requirement for pension portability.
- L.14 - Clarified SIC Code applicability to subcontractors.



# EVALUATION FACTORS

## Factor 1 Mission Suitability WEIGHTS

- |  |                    |
|--|--------------------|
| 1. Organization  | 15%                |
| 2. Phase-in, Initial Staffing, and Continuing Personnel Management | 20%                |
| 3. Professional Compensation Plan                                  | 15%                |
| 4. Operations Plan   | 35%                |
| 5. Qualifications and Availability of Key Personnel                | <u>15%</u><br>100% |

## Factor 2 Cost

## Factor 3 Relative Experience and Past Performance

## Factor 4 Other Considerations

1. Small Business and SDB Subcontracting Plan
2. Financial Condition and Capability
3. Facility
4. Contract Terms and Conditions

## RELATIVE IMPORTANCE OF EVALUATION FACTORS

- The numerical weights assigned to the Mission Suitability subfactors are indicative of the relative importance of those evaluation areas. The weights will be utilized only as a guide.
- Overall, in the selection of a Contractor for negotiation leading to contract award, Mission Suitability, Cost, Relevant Experience and Past Performance and Other Considerations will be of essentially equal importance.
- Within Factor 2, Cost, the costs associated with the options for the additional level-of-effort and the six 1-month option periods may be considered of less significance than the costs for the initial period (including phase-in) and the first and second priced options to extend the contract term.

## **PROPOSAL PREPARATION INSTRUCTIONS**

- ARRANGE PROPOSAL IN SEQUENCE, FORMAT, AND CONTENT CONSISTENT WITH ARRANGEMENT OF FACTORS AND ASSOCIATED SUBFACTORS SET FORTH IN ARTICLE M.2 TO FACILITATE EVALUATION.**
- ENSURE THAT PROPOSAL CONTAINS ALL NECESSARY INFORMATION AND IS COMPLETE IN ALL RESPECTS. EVALUATION WILL BE BASED UPON MATERIAL PRESENTED AND NOT ON WHAT IS IMPLIED.**
- ENSURE CONSISTENCY BETWEEN YOUR COST PROPOSAL AND MISSION SUITABILITY PROPOSAL. DISCREPANCIES MAY BE VIEWED AS A LACK OF UNDERSTANDING.**

**PROPOSAL PREPARATION INSTRUCTIONS  
(CONTINUED)**

**PROPOSAL SUBMISSION: (REFERENCE L-40, PAGE 161)**

**DUE DATE: CLOSE OF BUSINESS  
(4 P.M.) JANUARY 26, 1993**

**PLACE: NASA LANGLEY  
RESEARCH CENTER  
BUILDING 1195A, ROOM 103  
HAMPTON, VA 23681-0001**

**NUMBER OF COPIES:**

**ORIGINAL AND 12 OF VOLUME I - MISSION SUITABILITY PROPOSAL  
ORIGINAL AND 12 OF VOLUME II - BUSINESS PROPOSAL**

**GOVERNMENT POINT OF CONTACT: NANCY M. SESSOMS (804) 864-2471 OR  
MARY JANE YEAGER (804) 864-2473**

**SCOMAC**

## SIZE OF MISSION SUITABILITY PROPOSAL

- A limit of 60,000 words is imposed, inclusive of charts, tables, diagrams, captions, and figures, but exclusive of personnel resumes, cover pages, and dividers.
- Indicate in the footer of each page the word count for that page and the cumulative word count up to the end of that page.
- Any information that is determined to be beyond the word-count limit will not be evaluated.

## REFER TO PAGE 161 OF THE RFP FOR DETAILED INSTRUCTIONS

NOTE: REFER TO ANSWER #70 WHICH PROVIDES TWO OPTIONS FOR FORMATTING THE MISSION SUITABILITY PROPOSAL.

- **The proposal word count does apply to charts, tables, diagrams, captions, etc. If the word processing package you use does not count words on these pages, you may include the word count for these pages in a summary chart rather than including in the cumulative word count at the footer of each page.**
- **The table of contents and list of figures are excluded from the proposal word count.**

# VOLUME II - BUSINESS PROPOSAL

## FACTOR 2 - COST

Include These Required Forms:

	<u>FORMS</u>	<u>PERIOD</u>
Phase-In	SF 1411	Phase-In Period
Year 1	B,F	8/9/93 - 7/31/94
Year 2	B,F	8/1/94 - 7/31/95
Total Initial Contract		
Period (2 Yrs)	SF 1411, A1	8/9/93 - 7/31/95
Year 3	B,F	8/1/95 - 7/31/96
Year 4	B,F	8/1/96 - 7/31/97
Total First Option to		
Extend (2 Yrs)	SF 1411, A2	8/1/95 - 7/31/97
Year 5	B,F	8/1/97 - 7/31/98
Year 6	B,F	8/1/98 - 7/31/99
Year 7	B,F	8/1/99 - 7/31/00
Total Second Option to		
Extend (3 Yrs)	SF 1411, A3	8/1/95 - 7/31/00
Options to Extend 3 - 8		
(1 For Each Mo.)	SF 1411, B*	8/1/00 - 1/31/01
(1 For Total)	A4,F	
Options to Increase LOE	SF 1411, E,E1	8/9/93 - 1/31/01
Systems Maintenance Price Pool	SF 1411, E	8/9/93 - 1/31/01
Total - All Proposed Costs	SF 1411, A,C,C1,D	Phase-In - 1/31/01

\*Provide only one Cost Form B if all six months are the same.

SCOMAC

**Each subcontract expected to exceed \$500,000 shall be supported by fully executed copies of all applicable forms.**

**In the event you elect to claim exemption from submission of certified cost or pricing data, a separate SF 1412 must be submitted for each line item exceeding a 7 1/2 year total extended price of \$50,000.**

**Offerors and major subcontractors are required to submit cost data on self-calculating floppy diskettes, 2 copies, formatted under MS DOS. It is recommended that you request a Government-provided diskette. REFER TO PAGES 167 THROUGH 174 FOR DETAILED INFORMATION.**

**SCOMAC**



## Systems Maintenance Prices

- Proposed price shall be based on status listed for each CLIN in Exhibit A.
- Price includes burden and profit of the business entity performing the hands-on work
- Price guarantee - the monthly charge for each CLIN shall not exceed the fixed price set forth in Appendix A, the current GSA contract price (if applicable) or the ~~\*current established catalog price as defined in FAR 15.804-3(e)~~, whichever is lower.
- "Established catalog prices" must be recorded in a form regularly maintained by the manufacturer or vendor. This form may be a catalog, price list, schedule, or other verifiable and established record. The record must (i) be published or otherwise available for customer inspection and (ii) state current or last sales price to a significant number of buyers constituting the general public. NOTE: This definition is provided for purposes of completing the SF 1412 only.
- \* lowest price at which a sale was made to any customer during the month (Revised - refer to corrections to the RFP)

**Systems Maintenance Prices**  
**CONTINUED**

- The BMMC will allow the Government to easily recompute the monthly maintenance cost charge when maintenance coverage requirements change.
- Your calculation of the monthly maintenance charge should be consistent with the BMMC multiplied by the applicable status conversion percentage.
- Probable cost will include the monthly maintenance price proposed for the Appendix A items for the status listed therein.

**REFER TO H.18, C.4.1 (PAGE 64 OF THE S.O.W), AND PAGE 172 & 173**

# SEB EVALUATION PROCEDURES

## Standard Procedure

Review for unacceptable proposals

Identify strengths, weaknesses

Initial technical scoring of Mission Suitability

Initial evaluation of Cost, Relevant Experience and Past Performance, and Other Considerations

Develop questions

Establish Competitive Range

Conduct written and/or oral discussions

Best and Final Offers Received

Final Technical scoring of Mission Suitability

Final evaluation, Cost, Relevant Experience and Past Performance and Other Considerations

Prepare, present final report to Selection Official

## Streamlined Procedure

Review for unacceptable proposals

Identify strengths, weaknesses

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Review Cost, Relevant Experience and Past Performance, and Other Considerations

Develop questions

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Conduct written and/or oral discussions

Best and Final Offers Received

Technical scoring of Mission Suitability

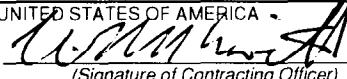
Evaluation of Cost, Relevant Experience and Past Performance, and Other Considerations

Prepare, present Final Report to Selection Official

SCOMAC

**SOURCE EVALUATION PROCESS  
TENTATIVE SCHEDULE**

<b>RFP Issuance</b>	<b>12/1/92</b>
<b>Preproposal Conference</b>	<b>12/16/92</b>
<b>Proposals Due</b>	<b>1/26/93</b>
<b>Selection &amp; Phase-In Commence</b>	<b>6/15/93</b>
<b>Negotiation</b>	<b>7/15/93</b>
<b>Award</b>	<b>7/22/93</b>
<b>Contract Start SCOMAC</b>	<b>8/9/93</b>

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE OF PAGES 1 36
2. AMENDMENT/MODIFICATION NO. 2	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED		( <input checked="" type="checkbox"/> )	9A. AMENDMENT OF SOLICITATION NO. 1-41-1100.1015	
		( <input checked="" type="checkbox"/> )	9B. DATED (SEE ITEM 11) 12/1/92	
			10A. MODIFICATION OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above number solicitation is amended as set forth in item 14. The hour and date specified for receipt of offers <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If Required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
( <input checked="" type="checkbox"/> )	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.			
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).			
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:			
	D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) SUBJECT: NASA Request for Proposal 1-41-1100.1015 - Scientific Computing Operations, Maintenance, and Communication (SCOMAC) Services. The purposes of this amendment are to (1) make corrections to subject RFP; and (2) extend the due date for receipt of Offers.  (Continued on Attached Pages)				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or Print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or Print) W. R. Kivett		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 1-8-93	

I. In order to provide offerors sufficient time to incorporate the following changes and additional changes in the forthcoming amendment, block 9 of SF33 of subject RFP is revised as follows:

"9. Sealed offers in original and twelve (12) copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the depository located in 9A Langley Boulevard, Building 1195A, Room 103, until 4:00 p.m. local time 2/2/93."

II. EXHIBIT A, STATEMENT OF WORK, Appendix A has been updated and is attached as Enclosure 1. Items which have been changed (added, deleted, or modified) are indicated with an ampersand to the left of the CLIN number. Original Equipment Manufacturer (OEM) and part numbers, where available, have been added to environmental support equipment and are so indicated with an ampersand.

III. SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS, L.40 E. 1. d Computerized Cost Proposal Input Instructions (pages 168-169) - Several changes have been made to the diskettes. New diskettes will be provided upon request.

IV. ATTACHMENT 5 COST PROPOSAL FORMS, A-F, is revised to delete FORM D (page 198), and the last two pages of FORM F (pages 204 and 205), and substitute the revised FORMS D and F which are attached as Enclosure 2.

NOTE: If you have received a Government-provided diskette containing Cost Forms A-F, a new disk is being provided.

**ENCLOSURE 1 - APPENDIX A**

The following CLINS have been changed since release of the RFP.  
Any CLIN which has been changed (added, deleted, modified)  
is flagged in Appendix A with an ampersand (&) to the left  
of the CLIN.

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APPENDIX A, PART 1  
COMPUTER HARDWARE ITEMS

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE ST	MONTHLY MAINTENANCE COST								
					YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG	
1000	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1001	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1002	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1003	IOP-001	MULTIBUS IO PROCESSOR	CONVEX	080993 3									
1004	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1005	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1006	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1007	MCM-200	MEMORY CONTROL MODULE	CONVEX	080993 3									
1008	ULT-201C	ULTRANET CONNECTION	CONVEX	080993 3									
1009	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993 3									
1010	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993 3									
1011	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993 3									
1012	ULT-201C	ULTRANET CONNECTION	CONVEX	080993 3									
1013	DKD-216S	650 MB REMOVE. DRIVE (ADDITL)	CONVEX	080993 3									
1014	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1015	IOP-001	MULTIBUS IO PROCESSOR	CONVEX	080993 3									
1016	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1017	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1018	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1019	MEM-200	32 MB MEMORY MODULE	CONVEX	080993 3									
1020	MEM-200	32 MB MEMORY	CONVEX	080993 3									

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Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1021	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1022	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1023	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1024	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1025	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1026	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1027	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1028	MEM-200	MODULE 32 MB MEMORY	CONVEX	080993	3
1029	2S/4-128	SUPER COMPUTER	CRAY	080993	2
1030		RESERVED		TBD	
1031	HSX-1/C2	HIGH SPEED CHANNEL	CRAY	080993	2
1032	DC-3	DISK CONTROLLER	CRAY	080993	2
1033	DC-3	DISK CONTROLLER	CRAY	080993	2
1034	DC-3	DISK CONTROLLER	CRAY	080993	2
1035	DC-3	DISK CONTROLLER	CRAY	080993	2
1036	DC-3	DISK CONTROLLER	CRAY	080993	2
1037	DC-3	DISK CONTROLLER	CRAY	080993	2
1038	DC-3	DISK CONTROLLER	CRAY	080993	2
1039	DC-3	DISK CONTROLLER	CRAY	080993	2
1040	DS-40R	DISK STORAGE SUBSYSTEM	CRAY	080993	2
1041	DS-40R	DISK STORAGE SUBSYSTEM	CRAY	080993	2
1042		RESERVED		TBD	
1043		RESERVED		TBD	

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1044	C-210-64	C2 SERIES PROC. W/64 MB MEMORY	CONVEX	080993	3
1045	C220-128	C2 SERIES PROC. W/128 MB MEMORY	CONVEX	080993	3
1046		RESERVED		TBD	
1047		RESERVED		TBD	
1048	MBS-004	MULTIBUS CHASSIS	CONVEX	080993	3
1049	MBS-004	MULTIBUS CHASSIS	CONVEX	080993	3
1050	VIOP-001	VME I/O PROCESSOR	CONVEX	080993	3
1051	VBS-004	VME CHASSIS	CONVEX	080993	3
1052	ACM-002	MULTIBUS ASYNE CONNECTION	CONVEX	080993	3
1053	ACM-002	MULTIBUS ASYNE CONNECTION	CONVEX	080993	3
1054	ETH-001	MULTIBUS ETHER- NET CONNECTION	CONVEX	080993	3
1055	HYP-201	VME HYPERCHANNEL CONNECTION	CONVEX	080993	3
1056	PRC-001	MULTIBUS PRINT- ER CONTROLLER	CONVEX	080993	4
1057	MTD-102	HIGH PERF. TAPE DRIVE W/MULTI-	CONVEX	080993	4
1058	MTD-002	HIGH PERFORMAN. TAPE DRIVE	CONVEX	080993	3
1059	MTD-002	HIGH PERFORMAN. TAPE DRIVE	CONVEX	080993	3
1060	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1061	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1062	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1063	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1064	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1065	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1066	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3
1067	DKD-308	1 GB DISK DRIVE /VME CONTROLLER	CONVEX	080993	3

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1068	DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1069	DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1070	DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1071	DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1072	DKD-308	/VME CONTROLLER 1 GB DISK DRIVE	CONVEX	080993	3
1073	RDS-001	/VME CONTROLLER REMOVEABLE DISK	CONVEX	080993	3
1074	RDS-002	CHASSIS REMOVEABLE DISK	CONVEX	080993	3
1075	DKD-314	CHASSIS 320 MB REMOV.	CONVEX	080993	3
1076	DKD-314	DISK DR./CNTRL. 320 MB REMOV.	CONVEX	080993	3
1077	DKD-214	DISK DR./CNTRL. 320 MB REMOVE-	CONVEX	080993	3
1078	DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1079	DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1080	DKD-214	ABLE DRIVE 320 MB REMOVE-	CONVEX	080993	3
1081	DKD-215	ABLE DRIVE SPU REMOVEABLE	CONVEX	080993	3
1082	DKD-215	DRIVE SPU REMOVEABLE	CONVEX	080993	3
1083	DKD-214S	DRIVE 320 MB REMOVE.	CONVEX	080993	3
1084	DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1085	DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1086	DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1087	DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1088	DKD-214S	DRIVE (ADDITL) 320 MB REMOVE.	CONVEX	080993	3
1089	DKD-215S	DRIVE (ADDITL) SPU REMOVEABLE	CONVEX	080993	3
1090	DKD-215S	DRIVE (ADDITL) SPU REMOVEABLE	CONVEX	080993	3

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1091	DKD-215S	SPU REMOVEABLE DRIVE (ADDITL)	CONVEX	080993	3
1092	DKD-215S	SPU REMOVEABLE DRIVE (ADDITL)	CONVEX	080993	3
1093	EXP-101	EXPANSION CABINET	CONVEX	080993	3
1094	EXP-101	EXPANSION CABINET	CONVEX	080993	3
1095	EXP-101	EXPANSION CABINET	CONVEX	080993	3
1096	SP-047	HIGH SPEED PRINTER	CONVEX	080993	3
1097	VIOP-001	VME I/O PROCESSOR	CONVEX	080993	3
1098	VBS-004	VME CHASSIS	CONVEX	080993	3
1099	ACM-002	MULTIBUS ASYNC CONNECTION	CONVEX	080993	3
1100	ACM-002	MULTIBUS ASYNC CONNECTION	CONVEX	080993	3
1101	ETH-001	MULTIBUS ETHER- NET CONNECTION	CONVEX	080993	3
1102	HYP-201	VME HYPERCHANNEL CONNECTIONS	CONVEX	080993	4
1103	PRC-001	MULTIBUS PRINT- ER CONTROLLER	CONVEX	080993	4
1104	MTD-102	HIGH PERF. TAPE DRIVE W/MULTI-	CONVEX	080993	4
1105	DKD-308	DISK DRIVE LGIG /VME CONTROLLER	CONVEX	080993	3
1106	RDS-001	REMOVEABLE DISK CHASSIS	CONVEX	080993	3
1107	EXP-101	EXPANSION CAB- INET	CONVEX	080993	3
1108	SP-047	HIGH SPEED PRINTER	CONVEX	080993	3
1109	A130	NSC TO CRAY ADAPTER	NSC	080993	3
1110	A130	NSC TO CRAY ADAPTOR	NSC	080993	3
1111	A130	NSC TO CRAY ADAPTOR	NSC	080993	3
1112	A130	NSC TO CRAY ADAPTOR	NSC	080993	3
1113	A400	NSC TO CONVEX ADAPTER	NSC	080993	3
1114	A400	NSC TO CONVEX	NSC	080993	3

Appendix A, Part 1

MODEL/ PRODUCT      ITEM DESCRIPTION OEM      TRANSITION DATE ST      YEAR 1 BMMC/CHRG      YEAR 2 BMMC/CHRG      YEAR 3 BMMC/CHRG      YEAR 4 BMMC/CHRG      YEAR 5 BMMC/CHRG      YEAR 6 BMMC/CHRG      YEAR 7 BMMC/CHRG      YEAR 8 BMMC/CHRG

MONTHLY MAINTENANCE COST

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION OEM	TRANSITION DATE ST	YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG
1115	A400	ADAPTER NSC TO CONVEX NSC	080993 3								
1116	A400	NSC TO SUN ADAPTER NSC	080993 3								
1117	AT50	50 MBYTE TRUNK NSC	080993 3								
1118	AT50	50 MBYTE TRUNK NSC	080993 3								
1119	AT50	50 MBYTE TRUNK NSC	080993 3								
1120	AT50	50 MBYTE TRUNK NSC	080993 3								
1121	AT50	50 MBYTE TRUNK NSC	080993 3								
1122	AT50	50 MBYTE TRUNK NSC	080993 3								
1123	AT50	50 MBYTE TRUNK NSC	080993 3								
1124	AT50	50 MBYTE TRUNK NSC	080993 3								
1125	T50A	COAX CABLE NSC	080993 3								
&1126	3/160S	SUN SYSTEM SUN	080993 3								
&1127	3/160S-P8	8MG ADD. MEMORY SUN	080993 3								
1128	AC-1	CABINET NSC	080993 3								
1129	AC-1	CABINET NSC	080993 3								
1130	AC-1	CABINET NSC	080993 3								
1131	AC-1	CABINET NSC	080993 3								
1132	2010	HUB 1000 SERIES ULTRA	080993 3								
1133	3010	HSX ADAPTER ULTRA	080993 3								
1134	2000	NETWORK MANAGER ULTRA	080993 3								
1135	9010-005	FIBER CABLES ULTRA	080993 3								
1136	3210	SUN VME CARD ULTRA	080993 3								
1137	3210-92	SUN VME CARD ULTRA	080993 3								

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1138	3110	CONVEX VME CARD	ULTRA	080993	3												
1139	3110-91	CONVEX VME CARD	ULTRA	080993	3												
1140	5000	FRAME BUFFER CARD	ULTRA	080993	3												
1141	5900-10	SONY COLORED MONITOR	ULTRA	080993	3												
1142	9000-003	RGB CABLE SET	ULTRA	080993	3												
1143	9005-023	RG 59 COAX CABLE SET	ULTRA	080993	3												
1144	3210-82	SUN VME CARD	ULTRA	080993	3												
&1145		RESERVED		TBD													
&1146	DS-40R	DISK SUBSYSTEM	CRAY	080993	1												
&1147	DS-40R	DISK SUBSYSTEM	CRAY	080993	1												
&1148		RESERVED		TBD													
&1149		RESERVED		TBD													
&1150		RESERVED		TBD													
&1151		RESERVED		TBD													
&1152		RESERVED		TBD													
1153	FEI-3S	FRONT END INTERFACE	CRAY	080993	3												
&1154		RESERVED		TBD													
1155	4480M20	TAPE CONTROL UNIT	STK	080993	1												
1156	4480M20	TAPE CONTROL UNIT	STK	080993	1												
1157	FC4411	FEATURE CODE	STK	080993	1												
1158	FC4411	FEATURE CODE	STK	080993	1												
1159	FC4412	FEATURE CODE	STK	080993	1												
1160	FC4412	FEATURE CODE	STK	080993	1												
1161	4480M22	CD CARTRIDGE	STK	080993	1												



Appendix A, Part 1

MODEL/ CLIN PRODUCT      ITEM DESCRIPTION OEM      TRANSITION DATE ST      YEAR 1 BMMC/CHRG      YEAR 2 BMMC/CHRG      YEAR 3 BMMC/CHRG      YEAR 4 BMMC/CHRG      YEAR 5 BMMC/CHRG      YEAR 6 BMMC/CHRG      YEAR 7 BMMC/CHRG      YEAR 8 BMMC/CHRG

1162	4480M22	DRIVE	CD CARTRIDGE	STK	080993	1											
1163	FC4411	DRIVE	FEATURE CODE	STK	080993	1											
1164	FC4411		FEATURE CODE	STK	080993	1											
1165	FC4412		FEATURE CODE	STK	080993	1											
1166	FC4412		FEATURE CODE	STK	080993	1											
1167	4410-001		LIBRARY STORAGE MODULE	STK	080993	1											
1168	4411-001		LIBRARY CONTROL UNIT	STK	080993	1											
1169	4430-002		LIBRARY MANAGEMENT UNIT	STK	080993	1											
1170	4440-001		LIBRARY SERVER	STK	080993	1											
1171	FC3211		FEATURES CODE	STK	080993	1											
1172	FC3211		FEATURE CODE	STK	080993	1											
1173	FC4442		FEATURE CODE	STK	080993	1											
1174	FC4442		FEATURE CODE	STK	080993	1											
1175	2010		HUB 1000 SERIES	ULTRA	080993	3											
1176	U3030-01		HIPPI UPGRADE KIT	ULTRA	080993	3											
1177	4010		LINK ADAPTER	ULTRA	080993	3											
1178	4900-01		TRANSCEIVER	ULTRA	080993	3											
1179	4900-01		TRANSCEIVER	ULTRA	080993	3											
1180	4900-01		TRANSCEIVER	ULTRA	080993	3											
1181	4900-01		TRANSCEIVER	ULTRA	080993	3											
1182	4900-01		TRANSCEIVER	ULTRA	080993	3											
1183	4900-01		TRANSCEIVER	ULTRA	080993	3											
1184	4900-01		TRANSCEIVER	ULTRA	080993	3											

Appendix A, Part 1

MODEL/ PRODUCT      ITEM DESCRIPTION      OEM      TRANSITION DATE      ST      YEAR 1 BMMC/CHRG      YEAR 2 BMMC/CHRG      YEAR 3 BMMC/CHRG      YEAR 4 BMMC/CHRG      YEAR 5 BMMC/CHRG      YEAR 6 BMMC/CHRG      YEAR 7 BMMC/CHRG      YEAR 8 BMMC/CHRG

1185	4900-01	TRANSCEIVER	ULTRA	080993	3								
1186	9007-023	COAX SET	ULTRA	080993	3								
1187	9007-023	COAX SET	ULTRA	080993	3								
1188	9007-023	COAX SET	ULTRA	080993	3								
1189	9007-023	COAX SET	ULTRA	080993	3								
1190		RESERVED		TBD									
1191		RESERVED		TBD									
1192		RESERVED		TBD									
1193	DS-41	DISK SUBSYSTEM	CRAY	080993	3								
1194	DS-41	DISK SUBSYSTEM	CRAY	080993	3								
&1195		RESERVED		TBD									
&1196		RESERVED		TBD									
1197	CC545	DISPLAY CONSOLE	CDC	092893	3								
1198	667-3	MAG TAPE TRANS- PORT	CDC	092893	5								
1199	669-3	MAG TAPE TRANS- PORT	CDC	092893	5								
1200	669-3	MAG TAPE TRANS- PORT	CDC	092893	5								
1201	679-7	ATS TAPE TRANS- PORT	CDC	092893	5								
1202	679-7	ATS TAPE TRANS- PORT	CDC	092893	5								
1203	7021-22	MAG TAPE CONTROL LLER + CONTROLW	CDC	092893	5								
1204	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5								
&1205	7021-32	ATS CONTROL. INCL. IN 1204	CDC	092893	5								
1206	844-41	DISK STORAGE UNIT	CDC	092893	3								
1207	844-41	DISK STORAGE UNIT	CDC	092893	3								
1208	844-41	DISK STORAGE	CDC	092893	3								

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1209	844-41	UNIT DISK STORAGE	CDC	092893	3
1210	380-170	UNIT CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3
1211	380-170	CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3
1212	380-170	CYBER 170 NAD WITH ADD. LCN TRUNK CONNECT- IONS & 64K BYTE MEMORY INCRE- MENTS	CDC	092893	3
1213	7154-2	MASS STORAGE CONTROLLER INCLUDED MULTI ACCESS CONTROLLER OPT	CDC	092893	3
1214	7154-2	MASS STORAGE CONTROLLER INCLUDED MULTI ACCESS CONTROLLER OPT	CDC	092893	3
1215	679-7	ATS TAPE TRANS- PORT	CDC	092893	5
1216	679-7	ATS TAPE TRANS- PORT	CDC	092893	5
1217	679-7	ATS TAPE TRANS- PORT	CDC	092893	5
1218	679-7	ATS TAPE TRANS- PORT	CDC	092893	5
1219	679-7	ATS TAPE TRANS- PORT	CDC	092893	5
1220	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5
81221	7021-32	ATS CONTROL. INCL.IN 1220	CDC	092893	5

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1222	M862	MASSTOR STORAGE CONTROLLER INCL. 2ND CYBER CHANNEL ACCESS & MICRO-CODE	MASSTOR SY	092893	3
1223	M862	MASSTOR STORAGE CONTROLLER INCLUDES 2ND CYBER CHANNEL ACCESS & MICRO- CODE	MASSTOR SY	092893	3
1224	M862	MASSTOR STORAGE CONTROLLER INCLUDES 2ND CYBER CHANNEL ACCESS & MICRO- CODE	MASSTOR SY	092893	3
1225	M861	MASSTOR STORAGE MODULE INCLUDES 2ND DATA RECORDING DEVICE	MASSTOR SY	092893	3
1226	M861	MASSTOR STORAGE MODULE INCLUDES 2ND DATA RECORDING DEVICE	MASSTOR SY	092893	3
1227	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER SUPPLY	CDC	092893	3
1228	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER SUPPLY	CDC	092893	3
1229	65206-1	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE AND CABINET W/POWER	CDC	092893	3

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1230	65206-2	SUPPLY FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3												
1231	65206-2	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3												
1232	65206-2	FED STANDARD CHANNEL ADAPT INCL QSE24523 CONTROLWARE	CDC	092893	3												
1233	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												
&1234	7021-32	ATS CONTROL. INCL IN 1233	CDC	092893	5												
1235	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1236	679-7	ATS TAPE TRANS- PORT	CDC	092893	5												
1237	553-1	REMOTE PRINT ST ATION	CDC	092893	3												
1238	7021-32	ATS CONTROLLER W/MATRIX	CDC	092893	5												
&1239	7021-32	ATS CONTROL. INCL IN 1238	CDC	092893	5												
1240	556-1	REMOTE PRINT STATION	CDC	092893	3												
1241	556-1	REMOTE PRINT STATION	CDC	092893	3												
1242	180-860A	CY180-860 MAINF RAME & FEATURES INCLUDES 2000K MEM., 20 PPUS, 24 I/O CHANNEL PERFORMANCE OPTION, COOLING, POWER	CDC	092893	3												
1243	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3												
1244	7165-22	MASS STORAGE CONTROLLER	CDC	092893	3												
1245	895-1	DISK STORAGE UNIT	CDC	092893	3												
1246	895-2	DISK STORAGE UNIT	CDC	092893	3												

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

MODEL/ CLIN PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1247 895-1	DISK STORAGE UNIT	CDC	092893	3
1248 895-2	DISK STORAGE UNIT	CDC	092893	3
1249 18002-1	DISPLAY CONSOLE STATION	CDC	092893	3
1250 18001-1	DATA CHANNEL CONVERTER	CDC	092893	3
1251 180-860A	CY180-860 MAINFRAME & FEATURES INCLUDES 8 MWDS MEM., 20 PPUS, 24 I/O CHANNEL PERFORMANCE OPTION, COOLING, POWER	CDC	092893	3
1252 7165-22	MASS STORAGE CONTROLLER	CDC	092893	3
1253 7165-22	MASS STORAGE CONTROLLER	CDC	092893	3
1254 895-1	DISK STORAGE UNIT	CDC	092893	3
1255 895-2	DISK STORAGE UNIT	CDC	092893	3
1256 895-1	DISK STORAGE UNIT	CDC	092893	3
1257 895-2	DISK STORAGE UNIT	CDC	092893	3
1258 18001-1	DATA CHANNEL CONVERTER	CDC	092893	3
1259 895-1	DISK STORAGE UNIT	CDC	092893	3
1260 895-2	DISK STORAGE UNIT	CDC	092893	3
1261 895-1	DISK STORAGE UNIT	CDC	092893	3
1262 895-2	DISK STORAGE UNIT	CDC	092893	3
1263 679-7	ATS TAPE TRANS-PORT	CDC	092893	5
1264 679-7	ATS TAPE TRANS-PORT	CDC	092893	5
1265 679-7	ATS TAPE TRANS-PORT	CDC	092893	5
1266 679-7	ATS TAPE TRANS-PORT	CDC	092893	5
1267 895-2	DISK STORAGE	CDC	092893	3

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1268	895-2	UNIT DISK STORAGE	CDC	092893	3
1269	679-7	UNIT ATS TAPE TRANS- PORT	CDC	092893	5
1270	679-7	UNIT ATS TAPE TRANS- PORT	CDC	092893	5
1271	895-2	UNIT DISK STORAGE	CDC	092893	3
1272	895-2	UNIT DISK STORAGE	CDC	092893	3
1273	2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3
1274	2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER- FACE, 1MB MEM- ORY OPTION	CDC	092893	3
1275	9715-515	UNIT (EMC2) DISK STORAGE	CDC	092893	3
1276	2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3
1277	2601-5	UNIT DEVICE INTER- FACE CABINET ASSEMBLY WITH MAINFRAME DEV- ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3
1278	2601-5	UNIT DEVICE INTER- FACE CABINET	CDC	092893	3

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1279 2601-5	ASSEMBLY WITH MAINFRAME DEV-ICE INTERFACE AND 1MB MEMORY OPTION	CDC	092893	3
1280 2601-5	DEVICE INTER-FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER-FACE, 1MB MEM-ORY OPTION	CDC	092893	3
1281 2601-5	DEVICE INTER-FACE CABINET ASSEMBLY WITH ASYNC/SYNC, TERMINAL DEVICE INTERFACE, 1MB MEMORY OPTION	CDC	092893	3
1282 2601-5	DEVICE INTER-FACE CABINET ASSEMBLY WITH ASYNC, TERMINAL DEVICE INTER-FACE, 1MB MEM-ORY OPTION	CDC	092893	3
1283 LCN	LCN 50 MEGABIT TRUNKS (3)	CDC	092893	3
1284 3800-1021	ACCUMULATOR EXP IBM	IBM	100193	5
1285 3800-1021	ACCUMULATOR EXP IBM	IBM	100193	5
1286 9335-A01	DASD DISK DRIVE IBM	IBM	100193	5
1287 3800-006	LASER PRINTER IBM	IBM	100193	5



Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST											
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG				
1288	3800-1010	ACCUMULATOR	IBM	100193	5												
1289	3800-006	LASER PRINTER	IBM	100193	5												
1290	3430-A01	TAPE DRIVE	IBM	100193	5												
1291	3800-1010	ACCUMULATOR	IBM	100193	5												
1292	9335-B01	DASD DISK DRIVE	IBM	100193	5												
1293	9309-002	POWER SUPPLY RACK	IBM	100193	5												
1294	9335-B01	DASD DISK DRIVE	IBM	100193	5												
1295	9335-A01	DASD DISK DRIVE	IBM	100193	5												
1296	9375-060	COMPUTER	IBM	100193	5												
1297	9309-002	POWER SUPPLY RACK	IBM	100193	5												
1298	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1299	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1300	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3												
1301	DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3												
1302	DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3												
1303	ACM-201	VME ASYNC. CONTROLLER	CONVEX	121894	3												
1304	ACM-201	VME ASYNC. CONTROLLER	CONVEX	121894	3												
1305	DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3												
1306	VBS-003	VME BUS CHASSIS	CONVEX	121894	3												
1307	RDS-002	REMOVE.DIS CHA- SIS 3 DATA SLOT	CONVEX	121894	3												
1308	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												
1309	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												
1310	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3												

## Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST												
						YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8					
1311	C3840-0000	3800 SERIES PROCESSOR	CONVEX	121894	3													
1312	PUG-3800	ADD.3800 SERIES PROCESSOR	CONVEX	121894	3													
1313	EXP-101	EXPANSION CAB- INET	CONVEX	121894	3													
1314	PXP-3800-CC	3800 SERIES PRO CESSOR CABINET	CONVEX	121894	3													
1315	IUG-3800	3800 SERIES I/O PORT UPGRADE	CONVEX	121894	3													
1316	VBS-004	VMB BUS CHASIS	CONVEX	121894	3													
1317	VBS-004	VMB BUS CHASIS	CONVEX	121894	3													
1318	IDC-001	INTEGRATED DISK CONTROLLER	CONVEX	121894	3													
1319	EXP-101	EXPANSION CAB- INET	CONVEX	121894	3													
1320	VBS-004	VMB BUS CHASIS	CONVEX	121894	3													
1321	MEM-3800-128	128 MBYTE MEMORY BOARD	CONVEX	121894	3													
1322	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3													
1323	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3													
1324	VBS-004	VMB BUS CHASIS	CONVEX	121894	3													
1325	MTD-002	HIGH PERF. TAPE DRIVE	CONVEX	121894	3													
1326	DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3													
1327	DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3													
1328	EXP-105	HIGH PERFOR. EXPAN. CABINET	CONVEX	121894	3													
1329	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3													
1330	DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3													
1331	DKD-504	HIGH PERF. 2.5 MBYTE DISK DR.	CONVEX	121894	3													
1332	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3													
1333	VIOP-001	VME BUS IO PROCESSOR	CONVEX	121894	3													
1334	ACM-201	VME ASYNC.	CONVEX	121894	3													

Appendix A, Part 1

MODEL/ CLIN PRODUCT      ITEM DESCRIPTION      OEM      TRANSITION DATE      ST      YEAR 1      YEAR 2      YEAR 3      YEAR 4      YEAR 5      YEAR 6      YEAR 7      YEAR 8      MONTHLY MAINTENANCE COST  
 BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG      BMMC/CHRG

MODEL/ CLIN PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	MONTHLY MAINTENANCE COST
1335 ACM-201	CONTROLLER VME ASYNC.	CONVEX	121894	3									
1336 ACM-201	CONTROLLER VME ASYNC.	CONVEX	121894	3									
1337 ETH-201	CONTROLLER VME ETHERNET	CONVEX	121894	3									
1338 PRT-001	CONTROLLER LINE PRINTER	CONVEX	121894	3									
1339 SP-043	HIGH SPEED PRINTER	CONVEX	121894	3									
1340 2140	ARTS INTERFACE	KINETIC SY	121894	3									
1341 2140	ARTS INTERFACE	KINETIC SY	121894	3									
1342 2140	ARTS INTERFACE	KINETIC SY	121894	3									
1343 2140	ARTS INTERFACE	KINETIC SY	121894	3									
1344 C230-256	C2 SERIES PROC- CESORS W/256 MB RESERVED	CONVEX	121894	3									
1345			TBD										
1346	RESERVED		TBD										
1347 DKD-316	760MB REMOVE. DISK W/CONTROL.	CONVEX	121894	3									
1348 DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3									
1349 DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3									
1350 DKD-216	760MB REMOVE- ABLE DISK	CONVEX	121894	3									
1351 EXP-101	EXPANSION CAB- INET	CONVEX	121894	3									
1352 MTC-201	MAGNETIC TAPE CONTROLLER	CONVEX	121894	3									
1353 MTD-204	MEDIUM PERFORM. TAPE DRIV	CONVEX	121894	3									
1354 VIOP-001	VME IO PROCESSOR	CONVEX	121894	3									
1355 VBS-004	VME BUS CHASSIS	CONVEX	121894	3									
1356 VBS-004	VME BUS CHASSIS	CONVEX	121894	3									
1357 ETH-201	VME ETHERNET CONNECTION	CONVEX	121894	3									

Appendix A, Part 1

MONTHLY MAINTENANCE COST  
 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6 YEAR 7 YEAR 8  
 BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
1358	ACM-202	VME ASYNC CONTROLLER	CONVEX	121894	3
1359	PRT-001	LINE PRINTER	CONVEX	121894	3
1360	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3
1361	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3
1362	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3
1363	VDU-001	VIDEO DISPLAY UNIT	CONVEX	121894	3
1364	PIA-002	PBUS INTERFACE ADAPTER	CONVEX	121894	3
1365	EXP-101	EXPANSION CAB- INET	CONVEX	121894	3
1366	2140	ARTS INTERFACE	KINETIC SY	121894	3
1367	2140	ARTS INTERFACE	KINETIC SY	121894	3
1368	RS 6000/560	RISC WORKSTAT. HIPPI & SCSI	IBM	TBD	3
1369	D525-1	OPTICAL DISK JUKEBOX	DOCUMENT I	TBD	3
1370	8500	8MM TAPE DRIVE	FXABYTE	TBD	3
1371	6091-10	COLOR MONITOR	IBM	TBD	3
1372	7210-001	OPTICAL DISK CD-ROM	IBM	TBD	3
1373	RS6000/320H	RISC WORKSTAT.	IBM	TBD	3
1374	RS6000/560	RISC WORKSTAT.	IBM	TBD	3
1375	8508	B/W MONITOR	IBM	TBD	3
1376	9610	9-TRACK TAPE DR IVE	DR KENNEDY	TBD	3
1377	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3
1378	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3
1379	TAHITI	M/O OPTICAL DISK DRIVE	MASOPTIC	TBD	3
1380	NCR 6292	DISK DRIVE DISK ARRAY SYSTEM	NCR	TBD	3
1381	NCR 6292	DISK ARRAY	NCR	TBD	3

Appendix A, Part 1

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE COST								
						YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG	
1382	SA-H212-D	SYSTEM DISK SUBSYSTEM	FUJITSU	TBD	3									
1383	HP-730	HP WORKSTATION- DATABASE SERVER	HP	TBD	3									
1384	MLB	4MM DAT TAPE DRIVE	HP	TBD	3									
1385	A1097A	MONITOR	HP	TBD	3									
1386	TXM-3201A1	CD-ROM DRIVE	HP	TBD	3									
1387	4781	SCSI TAPE CONTROL UNIT	STK	TBD	1									
1388	4781M22	CARTRIDGE TAPE DRIVE	STK	TBD	1									
1389	4480	TAPE CONTROL UNIT	STK	TBD	1									
1390	4480M24	CARTRIDGE TAPE DRIVE	STK	TBD	1									
1391	4480	TAPE CONTROL UN IT	STK	TBD	1									
1392	4480M24	CARTRIDGE TAPE DRIVE	STK	TBD	1									
1393	4410	LIBRARY STORAGE MODULE	STK	TBD	1									
1394	4411	LIBRARY CONTROL UNIT	STK	TBD	1									
1395	9570	DISK ARRAY - 10 GIGABYTE	IBM	TBD	3									
1396	PS32-8	HIPPI SWITCH	NETWORK SY	TBD	3									
1397	VIOP-001	VME IO PROCESSOR	CONVEX	121894	3									
&1398	Y-MPD8E/8256	COMPUTER	CRAY	080993	1									
&1399	IDC	ADD'L I/O CLUST ER	CRAY	080993	1									
&1400	DCA-1	DISK CHANNEL ADAPTER	CRAY	080993	1									
&1401	TCA-1	TAPE CHANNEL ADAPTER	CRAY	080993	1									
&1402	CCA-1	COMMUN. CHANNEL ADAPTER	CRAY	080993	1									
&1403	CCA-1	COMMUN. CHANNEL ADAPTER	CRAY	080993	1									
&1404	SSDE/512	512 MWD SSD	CRAY	080993	1									

Appendix A, Part 1

MODEL/ CLIN PRODUCT	ITEM DESCRIPTION OEM	TRANSITION DATE ST	MONTHLY MAINTENANCE CCST										
			YEAR 1 BMMC/CHRG	YEAR 2 BMMC/CHRG	YEAR 3 BMMC/CHRG	YEAR 4 BMMC/CHRG	YEAR 5 BMMC/CHRG	YEAR 6 BMMC/CHRG	YEAR 7 BMMC/CHRG	YEAR 8 BMMC/CHRG			
61405 HIPPI-100	100 MBYTE EXTER CRAY NAL CHANNEL	080993 3											

Total Number Of Hardware Items 387

The cost for the partial months of:

- 08/08/93 - 08/31/93
- 09/29/93 - 09/30/93
- 12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

& Changes (additions, deletions, modifications) since release of RFP.

APPENDIX A, PART 2  
COMPUTER SOFTWARE ITEMS

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE													
						YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG						
6000	CXM-002-200	XWINDOWS SOFT- WARE	CONVEX	080993	N/A														
6001	AVS-001-200	CONVEX AVS SOFTWARE	CONVEX	080993	N/A														
6002	CXA-001-200	XWINDOWS DEBUG- ER & PROFILER	CONVEX	080993	N/A														
6003	CAC-001-200	CONVEX APPLI- CATION COMPILER	CONVEX	080993	N/A														
&6004	UNICOS	UNICOS SYSTEM SOFTWARE	CRAY	080993	N/A														
&6005	CF77	CF77 COMPILER	CRAY	080993	N/A														
6006		RESERVED		TBD															
&6007	PASCAL	PASCAL COMPILER	CRAY	080993	N/A														
&6008	STANDARD C	STANDARD C COM PILER	CRAY	080993	N/A														
&6009	CAL	CRAY ASSEMBLY LANGUAGE	CRAY	080993	N/A														
6010	TCP/IP	NETWORK PHOTO- COL SOFTWARE		080993	N/A														
6011	NFS	NETWORK FILE SERVER	CRAY	080993	N/A														
6012	NET-001-200	CONVEX INTERNET SERVICES	CONVEX	080993	N/A														
6013	NET-001-200	CONVEX INTERNET SERVICES	CONVEX	080993	N/A														
6014	CFT-001-200	CONVEX FORTRAN COMPILER	CONVEX	080993	N/A														
6015	CFT-001-200	CONVEX FORTRAN COMPILER	CONVEX	080993	N/A														
6016	LIB-001-200	VEC LIB	CONVEX	080993	N/A														
6017	LIB-001-200	VEC LIB	CONVEX	080993	N/A														
6018	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	080993	N/A														
6019	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	080993	N/A														
6020	EMA001-200	EMAX C3 SERIES	CONVEX	080993	N/A														

Appendix A, Part 2

MONTHLY MAINTENANCE

CLIN MODEL/ PRODUCT ITEM DESCRIPTION OEM TRANSITION DATE ST YEAR 1 CHRG YEAR 2 CHRG YEAR 3 CHRG YEAR 4 CHRG YEAR 5 CHRG YEAR 6 CHRG YEAR 7 CHRG YEAR 8 CHRG

6021	NFS-001-200	NETWORK FILE SYSTEM	CONVEX	080993	N/A												
6022	NFS-001-200	NETWORK FILE SYSTEM	CONVEX	080993	N/A												
6023	UNG-100-200	CONVEX OS	CONVEX	080993	N/A												
6024	3/160 OS	SUN OPERATING SYSTEM	SUN	080993	N/A												
6025	3/160 OS	SUN OPERATING SYSTEM	SUN	080993	N/A												
6026		UNICOS SOCKET LIB	ULTRA	080993	N/A												
6027		UNICOS BERK UTILITY	ULTRA	080993	N/A												
6028		UNICOS UGRAF	ULTRA	080993	N/A												
6029		CONVEX SOCKETS	ULTRA	080993	N/A												
6030		CONVEX BERK UTILITY	ULTRA	080993	N/A												
6031		CONVEX UGRAF	ULTRA	080993	N/A												
6032		SUN 3 SOCKETS	SUN	080993	N/A												
6033		SUN 3 BERK UTILITY	SUN	080993	N/A												
6034		CRAY OS DRIVER	ULTRA	080993	N/A												
6035		CONVEX OS DRIVER	ULTRA	080993	N/A												
6036		SUN OS DRIVER	ULTRA	080993	N/A												
6037		RESERVED		TBD													
6038		RESERVED		TBD													
6039	1190-V01	VM SOFTWARE	STC	080993	N/A												
6040	STC 1190-V10	ACSLX UNIX	STC	080993	N/A												
6041	S1100-01	CRAY Y-MP ULTRA NET SOFTWARE	ULTRA	080993	N/A												
6042		CRAY ATTACH	SUN	080993	N/A												
6043	D860-01	NETWORK OPERATING SYSTEM	CDC	092893	N/A												



Appendix A, Part 2

CLIN MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE									
					YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG		
6044 D860-02	MAINT PKG UNDER NOS 2	CDC	092893	N/A										
6045 D860-03	MULTI-MFRAME MOD UNDER NOS 2	CDC	092893	N/A										
6046 D860-05	TRACER UNDER NOS 2	CDC	092893	N/A										
6047 D860-10	NETWK ACC METH- OD UNDER NOS 2	CDC	092893	N/A										
6048 D860-11	INTERACTIVE FAC UNDER NOS 2	CDC	092893	N/A										
6049 D860-12	REMOTE BATCH FAC UNDER NOS 2	CDC	092893	N/A										
6050 D860-15	CYBER CROSS SYS UNDER NOS 2	CDC	092893	N/A										
6051 D860-150	NOS ON-LINE MAN UNDER NOS 2	CDC	092893	N/A										
6052 D860-20	FORTTRAN UNDER NOS 2	CDC	092893	N/A										
6053 D860-24	BASIC INTERACTI VE UNDER NOS 2	CDC	092893	N/A										
6054 D860-250	CYBL 170 CDE GNTR UNDER NOS	CDC	092893	N/A										
6055 D860-252	NOS CONTEXT UNDER NOS 2	CDC	092893	N/A										
6056 D860-28	XEDIT 3 UNDER NOS 2	CDC	092893	N/A										
6057 D860-29	CYBER INTER DE- BUG UNDER NOS 2	CDC	092893	N/A										
6058 D860-33	SORT/MERG UNDER NOS 2	CDC	092893	N/A										
6059 D860-34	PASCAL 170 UNDER NOS 2	CDC	092893	N/A										
6060 D860-37	FULL SCREEN EDI TOR UNDER NOS 2	CDC	092893	N/A										
6061 D860-907	PTF/QTF XFER RAC UNDER NOS 2	CDC	092893	N/A										
6062 D860-908	RHF ACCESS METH ODS UNDER NOS 2	CDC	092893	N/A										
6063 D860-94	MASS STORE EXTD UNDER NOS 2	CDC	092893	N/A										
6064 H860-22	FORTTRAN EXT TS UNDER NOS 2	CDC	092893	N/A										
6065 H860-32	FORTTRAN 4/5 AID S UNDER NOS 2	CDC	092893	N/A										
6066 N225-01	COMM CONTRL PRG UNDER NOS 2	CDC	092893	N/A										
6067 N261-01	CDCNET UNDER	CDC	092893	N/A										

Appendix A, Part 2

MONTHLY MAINTENANCE

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8
						CHRG	CHRG	CHRG	CHRG	CHRG	CHRG	CHRG	CHRG

6068	D860P-351	NOS 2 TERMINAL CLUS- TER FACILITY	CDC	092893	N/A								
6069	N261-22	CDCNET TCP/IP, TELNET, FTP	CDC	092893	N/A								
6070	K14B918	ICEM-CFD PACK- AGE, OPTION 1 INCLUDES IGES, DESIGN DRAFTING CURVES & SUR- FACES, NURBS, MULCAD, PADAMM	CDC	092893	N/A								
6071	K14B-900	ICEM-CFD PACK- AGE GEOMETRY SUBSET INCLUDES DESIGN DRAFTING CURVES & SUR- FACES, NURBS ICEM-GPL	CDC	092893	N/A								
6072	K14B-920		CDC	092893	N/A								
6073	ADA-001-200	ADA COMPILER		121894	N/A								
6074	NFS-001-200	NETWORKING FILE SYSTEM	CONVEX	121894	N/A								
6075	CXM-002-200	CXWINDOWS SOFT.	CONVEX	121894	N/A								
6076	NET-001-3800	CONVEX INTERNET SERVICES	CONVEX	121894	N/A								
6077	UNG-202-3800	CONVEX OS (32 USERS)	CONVEX	121894	N/A								
6078		ARTS INTERFACE SOFT. DRIVER	CONVEX	121894	N/A								
6079	NFS-001-3800	NETWORK FILE SYSTEM	CONVEX	121894	N/A								
6080	UXE-001-3800	UXE REAL TIME OS	CONVEX	121894	N/A								
6081	CXM-002-3800	CXWINDOWS OS	CONVEX	121894	N/A								
6082	CFT-001-3800	CONVEX FORTRAN COMPILER	CONVEX	121894	N/A								
6083	UNG-202-200	CONVEX OS (32 USERS)	CONVEX	121894	N/A								
6084	NET-001-200	CONVEX INTERNET SERVICES SOFT.	CONVEX	121894	N/A								
6085	CFT-001-200	CONVEX FORTRAN COMPILER	CONVEX	121894	N/A								

Appendix A, Part 2

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST	MONTHLY MAINTENANCE											
						YEAR 1 CHRG	YEAR 2 CHRG	YEAR 3 CHRG	YEAR 4 CHRG	YEAR 5 CHRG	YEAR 6 CHRG	YEAR 7 CHRG	YEAR 8 CHRG				
6086	CSD-004-200	CONVEX CONSUL- TANT	CONVEX	121894	N/A												
6087	UNG-100-200	CONVEX OS CODE	CONVEX	121894	N/A												
6088	CXB-001-200	CONVEX BATCH PROCESSING	CONVEX	121894	N/A												
6089	UDD-001-200	USER WRITTEN DEVICE DRIVER	CONVEX	121894	N/A												
6090	HCR-999	HCR PASCAL	HCR	121894	N/A												
6091		ARTS INTERFACE SOFTWARE DRIVER	CONVEX	121894	N/A												
6092	UXE-001	UXE REAL-TIME OPERATING SYS.	CONVEX	121894	N/A												
&6093	DMF	DATA MIGRATION FACILITY	CRAY	080993	N/A												
6094	CXB-001-200	CXBATCH	CONVEX	080993	N/A												
6095	CXB-001-200	CXBATCH	CONVEX	080993	N/A												
6096	CXB-001-3800	CXBATCH	CONVEX	TBD	N/A												
6097	CTB-001-200	TOOLBOX	CONVEX	080993	N/A												
6098	CTB-001-200	TOOLBOX	CONVEX	080993	N/A												
6099	CSS-001-200	SHARE	CONVEX	080993	N/A												
6100	ADA-001-200	ADA	CONVEX	121894	N/A												
6101	CSD-004-3800	CONSULTANT	CONVEX	TBD	N/A												
&6102	UNICOS	UNICOS SYSTEM SOFTWARE	CRAY	080993	N/A												
&6103	CF77	CF77 COMPILER	CRAY	080993	N/A												
&6104	PASCAL	PASCAL COMPILER	CRAY	080993	N/A												
&6105	STANDARD C	STANDARD C COMPILER	CRAY	080993	N/A												
&6106	CAL	CRAY ASSEMBLY LANGUAGE	CRAY	080993	N/A												
&6107	TCP/IP	NETWORK PROTO- COL SOFTWARE	CRAY	080993	N/A												
&6108	NFS	NETWORK FILE SERVER	CRAY	080993	N/A												
&6109	DMF	DATA MIGRATION FACILITY	CRAY	080993	N/A												

Total Number Of Software Items 107

The cost for the partial months of:

08/08/93 - 08/31/93

09/29/93 - 09/30/93

12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

& Changes (additions, deletions, modifications) since release of RFP

APPENDIX A, PART 3  
ENVIRONMENTAL SUPPORT EQUIPMENT

CLIN	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST*	MONTHLY MAINTENANCE													
						YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8						
&8000	L212880001	KATO MOTOR GENERATOR	KATO	080993	1														
&8001		RESERVED		TBD															
&8002	YMP	HEAT EXCHANGE UNIT	CRAY	080993	1														
&8003	60 TON	REFRIGERATION CONDENSING UNIT	COPELAND	080993	1														
&8004	CRAY2	COOLANT RESERVOIR	CRAY	080993	2														
&8005	L212880001	KATO MOTOR GENERATOR	KATO	080993	2														
&8006	L212880001	KATO MOTOR GENERATOR	KATO	080993	2														
&8007	L212880001	KATO MOTOR GENERATOR	KATO	080993	2														
&8008	CRAY2	SUPPORT HEAT EXCHANGES POD	CRAY	080993	2														
&8009	CRAY2	MASTER HEAT EXCHANGER POD	CRAY	080993	2														
&8010		RESERVED		TBD															
&8011		RESERVED		TBD															
&8012	53369800	EMERGENCY OFF CONTROL	CDC	092893	3														
&8013	GH445	MG CONTROLLER	AUTOCON	092893	3														
&8014	23048300	COMPUTER POWER CONTROL	CDC	092893	3														
&8015	GE268	MOTOR GEN SET 40KVA	KATO	092893	3														
&8016		RESERVED		TBD															
&8017		RESERVED		TBD															
&8018	18164000	TERMINATOR POWER SUPPLY	CDC	092893	3														
&8019	18182800	TERMINATOR POWER SUPPLY	CDC	092893	3														
&8020		RESERVED		TBD															

Appendix A, Part 3

MONTHLY MAINTENANCE

YEAR 1   YEAR 2   YEAR 3   YEAR 4   YEAR 5   YEAR 6   YEAR 7   YEAR 8

BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG BMMC/CHRG

CLIN PRODUCT	MODEL/ PRODUCT	ITEM DESCRIPTION	OEM	TRANSITION DATE	ST
&8021		RESERVED		TBD	
&8022	GE268	MOTOR GEN SET 40KVA	KATO	092893	3
&8023	GH445	MG CONTROLLER	EM	092893	3
&8024	GE268	MOTOR GEN SET 40KVA	KATO	092893	3
&8025	GH445	MG CONTROLLER	AUTOCON	092893	3
&8026	67328462	SYSTEM POWER MONITOR	CDC	092893	3
&8027	GH252	CHILLED WATER UNIT	CDC	092893	3
&8028	53369800	EMERGENCY OFF CONTROL	CDC	092893	3
&8029		RESERVED		TBD	
&8030	53369800	EMERGENCY OFF CONTROL	CDC	092893	3
&8031	GE268	MOTOR GEN SET 40KVA	EM	092893	3
&8032	GH445	MG CONTROLLER	AUTOCON	092893	3
&8033	GH252	CHILLED WATER UNIT	CDC	092893	3
&8034	67328462	SYSTEM POWER MONITOR	CDC	092893	3
&8035	22128200	DEWPOINT DIS- TRIBUTION BOX	CDC	092893	3
&8036	63154000	DEWPOINT RECORDER	CDC	092893	3

Total Number Of Environmental Items      29

The cost for the partial months of:

08/08/93 - 08/31/93  
09/29/93 - 09/30/93  
12/18/94 - 12/31/94

are not indicated in Appendix A but will be determined by the monthly rate prorated based on the number of days in the month.

\* Status requirements for environmental equipment are based on supported hardware equipment (part 1).

& Changes (additions, deletions, modifications) since release of RFP.

**ENCLOSURE 2 - COST FORMS D AND F**

**FORM D**  
**Details of Other Direct Costs**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015

YEARS 1 - 7  
MONTHS 1 - 6

DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
=====							
LOE Subcontracts Non-DL Costs: *							
Specified ODC:							
Mat'l & Equipment	1,631,200	1,928,800	2,066,400	2,112,800	2,186,400	2,266,400	2,426,400
Software Purchases	61,170	72,330	77,490	79,230	81,990	84,990	90,990
Travel	81,560	96,440	103,320	105,640	109,320	113,320	121,320
Training	61,170	72,330	77,490	79,230	81,990	84,990	90,990
FP Specialized Svcs	203,900	241,100	258,300	264,100	273,300	283,300	303,300
Subtotal	2,039,000	2,411,000	2,583,000	2,641,000	2,733,000	2,833,000	3,033,000
Company Specific: (Itemize)**							
=====							

TOTAL ODCS

DESCRIPTION	TOTAL	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
=====							
LOE Subcontracts Non-DL Costs: *							
Specified ODC:							
Mat'l & Equipment	1,227,360	204,560	204,560	204,560	204,560	204,560	204,560
Software Purchases	46,026	7,671	7,671	7,671	7,671	7,671	7,671
Travel	61,368	10,228	10,228	10,228	10,228	10,228	10,228
Training	46,026	7,671	7,671	7,671	7,671	7,671	7,671
FP Specialized Svcs	153,420	25,570	25,570	25,570	25,570	25,570	25,570
Subtotal	1,534,200	255,700	255,700	255,700	255,700	255,700	255,700
Company Specific: (Itemize)**							
=====							

TOTAL ODCS

\* List individually and provide details on Forms A,C-E for each LOE subcontractor.  
 \*\* Provide discussion on a separate sheet. List each subcontract individually. Provide details in a format similar to Forms A-E for each subcontractor with a proposed price in excess of \$500,000.



**FORM F**  
**LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS**

PROPOSER: \_\_\_\_\_

YEAR \_\_\_\_\_  
page 5 of 5

RFP 1-41-1100.1015

Provide disclosure details or a SF 1412 for each line item.

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	** SUPPORT TYPE	CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE
6059					ENVIRONMENTAL SUPPORT EQUIPMENT					
6060					8000					
6061					8001					
6062					8002					
6063					8003					
6064					8004					
6065					8005					
6066					8006					
6067					8007					
6068					8008					
6069					8009					
6070					8010					
6071					8011					
6072					8012					
6073					8013					
6074					8014					
6075					8015					
6076					8016					
6077					8017					
6078					8018					
6079					8019					
6080					8020					
6081					8021					
6082					8022					
6083					8023					
6084					8024					
6085					8025					
6086					8026					
6087					8027					
6088					8028					
6089					8029					
6090					8030					
6091					8031					
6092					8032					
6093					8033					
6094					8034					
6095					8035					
6096					8036					
6097										
6098										
6099										
6100										
6101										
6102										
6103										
6104										
6105										
6106										
6107										
6108										
6109										
\$0 CUMMULATIVE ANNUAL TOTAL					\$0 CUMMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.

\*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

**FORM F**  
**LISTING OF MAINTENANCE FIXED PRICE LINE ITEMS**

PROPOSER: \_\_\_\_\_

RFP 1-41-1100.1015


Provide disclosure details or a SF 1412 for each line item.

YEAR \_\_\_\_\_  
page 4 of 5

CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE		CLIN	ANNUAL TOTAL	*PARTIAL MONTH CHARGE	FULL-MONTH CHARGE	BMMC	** SUPPORT TYPE	
							COMPUTER SOFTWARE ITEMS						
1359							6000						
1360							6001						
1361							6002						
1362							6003						
1363							6004						
1364							6005						
1365							6006						
1366							6007						
1367							6008						
1368							6009						
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\$0 CUMMULATIVE ANNUAL TOTAL								\$0 CUMMULATIVE ANNUAL TOTAL					

\* Refer to Appendix A for transitions dates applicable to partial months.

\*\* Annotate whether this price is support by full disclosure (FD) or whether exemption is requested through the submission of a SF 1412.

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE OF PAGES 21
2. AMENDMENT/MODIFICATION NO. 3	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If appropriate)	
6. ISSUED BY CODE National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001		7. ADMINISTERED BY (If other than item 6) CODE		
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED		<input checked="" type="checkbox"/>	9A. AMENDMENT OF SOLICITATION NO. 1-41-1100.1015	
		<input checked="" type="checkbox"/>	9B. DATED (SEE ITEM 11) 12/1/92	
			10A. MODIFICATION OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above number solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If Required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
<input checked="" type="checkbox"/>	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.			
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).			
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:			
	D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) SUBJECT: NASA Request for Proposal 1-41-1100.1015 - Scientific Computing Operations, Maintenance, and Communication (SCOMAC) Services.  The purposes of this amendment are to (1) make corrections to subject RFP; and (2) provide additional questions and answers.  Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or Print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or Print) W. R. Kivett		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 1-13-93	

I. SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS is revised as follows:

A. B.1, Scope of Work, paragraph A. is revised to refer to Statement of Work (SOW), dated October 23, 1992, in lieu of SOW dated September 18, 1992.

B. B.4, Specified Other Direct Costs, is revised to delete the last paragraph and substitute the following in lieu thereof:

"These costs are the Government's best estimate of what the actuals will be. There will be no adjustment in the fee(s) of the contract should the actuals exceed these estimates."

II. SECTION D - PACKAGING AND MARKING is hereby added with the following sentence: "There are no applicable clauses in this section."

III. SECTION F - DELIVERIES OR PERFORMANCE, Clause F.2, F.O.B. Destination, Within Consignee's Premises (FAR 52.247-35) (APR 1984), is revised as follows:

Add "Applicable only to CSCC Systems Maintenance, Section C.4 of the SOW" after the clause title.

IV. SECTION G - CONTRACT ADMINISTRATION DATA is revised as follows:

A. Existing clauses G.4 and G.5 are deleted in their entirety.

B. The following Clause is hereby added as G.4:

"G.4. Submission of Vouchers for Payment  
(18-52.216-87) (DEC 1988)

(a) Public vouchers for payment of costs shall include a reference to this contract (NAS1- ) and be forwarded to:

DCAA  
(mailing address to be determined)

This is the designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract. NOTE: The Contractor shall specify the monthly charge for each CLIN in Appendix A of Exhibit A and shall provide the certification required by H.18.

(b) The Contractor shall prepare vouchers as follows:

(1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment.

(2) Seven copies of SF 1034A, SF 1035A, or equivalent Contractor's attachment.

(3) The Contractor shall mark SF 1034A copies 1, 2, 3, 4, and such other copies as may be directed by the Contracting Officer by insertion in the memorandum block the names and addresses as follows:

- (i) Copy 1 NASA Contracting Officer;
- (ii) Copy 2 Auditor;
- (iii) Copy 3 Contractor;
- (iv) Copy 4 Contract administration office;
- (v) Copy 5 Project management office.

(c) Public vouchers for payment of fee shall be prepared similarly and be forwarded to:

Contracting Officer, MS 126  
NASA LaRC  
Hampton, VA 23681-0001

This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(d) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made".

C. G.6 Contract Closeout is renumbered "G.5".

V. SECTION H - SPECIAL CONTRACT REQUIREMENTS is revised as follows:

A. H.18 Advance Agreement on Systems Maintenance Prices, is revised as follows.

Paragraph 1 is deleted and the following substituted therefor:

"The monthly charge for performing systems maintenance services in accordance with Section C.4, CSCC Systems Maintenance, of the SOW are set forth in Appendix A of Exhibit A. The monthly charge includes all costs and profit of the actual business entity performing the hands-on work."

Paragraph 4 is deleted and the following substituted therefor:

"The Contractor agrees that the actual monthly charge for each CLIN shall not exceed the monthly charge set forth in Appendix A, the current General Services Administration Schedule (GSA) contract price, if applicable, or the lowest price at which a sale was made to any customer during the month, whichever is lower. The Contractor shall furnish with each invoice which includes cost for systems maintenance a statement certifying that the lowest of the above three prices has been charged."

B. H.19, Options, paragraph A. - The third sentence is revised to read as follows:

"The third through eighth option periods are to be exercisable by issuance of a unilateral modification no later than one calendar day prior to the expiration of the contract."

C. H.20, Systems Maintenance Price Pool For Section C.4 Of The Statement Of Work, paragraph 1 is revised to delete the word "price" in the second sentence.

D. H.21, Pension Portability, paragraph (c) is deleted and the following substituted therefor:

"(c) Provide for 100 percent employee vesting not later than the earliest of contract completion or contract termination (for purposes of this requirement, contract completion does not include option periods); and"

VI. Section I - CONTRACT CLAUSES, is revised as follows:

A. An incorrect clause number of "52.230-4" was inserted for Administration of Cost Accounting Standards (SEP 1987). The number is changed to read "52.230-5" and the current clause dated August 1992 is substituted therefor.

B. Clause CASB-2 Cost Accounting Standards (APR 1992) is deleted and the following Clause is substituted therefor in full text: 52-230-2 Cost Accounting Standards (AUG 1992) (See Enclosure 1).

C. Clause 52.217-9 Option to Extend the Term of the Contract is revised to add the following note:

"The preliminary written notice of the Government's intent to exercise is not applicable to the six 1-month option periods".

D. Clause 18-52.204-70 Report on NASA Subcontracts dated December 1988 is deleted and the current clause dated November 1992 is substituted therefor in full text. (See Enclosure 1)

E. Clause 18-52.216-75 Payment of Fixed Fee (DEC 1988) is hereby added in full text. (See Enclosure 1)

F. Clause 18-52.219-75 Small Business and Small Disadvantaged Business Subcontracting Reporting (SEP 1992) is hereby added in full. (See Enclosure 1)

G. Clause 18-52.246-72 Material Inspection and Receiving Report (OCT 1988) is hereby added in full text. (See Enclosure 1)

VII. EXHIBIT A, STATEMENT OF WORK, is revised as follows:

A. Page 54, section C.1, the last sentence of the fourth paragraph, is revised to read as follows:

"The Statement of Work (SOW) is for a contract to provide a major part of these services and maintenance."

B. Page 55, section C.2.1 is revised to add "CSCC" before "systems maintenance".

C. Page 55, section C.2.1.1, the first sentence of the fourth paragraph is revised to read as follows:

"The Contractor shall provide facility management support for the building 1268 CSCC facility complex."

D. Page 56, section C.2.2.1, the table which shows the normal distribution of the services required is clarified as follows:

<u>SERVICE</u>	<u>FIRST</u>	<u>SECOND</u>	<u>THIRD</u>	<u>WEEKEND HOLIDAY</u>
Equipment Operation	X	X	X	X
Computer Operating System Support	X	(1)	(1)	(1)
Maintenance	(2)	(2)	(2)	(2)
Communications Support	X	(3)	(3)	(3)
Distributed System Support	X	(4)	(4)	(4)

E. Page 58, section C.3.1 - The first bullet should be indented to line up evenly with the bullets that follow.

F. Page 61, section C.3.2, item 4. is revised to read as follows:

"4. Provide to user organizational representatives a query capability to retrieve current accounting and validation information".

G. Page 65, section C.4.7, the first and second paragraphs are deleted and the following substituted therefor:

"The Government will be responsible for purchasing all software licensing agreements. The Contractor shall notify the Government of the availability of updates and successor products to the current installed system software as well as the availability of applicable new products. The Contractor shall provide to the Government updates of the current Government- licensed and installed system software when no new license is required. This shall include corrective code and enhancements to the system software listed in Appendix A."

H. Page 66, section C.4.8, the first sentence of the third paragraph is revised to read as follows:

"The Contractor shall provide to the Government documentation for current and successor versions of software systems identified in Appendix A."

I. Page 69, Section C.8, the last sentence of the fourth paragraph (Performance Statistics) will be revised to read as follows:

"Examples are reports of utilization, job work load, malfunctions, downtime, and throughput and turnaround time for processed jobs."

VIII. Exhibit B - CONTRACT DOCUMENTATION REQUIREMENTS is revised as follows:

A. The cover page was out of order and should be inserted before page 99.

B. Paragraph A., Financial Management Reports, is revised to add the following subparagraph:

"6. Each 533M shall specify the actual monthly maintenance charge for each CLIN. The Contractor shall provide upon request data to support that the specified actual monthly charges were the lowest of the three prices referenced in Article H-18."

C. Paragraph M., Subcontracting Reports, the second subparagraph is revised as follows:

"Subcontract awards to small W-O businesses this reporting period: \$\_\_\_\_\_"



D. Paragraph M., Subcontracting Reports, the following paragraph is added:

"In addition to the instructions on the reverse of the SF 295, the Contractor is required to comply with Clause 18-52.219-75 Small and Small Disadvantaged Business Subcontracting Reporting."

E. Paragraph N., Award Fee Self-Evaluation Report, the first sentence is revised to read as follows:

"Within 10 working days after the conclusion of each award fee evaluation period, the Contractor shall submit a report that summarizes the major work accomplishments, including positive and negative aspects of performance, and analyzes actual versus planned costs and hours.

IX. EXHIBIT D INSTALLATION-PROVIDED GOVERNMENT PROPERTY, is revised as follows:

A. The following items are hereby deleted:

<u>ECN</u>	<u>DESCRIPTION MANUFACTURER</u>	<u>SERIAL NUMBER MODEL NUMBER</u>
Page 110:		
G076602	ATTENUATOR, OPTICAL 3M PHOTODYNE INC.	10688 19XT062T
G076621	PRINTER, ADP HEWLETT-PACKARD	2927S34752 HP222A
G076627	ANALYZER, PROTOCOL, LAN HEWLETT-PACKARD	2645A00649 2745A
G076628	TEST SET, FIBER OPTIC 3M PHOTODYNE INC.	10158 2230XR
G076629	EPROM PROGRAMMER BP MICROSYSTEMS	2044 EP1
G076819	ANALYZER, PROTOCOL HEWLETT-PACKARD	3011A02501 4972A
Page 114:		
0060726	TERMINAL, DATA PROCESS HEWLETT-PACKARD	2908A07056 C1003A
Page 116:		
0283924	TERMINAL, DATA PROCESS TELEVIDEO CORP	085060457A PT

B. Items listed in Enclosure 2 are hereby added.

X. SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS is revised to delete Cost Accounting Standards Notices and Certification (CASB-1) (APR 1992) and add 52.230-1 Cost Accounting Standards Notices and Certification (AUG 1992) in lieu thereof as K.20. This provision is attached as Enclosure 3.

XI. SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS is revised as follows:

A. L.39 Small Disadvantaged Business Subcontracting Goal (page 160), the third sentence is revised to read as follows:

"The Contracting Officer has determined that a goal of 15 percent of the total cost plus fee of your proposal is a suitable minimum goal for small disadvantaged businesses, and that such goal should constitute the minimum acceptable small disadvantaged business subcontracting goal for contract award."

B. L.40 C. Proposal Format and Content (page 161), paragraph 2. is revised to read as follows:

"Two options are available for formatting your mission suitability proposal. You may choose the one that you consider most advantageous. You must specify in your proposal which option you have selected. Regardless of the option you choose, the limitation is inclusive of charts, tables, diagrams, captions, and figures, but exclusive of personnel resumes, cover pages, dividers, table of contents, and list of figures. All text will be printed black on white, double-spaced, and preferably double-sided. Additionally, offerors are requested to refrain from using script-style or other non-standard type fonts, but instead use fonts such as Courier 10-cpi or CG Times 12 points, so as to insure readability of proposals."

Option 1. Based on word count:

In order to permit flexibility in formatting while holding the amount of information presented by each offeror to an approximately equal amount, a limit of 60,000 words is imposed on your mission suitability proposal.

You should indicate in the footer of each page the word count for that page and the cumulative word count up to the end of that page. The word-count rules used by any commercial word-processing software package are acceptable. If the word processing package you use does not count words in charts,

tables, diagrams, captions, and figures, you may include the word count for these pages in a summary chart rather than including in the cumulative word count at the footer of each page. Any information that is determined to be beyond the word count limit will not be evaluated.

Option 2. Based on page count:

The number of pages is limited to 175. Each "page" is one side of one sheet, 8-1/2" by 11" with at least one-inch margins on all sides. Foldouts count as an equivalent number of 8-1/2" by 11" pages. Type shall be no smaller than 12 points. Text shall be double-spaced (no more than 3 lines per inch) and either variable pitch or fixed pitch of no more than 12 characters per inch. The text contained on charts, figures, and tables should follow the text formatting guidelines stated above for Option 2. Any page(s) exceeding the 175 page limitation will not be evaluated.

C. L.40 E. 1. e. (1) Direct Productive Level of Effort (LOE) Hours (page 169) - The following is hereby added to paragraph (1):

"Provide supporting rationale for your proposed productive man-year."

D. L.40 E. 1. e. (6) Uncompensated Overtime (page 171) is revised to refer to L.34 in lieu of L.33.

F. L.40 E. 1. e. (12) Systems Maintenance (page 173) is deleted and the following substituted therefor:

"(12) Systems Maintenance - Reference Paragraph H.18 of the Contract Schedule. This category refers to the items listed in Appendix A of Exhibit A. Each of these items are considered an individual line item. Charges shall be listed on Cost Form F for each line item and shall be supported pursuant to the requirements set forth in E.1.a-d above. The charges shall be based on the status in Appendix A of Exhibit A specified for each line item and shall include burden and profit for only the business entity performing the hands-on work of that line item. (If a line item is to be provided by the prime, the charges shall include all burden and/or fee. If a line item is to be provided through a subcontract, the charges shall be the amount paid to the subcontractor; any burden and/or fee added by the prime will be shown under appropriate other categories on Forms A - A4 and/or D.) Each line item shall show the charge for each month or partial month, as applicable, and the annual total. If the

charges for any item are proposed at \$0, they should be indicated as such. The annual charge totals on Cost Form F shall be carried forward to the line entitled Systems Maintenance on Cost Form A for each corresponding year. You shall also enter on Form F your proposed Basic Monthly Maintenance Charge (BMMC), as defined in H.18 of the Contract Schedule, for each hardware and environmental control system item listed in Appendix A of Exhibit A. Provide your proposed status conversion percentages associated with the maintenance coverage addressed in Section C.4.1 of the SOW in the cost details of Volume 2. The calculation of the monthly charge should be consistent with the BMMC multiplied by the status conversion percentage."

XII. SECTION M - EVALUATION FACTORS FOR AWARD is revised as follows:

A. M.2 B. Factor 2 - Cost (page 179) is revised to add the following before the last sentence:

"The probable cost for CSCC systems maintenance will be based on the monthly charges proposed for the Appendix A items for the status listed therein."

B. M.3 A. is revised to delete the last two sentences and substitute the following therefor:

"The numerical weights assigned to the above subfactors are indicative of the relative importance of those evaluation areas. The weights will be utilized only as a guide."

XIII. ATTACHMENT 5 COST PROPOSAL FORMS A-F is revised to change the title of Cost Form F to read "Listing of Maintenance Line Item Charges."

XIV. ATTACHMENT 9 DESCRIPTION OF THE CENTRAL SCIENTIFIC COMPUTING COMPLEX is revised as follows:

A. The last sentence starting on page 239 is revised to read as follows:

"An International Business Machines 9370 mini computer along with two disk drives, a tape drive, and personal computer act as the graphics server for the IBM-3800 laser printer/plotter system."

B. The last sentence of "Operational Areas" on page 242 is hereby deleted.

XV. ATTACHMENT 10 DESCRIPTION OF LaRC COMMUNICATION NETWORKS is revised as follows:

A. LaRC TELECOMMUNICATIONS SYSTEMS (LaTS) - The last sentence of the first paragraph (page 249) is revised to read as follows:

"Contractor personnel now manage and maintain the system, engineer system expansions and upgrades, and perform all telephone installations, relocations, and feature changes, with oversight by LaRC."

B. LaRC VIDEO NETWORK (LARCVIN) - The last sentence of the first paragraph on page 250 is hereby deleted.

XVI. ATTACHMENT 14 is revised to delete "facility monitoring" from "Services to be Incorporated into SCOMAC".

**QUESTIONS/ANSWERS**

1. Reference Section L.40.D.3.b.(2) in which you request a table of personnel sources noting the percentage of the total initial work force a bidder would obtain from incumbent personnel, among others.

Q: Since the percentages will change depending on how many incumbent staff are available, will the Government provide the total number of incumbents on the contracts to be consolidated, or withdraw the request for this table?

As an example, if the incumbent has a staff size of 120 (and for this example assume we do not deviate from the LOE staffing level of 170) and we propose to capture 85% of the incumbents based on company historical average, this would equal 102 staff, or 60% of the 170 LOE, leaving 68 (or 40%) for new hires, company transfers, etc. However, if there are 150 incumbent staff and we use our 85% figure, we would capture 127 staff, or 75% of the 170, leaving 43 additional staff needed, or 25% to be obtained from other sources. As you can see, we need more information to more accurately produce the table as requested.

A: The number of employees comprising the current incumbent staff (excluding administrative and Key Personnel) is roughly equal to the Government estimated staffing of 170 positions. For proposal purposes, you should base your percentages on an incumbent work force of 170 positions.

2. The RFP makes reference to system maintenance prices as set forth in Appendix A to Exhibit A. However, Appendix A does not appear to contain pricing information.

Q: Is it therefore the Government's intention that the offeror should price the system maintenance costs?

A: Monthly and annual charges shall be proposed on cost Form F for each CLIN listed in Appendix A. Refer to L.40.E.e.(12), pages 172 and 173 of the RFP. Exhibit A, Statement of Work, which includes Appendix A will be completed after negotiation with the successful offeror.

3. Q: For the purpose of meeting the SDB subcontracting goal for this contract, is the system maintenance pool of 35 million dollars considered part of the total contract value?

A: No, see answers 39 and 49 of Amendment No. 1.

ENCLOSURE 1 - SECTION I CLAUSES



## 1. COST ACCOUNTING STANDARDS (NASA FAR SUPPLEMENT 52.230-2) (AUG 1992)

(a) Unless the contract is exempt under 49 CFR, Subparts 9903.201-1 and 9903.201-2, the provisions of 48 CFR, Part 9903.201-1 are incorporated herein by reference and the Contractor, in connection with this contract, shall--

(1) (CAS-covered Contracts Only) By submission of a Disclosure Statement, disclose in writing the Contractor's cost accounting practices as required by 48 CFR, Subpart 9903.202-1 through 9903.202-5, including methods of distinguishing direct costs from indirect costs and the basis used for allocating indirect costs. The practices disclosed for this contract shall be the same as the practices currently disclosed and applied on all other contracts and subcontracts being performed by the Contractor and which contain a Cost Accounting Standards (CAS) clause. If the Contractor has notified the Contracting Officer that the Disclosure Statement contains trade secrets and commercial or financial information which is privileged and confidential, the Disclosure Statement shall be protected and shall not be released outside of the Government.

(2) Follow consistently the Contractor's cost accounting practices in accumulating and reporting contract performance cost data concerning this contract. If any change in cost accounting practices is made for the purposes of any contract or subcontract subject to CAS requirements, the change must be applied prospectively to this contract and the Disclosure Statement must be amended accordingly. If the contract price or cost allowance of this contract is affected by such changes, adjustment shall be made in accordance with subparagraph (a)(4) or (a)(5) of this clause, as appropriate.

(3) Comply with all CAS, including any modifications and interpretations indicated thereto contained in 48 CFR, Part 9904 (Appendix B, FAR loose-leaf edition), in effect on the date of award of this contract or, if the Contractor has submitted cost or pricing data, on the date of final agreement on price as shown on the Contractor's signed certificate of current cost or pricing data. The Contractor shall also comply with any CAS (or modifications to CAS) which hereafter become applicable to a contract or subcontract of the Contractor. Such compliance shall be required prospectively from the date of applicability to such contract or subcontract.

(4)(i) Agree to an equitable adjustment as provided in the Changes clause of this contract if the contract cost is affected by a change which, pursuant to subparagraph (a)(3) of this clause, the Contractor is required to make to the Contractor's established cost accounting practices.

(ii) Negotiate with the Contracting Officer to determine the terms and conditions under which a change may be made to a cost accounting practice, other than a change made under other provisions of subparagraph (a)(4) of this clause; provided that no agreement may be made under this provision that will increase costs paid by the United States.

(iii) When the parties agree to a change to a cost accounting practice, other than a change under subdivision (a)(4)(i) of this clause, negotiate an equitable adjustment as provided in the changes clause of this contract.

(5) Agree to an adjustment of the contract price or cost allowance, as appropriate, if the Contractor or a subcontractor fails to comply with an applicable Cost Accounting Standard, or to follow any cost accounting practice consistently and such failure results in any increased costs paid by the United States. Such adjustment shall provide for recovery of the increased costs to the United States, together with interest thereon computed at the annual rate established under section 6621 of the Internal Revenue code of 1986 (26 U.S.C. 6621) for such period, from the time the payment by the United States was made to the time the adjustment is

effected. In no case shall the Government recover costs greater than the increased cost to the Government, in the aggregate, on the relevant contracts subject to the price adjustment, unless the Contractor made a change in its cost accounting practices of which it was aware or should have been aware at the time of price negotiations and which it failed to disclose to the Government.

(b) If the parties fail to agree whether the Contractor or a subcontractor has complied with an applicable CAS in 48 CFR, Part 9904 or a CAS rule or regulation in 48 CFR, Part 9903 and as to any cost adjustment demanded by the United States, such failure to agree will constitute a dispute under the Contract Disputes Act (41 U.S.C. 601).

(c) The Contractor shall permit any authorized representatives of the Government to examine and make copies of any documents, papers, or records relating to compliance with the requirements of this clause.

(d) The Contractor shall include in all negotiated subcontracts which the Contractor enters into, the substance of this clause, except paragraph (b), and shall require such inclusion in all other subcontracts, of any tier, including the obligation to comply with all CAS in effect on the subcontractor's award date or if the subcontractor has submitted cost or pricing data, on the date of final agreement on price as shown on the subcontractors signed Certificate of Current Cost or Pricing Data. This requirement shall apply only to negotiated subcontracts in excess of \$540,000 where the price negotiated is not based on--

(1) Established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(2) Prices set by law or regulation, and except that the requirement shall not apply to negotiated subcontracts otherwise exempt from the requirement to include a CAS clause as specified in 48 CFR, Subpart 9903.201-1.

## 2. REPORT ON NASA SUBCONTRACTS (NASA 18-52.204-70) (NOV 1992)

(a) The Contractor shall submit information on NASA Form 667 to the National Aeronautics and Space Administration (Code HM), Washington, DC 20546, substantially as follows with respect to each subcontract or subcontract modification exceeding \$25,000 within 10 working days after its execution:

(1) The name and address of the prime Contractor and the NASA prime contract number.

(2) The name and address of the subcontractor.

(3) Whether the subcontractor is a large or small business concern and/or a minority business concern.

(4) Whether the type of effort being performed involves research and development.

(5) A brief description of the subcontract work.

(6) The amount of the subcontract.

(7) The principal location where the subcontract work is to be performed, if known.

(b) The Contractor and its subcontractors shall submit negative reports annually, if applicable, on each prime contract and first-tier subcontract subject to this reporting requirement. These negative reports shall be submitted not later than October 31 for the 12-month period ending September 30th of each year. The negative reporting shall be continued until the contract or subcontract has been physically completed and the National Aeronautics and Space Administration (Code HM), Washington, DC 20546, so notified by the Contractor or subcontractor.

(c) "Subcontract," as used in this clause, means procurement in excess of \$25,000 by the Contractor or first-tier subcontractor of articles, materials, or services for performing this contract (including facility leases), except purchases,

regardless of amount, of stock items, materials, or services that cannot be specifically identified with this contract.

(d) "Research and development," as used in this clause, means basic and applied research, and design and development of prototypes and processes to (1) pursue a planned search for new knowledge, with or without reference to a specific application, (2) apply existing knowledge in the creation of new products or processes, or (3) apply existing knowledge in the improvement or modification of present products and processes. It excludes subcontracts for the purchase of standard commercial items and services.

(e) The Contractor shall --

(1) Insert the provisions of paragraphs (a), (b), (c), and (d) of this clause in each subcontract over \$100,000;

(2) Instruct its subcontractors to submit their reports directly to the National Aeronautics and Space Administration (Code HM), Washington, DC 20546; and

(3) Provide its subcontractors with the number of the NASA prime contract.

### 3. PAYMENT OF FIXED FEE (NASA 18-52.216-75) (DEC 1988)

The fixed fee shall be paid in monthly installments based upon the percentage of completion of work as determined by the Contracting Officer.

### 4. SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING REPORTING (NASA/FAR SUPPLEMENT 18-52.219-75) (SEP 1992)

(a) The Contractor shall submit the Summary Subcontract Report (Standard Form [SF] 295) quarterly for the reporting periods specified in Block 1.A. of the form. Reports are due 30 days after the close of each reporting period.

(b) The Contractor shall also complete Item 15 (Subcontract awards to Historically Black Colleges and Universities/Minority Institutions) in accordance with the existing instructions applicable to DOD activities.

(c) All other provisions in the instruction paragraphs of the SF 295 remain in effect.

(d) The Contractor shall include this clause in all subcontracts that include the clause at FAR 52.219-9.

### 5. MATERIAL INSPECTION AND RECEIVING REPORT (NASA 18-52.246-72) (OCT 1988)

(a) At the time of each delivery under this contract, the Contractor shall furnish to the Government a Material Inspection and Receiving Report (DD Form 250 series) prepared in triplicate copies, an original and two copies.

(b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 18-46.672-1. The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope which shall be securely attached to the exterior of the package in the most protected location.

(c) When more than one package is involved in a shipment, the Contractor shall list on the DD Form 250, as additional information, the quantity of packages and the package numbers. The Contractor shall forward the DD Form 250 with the lowest numbered package of the shipment and print the words "CONTAINS DD FORM 250" on the package.

ENCLOSURE 2 - ADDITIONAL INSTALLATION-  
PROVIDED GOVERNMENT PROPERTY

ECN	ITEM MANUFACTURER	SERIAL NUMBER MODEL NUMBER
0058841	DISPLAY UNIT SUN MICROSYSTEMS INC	843AZ0248 M
0259164	DISPLAY UNIT DIGITAL EQUIPMENT CORP	TAS2769 VR201A
0259165	BOX, POWER SUPPLY/CONT DIGITAL EQUIPMENT CORP	AB617026X2 VS240B
0404047	TERMINAL, DATA PROCESS HEWLETT-PACKARD CO	2342V70929 2623A MODIFIED
1092303	DISPLAY UNIT SAMSUNG ELECTRONICS	10204147 CVM4963
0462474	PRINTER, ADP EPSON AMERICA INC	373492 MX80 MODIFIED
1090329	TABLET, GRAPHICS SUMMAGRAPHICS CORP	010343004E331110027 MMII1812
G077964	DISPLAY UNIT SUN MICROSYSTEMS INC	847AZ0173 386I/M
0054500	TERMINAL, DATA PROCESS SUN MICROSYSTEMS	809F0006 3/50
1092271	DISK DRIVE UNIT SUN MICROSYSTEMS INC	150G1958 411
1092300	COMPUTER, MICRO SUN MICROSYSTEMS INC	149F2461 147B
0054499	TERMINAL, DATA PROCESS SUN MICROSYSTEMS	810F1095 3/50
0059163	TERMINAL, DATA PROCESS SUN MICROSYSTEMS	838F2327 3/60
0059164	DISPLAY UNIT SUN MICROSYSTEMS	828AZ0951 3/60M

ECN	ITEM MANUFACTURER	SERIAL NUMBER MODEL NUMBER
1084673	TERMINAL, DATA PROCESS MICROSERVE	7704166 X/TURBO
1084714	TERMINAL, DATA PROCESS MICROSERVE	7704153 X/TURBO
1084847	COMPUTER, MICRO SUN MICROSYSTEMS	111F0794 47
1084848	DISPLAY UNIT SUN MICROSYSTEMS	022CN0197 HM4119S-DA-OL
1084849	TRANSPORT, MAGNETIC TA SUN MICROSYSTEMS	110G4280 EXP2
1084850	DISK DRIVE UNIT SUN MICROSYSTEMS	050G2014 EXP2
1092289	COMPUTER, MICRO I C PERSONAL COMPUTER	903823 IC386
1092290	DISPLAY UNIT CTX INTERNATIONAL INC	K43-15100220 CVP5468A
0055751	DISPLAY UNIT INTERNATIONAL BUSINESS	6016956 8580111
0849206	PRINTER, ADP EPSON AMERICA INC	04027439 P10FC(FX286)
0849208	DISPLAY UNIT NEC CORP	97M12744C MULTISYNC 2A
0849207	PRINTER, ADP HEWLETT-PACKARD CO	1353271 33440A
1084688	DISPLAY UNIT NEC INFORMATION SYSTEMS	02N14310K JC1403HMA
1084689	COMPUTER, MICRO MICROSERVE	68100946 386

ECN	ITEM MANUFACTURER	SERIAL NUMBER MODEL NUMBER
0075831	COMPUTER, MICRO LANGLEY RESEARCH CNTR	NONE NONE
1089877	MODULATOR, AGILE SCIENTIFIC-ATLANTA INC	02321 9270
1090845	ANALYZER, SIGNAL, DIGIT WAVETEK	167 SAMIIIIO
1092070	MODULATOR, AGILE SCIENTIFIC-ATLANTA INC	02234 9270
1092071	MODULATOR, AGILE SCIENTIFIC-ATLANTA INC	02241 9270
G077955	COMPUTER, MICRO MAGNAVOX ELECTRONIC SYS	8800522 PC/AT
0550194	DISPLAY UNIT INTERNATIONAL BUSINESS	0174744 5151-001
1092291	DISPLAY UNIT LEADING TECHNOLOGIES	10903965 520S
1092292	COMPUTER, MICRO MICRO ENHANCEMENTS	92030866 DFI386
1157750	VAN FORD	1FTDE14YINHB60308 ECONOLINE E150
1157751	VAN FORD	1FTDE14Y3NHB60309 ECONOLINE E150
1157752	TRUCK FORD	1FTHF25YXPNA07482 F250
1093499	DISPLAY UNIT MITSUBISHI	112000660 HC3915ATR
1056632	DISPLAY UNIT MITSUBISHI	111000570 HC3915ATR

ENCLOSURE 3 - SECTION K PROVISION



COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION  
(NASA/FAR SUPPLEMENT 52.230-1) (AUG 1992)

NOTE: This notice does not apply to small businesses or foreign governments. This notice is in four parts, identified by Roman numerals I. through IV. Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

I. *Disclosure Statement - Cost Accounting Practices and Certification*

(a) Any contract in excess of \$500,000 resulting from this solicitation, except contracts in which the price negotiated is based on (1) established catalog or market prices of commercial items sold in substantial quantities to the general public, or (2) prices set by law or regulation, will be subject to the requirements of parts 9903 and 9904, except for those contracts which are exempt as specified in 9903-201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of parts 9903 and 9904 must, as a condition of contracting, submit a Disclosure Statement as required by 9903.202. The Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practice used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

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

(c) Check the appropriate box below:

(1) Certificate of Concurrent Submission of Disclosure Statement.

The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows: (i) original and one copy to the cognizant Administrative Contracting Officer (ACO), and (ii) one copy to the cognizant contract auditor.

(Disclosure must be on Form Number CASB-DS-1. Forms may be obtained from the cognizant ACO.)

Date of Disclosure Statement \_\_\_\_\_

Name and Address of Cognizant ACO where filed \_\_\_\_\_

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

(2) Certificate of Previously Submitted Disclosure Statement.

The offeror hereby certifies that Disclosure Statement was filed as follows:

Date of Disclosure Statement \_\_\_\_\_

Name and Address of Cognizant ACO where filed \_\_\_\_\_

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

(3) Certificate of Monetary Exemption.

The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$10 million in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) Certificate of Interim Exemption.

The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) above, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraphs (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

**CAUTION:** Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$10 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

*II. Cost Accounting Standards - Exemption for Contracts of \$500,000 or Less*

If this proposal is expected to result in the award of a contract of \$500,000 or less, the offeror shall indicate whether the exemption below is claimed. Failure to check the box below shall mean that the resultant contract is subject to CAS requirements or that the offeror elects to comply with such requirements.

The offeror hereby claims an exemption from the CAS requirements under the provisions of 9903.201-1(b)(2).

*III. Cost Accounting Standards - Eligibility for Modified Contract Coverage*

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

The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because (i) during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$10 million in awards of CAS-covered prime contracts and subcontracts, and (ii) the sum of such awards equaled less than 10 percent of total sales during that cost accounting period. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

**CAUTION:** An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$10 million or more or if, during its current cost

accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$10 million or more.

*IV. Additional Cost Accounting Standards Applicable to Existing Contracts*

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

YES

NO

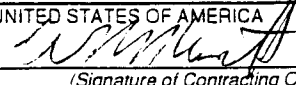
<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE OF PAGES 1 5
2. AMENDMENT/MODIFICATION NO. 4	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001	CODE	7. ADMINISTERED BY (If other than Item 6)	CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  TO ALL CONCERNED		( <input checked="" type="checkbox"/> )	9A. AMENDMENT OF SOLICITATION NO. 1-41-1100.1015	
			9B. DATED (SEE ITEM 11) 12/1/92	
			10A. MODIFICATION OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above number solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If Required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
<input checked="" type="checkbox"/>	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.			
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).			
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:			
	D. OTHER (Specify type of modification and authority)			
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) SUBJECT: NASA Request for Proposal 1-41-1100.1015 - Scientific Computing Operations, Maintenance, and Communication (SCOMAC) Services.  The purposes of this amendment are to (1) make corrections to subject RFP; and (2) provide additional questions and answers.  (Continued on Attached Page)  Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or Print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or Print) W. R. Kivett		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)	16C. DATE SIGNED 1-19-93	

EXHIBIT A STATEMENT OF WORK, Appendix A is revised as follows:

"The model/product number for CLIN 1382 is changed from "SA-H212-D" to "M2266-SA". The Government-provided cost diskettes which includes Appendix A of Exhibit A should be revised accordingly."

**QUESTIONS/ANSWERS**

Note: Questions and Answers 1 through 3 are included  
in Amendment No. 3.

4. Q: Does LaRC currently utilize a tape management software package to manage the magnetic tape libraries? If so, what package is used and will it be available for the Contractor's use?

A: Two locally developed packages are used for management of the magnetic tape library system. One package, referred to as the Tape Processing System, is the primary management package. The other package is the Remote Facility which is used to manage magnetic tape information for those tapes stored in the remote tape storage facility. Both of these packages will be available for SCOMAC contractor use.

5. Q: With respect to Option 1 proposal formatting described in the response to Question 70 outlined in Amendment 1, can the point size be smaller than 12 points for the figures and tables?

A: For Option 1 the point size for text in figures and tables may be less than 12, however, for Option 2 the point size must be at least 12.

6. Option 2 Proposal Formatting as described in the response to Question 70 outlined in Amendment 1 required double spacing while Section L.40.C.2 references 28 lines of text/page.

Q: Double spacing does not allow for that many lines - will space and a half be accepted?

A. No. Under Option 2, a maximum of 28 lines per page is acceptable. A one sixth of an inch reduction in the bottom margin will be permitted to accommodate the additional line when double spaced 12 point text is used. Under this rule there will be 3 lines per inch or 27 lines per 9 inches. To avoid the last space at the bottom of the page, an additional line of text is permitted.

7. Q: In determining the offeror's probable cost, will the Government utilize the \$35,000,000 plug number for System Maintenance identified in Section L.18 or those line item prices proposed in Schedule F?

A: The probable cost will be based on both the plug number and the line item prices.

8. Q: Form A Summary appears to include System Maintenance cost twice. These costs appear to be accounted for under "System Maintenance (Detail on Form F)" (line 40) and at the bottom of Form A "System Maintenance Pool" (line 56). Please clarify.

A: The "System Maintenance" Costs on Form F are taken from the current CLIN ITEM charges as detailed in Appendix A of Exhibit A. The "System Maintenance Pool" is the \$35,000,000 plus number needed to effect maintenance changes after contract award (See Section L.40.E.1.e. (12)) as amended on page 9 of Amendment 3 and (18) of page 174 of the RFP.

9. Q: Option 2 Proposal Formatting as described in the response to Question 70 outlined in Amendment 1 requires double spacing. Does text presented in bulletized format also require doublespacing?

A: Yes.

10. Q: If a PC\Workstation\X-Terminal (not listed on Appendix A) is reported to have a network problem and it is diagnosed as a PC\Workstation\X-Terminal problem, who is responsible for the repair?

A: Repair of PCs\Workstations\X-Terminals not listed in Appendix A is not the responsibility of the SCOMAC contract. Most of these devices are maintained under the LaRC Instrument Support Services contract.

11. Q: There are some items in Appendix A, Part 1 that we cannot identify manufacturer or model. In order to provide a competitive proposal these specifics are needed. The items are as follows:

- a. CLIN 1369; D525-1 Optical Juke Box - Document 1 - need full name of OEM.
- b. CLIN 1383; H-P 730; H-P Workstation - need memory size, disk size, and screen size and type.
- c. CLIN 1396; PS32-8 HIPPI Switch - Network Sy. - need full name of manufacturer.

- A:
- a. CLIN 1369. Full name of OEM is Document Imaging Systems Corp.
  - b. CLIN 1383. Memory size is 80MB. Disk type is Quantum Prodrive 4253 (Internal). Disk size is 425MB. Screen type is HP A1097A (Color). Screen size is 19".
  - c. CLIN 1396. Manufacturer is Network Systems Corporation.

12. Q: Where do we put the hours and dollars associated with overtime for the subcontractor. It doesn't appear there are lines for these items on Form A.

A: Form A shall reflect all subcontract hours on the subcontract line. Segregation of subcontractor straight time and overtime hours and costs will be reflected in the separate set of Cost Forms that must be submitted for all major subcontractors [Ref. page 172, paragraph (11)].



AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE OF PAGES 1 2

2. AMENDMENT/MODIFICATION NO. 5 3. EFFECTIVE DATE 4. REQUISITION/PURCHASE REQ. NO. 5. PROJECT NO. (If applicable)

6. ISSUED BY CODE National Aeronautics and Space Administration Langley Research Center Hampton, VA 23681-0001 7. ADMINISTERED BY (If other than item 6) CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TO ALL CONCERNED 9A. AMENDMENT OF SOLICITATION NO. 1-41-1100.1015 9B. DATED (SEE ITEM 11) 12/1/92 10A. MODIFICATION OF CONTRACT/ORDER NO. 10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS [X] The above number solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers [ ] is extended, [X] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If Required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A. B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return [ ] copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible) SUBJECT: NASA Request for Proposal 1-41-1100.1015 - Scientific Computing Operations, Maintenance, and Communication (SCOMAC) Services. The purpose of this amendment is to provide additional questions and answers. (Continued on Attached Page) Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or Print) 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or Print) W. R. Kivett 15B. CONTRACTOR/OFFEROR 15C. DATE SIGNED 16B. UNITED STATES OF AMERICA BY [Signature] 16C. DATE SIGNED 1-22-93 [Signature of Contracting Officer]

Questions/Answers

(NOTE: Questions and Answers 1 through 12 are included in Amendments 3 and 4.)

13. Q: On page 174, Item 17 Fee, are Offerors precluded from bidding a Base Fee and Award Fee for the LOE and related costs, including Specified Other Direct Costs, for the initial period and the first and second Options to Extend?

A: No.

14. Q: On page 172, Item 12 Systems Maintenance, are the Offerors responsible for including systems maintenance cost estimates for the Options to Extend for Periods 3-8 on Cost Form F? The Government-provided diskette reflects Cost Form F for Years 1 through 7 only.

A: Yes. The Government provided diskettes, cells A:BG2808..A:BR3201 contain cost Form F for "Year 8, (6 months)," which is periods 3-8.

15. Q: We note that we are not receiving 1412 forms for Appendix A equipment maintenance items in the bids being provided by Cray, Convex and Control Data to Primes who request them. As we interpret the RFP, your requirement will result in several hundred 1412 forms being submitted for the equipment maintenance items if they are to be maintained by these manufacturers. Is this interpretation correct?

A: Yes, your interpretation is correct.

16. Q: Reference RFP L.39. Page 160: Does the value of ODC purchases from Small Disadvantaged Businesses count toward the 15% goal?

A: Yes.